Design Strategy in Action

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CCA
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Introduction

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Two years into the MBA in Design Strategy program, with our first graduates finished and out in the world, it's possible to start gaining some perspective about this program and the world around it. When we started building it in 2007, we knew there was interest and need because we talked with many companies and other organizations about what kinds of people and skills they couldn't easily find. At the time, it was more intuition than anything else that led us to focus on the interaction of design (and, with it, design thinking and design process), sustainability (and systems thinking), and business (particularly new approaches to management, leadership, and economics). We were the only program to publicly state a focus across these otherwise (and historically) distinct domains—and I believe we still are.

It has turned out to be a hunch worth following. In the last three years, the business world has increasingly investigated its fascination with design thinking (although there is still a lot of room for exploration). In addition, the business world is slowly realizing the need for new economic models and, as Generation Y and the Millennials further infiltrate corporations, the need for a new approach to managing people.
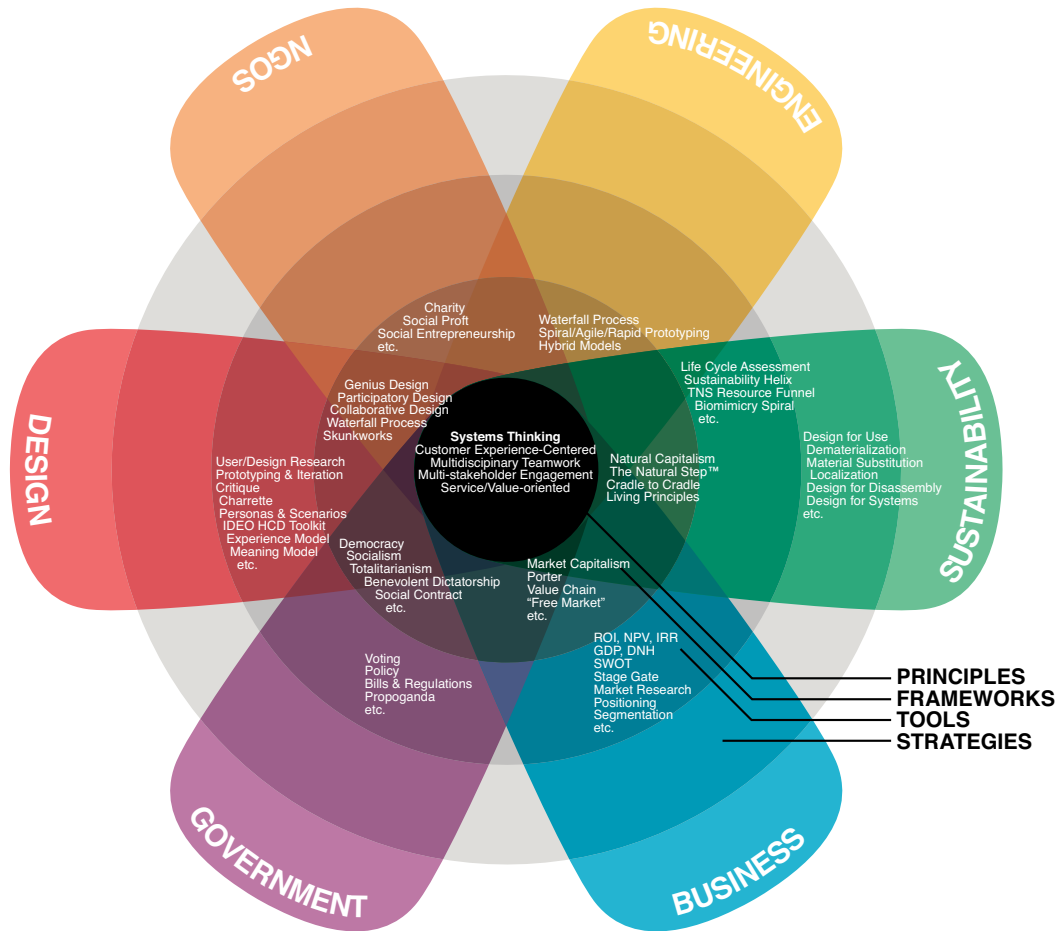
The sustainability world is also responding to increasing interest from the business world and, itself, realizing the need to understand business issues, language, and systems in order to realize the extensive change it views as needed. This was a failing in the past and why it sometimes seems like little has been accomplished in the last 30 to 40 years in the green and sustainability movements.

Lastly, the design world is increasingly losing its aversion to "business" as it realizes its potential to create and effect change in the world and its own impatience in seeing these changes (and their related opportunities) embodied quickly.

In our Fellows program, we teach a systems strategy model that shows not only the overlap among the design, sustainability, and business worlds, but also that this overlap is occurring specifically in the principles that each of these domains use to describe themselves. Chief among them is systems thinking, but alongside this are the ideals of stakeholder engagement and customer-centricity. The business world describes these slightly differently (in terms of customer loyalty and value, service models, et cetera) but they are entirely compatible with how the design world articulates customers (or users, sometimes), and

the need to design systems. While the sustainability conversation has long included systems thinking, we believe the design process has the potential to bring a new context for value and a better route to successful, lasting innovation.

NGOS

ENGINEERING

DESIGN

SUSTAINABILITY

GOVERNMENT

BUSINESS

Charity
Social Proft
Social Entrepreneurship
etc.

Waterfall Process
Spiral/Agile/Rapid Prototyping
Hybrid Models

Life Cycle Assessment
Sustainability Helix
TNS Resource Funnel
Biomimicry Spiral
etc.

Genius Design
Participatory Design
Collaborative Design
Waterfall Process
Skunkworks

Systems Thinking
Customer Experience-Centered
Multidisciplinary Teamwork
Multi-stakeholder Engagement
Service/Value-oriented

Natural Capitalism
The Natural Step™
Cradle to Cradle
Living Principles

Design for Use
Dematerialization
Material Substitution
Localization
Design for Disassembly
Design for Systems
etc.

User/Design Research
Prototyping & Iteration
Critique
Charrette
Personas & Scenarios
IDEO HCD Toolkit
Experience Model
Meaning Model
etc.

Democracy
Socialism
Totalitarianism
Benevolent Dictatorship
Social Contract
etc.

Market Capitalism
Porter
Value Chain
"Free Market"
etc.

Voting
Policy
Bills & Regulations
Propoganda
etc.

ROI, NPV, IRR
GDP, DNH
SWOT
Stage Gate
Market Research
Positioning
Segmentation
etc.

PRINCIPLES
FRAMEWORKS
TOOLS
STRATEGIES

Systems Strategy Model

As the program grows (doubling in size by 2011), we continue to attract a more diverse student body, faculty, and community. We're joined, increasingly, by those with financial backgrounds and more experience with nonprofits. Our aim is to add to our community conversations and create and share these perspectives and tools so that everyone in our community can use them to create more positive change in the world.

That is our ultimate aim and the reason why this program has come into being.

Live Exchange: Rethinking Communication

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Live Exchange (LiveE) is a foundational course on authentic, effective, and positive communication. It provides a curriculum for asset-based communication.

Design strategy,[1] branding, innovation, leadership, sustainability—no matter the arena of inquiry, the medium that facilitates understanding will be communication. We communicate so often and so effortlessly that, like fish in water, we can easily fail to recognize our surroundings. However, within the world of business, there is a huge cost in time, resources, and human capital (high turnover, wasted energy, low morale) when our efforts to communicate fail. Through the lens of generative communication we can transform design strategy dilemmas and convert difficult business problems into potential opportunities.

Before the bullet train of technology would forever change what it meant to be human, Neitzche spoke with poignant urgency about the human capacity for creative agency and the power to invent within any system. Who is it possible to be, he asked, and what is it possible to invent? When the conventions of business as usual no longer suffice, design strategy becomes an effective claim on the meaning and possibility of the future.

Training as positive game changers, MBA in Design Strategy students learn new communicative languages: a gestalt of visual, collaborative, strengths-based, minds-on/hands-on learning. Each of us is an ongoing whirl of likes and dislikes. On the first day of class, students are asked to bring one object they love and one they dislike. Past contributions have included a bird's nest, a plastic water bottle, an iPad, and a surfboard. In LiveE we ask: What do our likes and dislikes open or close for us? How do our biases shape our communication and our future?

The DMBA emphasizes teamwork and professional practice. Students garner firsthand knowledge of how learning groups come to constitute, understand, and sustain themselves. Live Exchange provides frameworks for understanding, listening to, and engaging with teams of diverse individuals whose experiences, history, points of view, and temperaments differ from our own. In these classes, learning is a contact sport.

The graduates of our program are a hybrid breed of practitioners equipped with quantitative (data, logic, hard information, numbers) and qualitative (creative, collaborative, emotional, and appreciative intelligence) skills. They are able to build a framework, think outside of it, then fold it up and recycle as needed.

Design strategy practitioners combine tactics with imagination to navigate between fact and possibility. Combining grounded strategy with positive, open-ended, "What if?" questions, our graduates create narratives of the possible.

Live Exchange

Live Exchange is an inquiry into how, in training as change agents, the best players are themselves transformed. Given their mission to move from the normally accepted ways of doing business to the novel and untried, course participants begin by researching and renovating their own communications. Innovation comes from the Latin "renew." Live Exchange focuses on renewing, rebuilding, repairing, and sustaining trust—the leitmotif that makes transformation possible.

LiveE provides a close look at the architecture of everyday conversations, the fundamental unit of communication. Communication with employers, employees, colleagues, family, friends, and peers is the laboratory for our experiments. One student described Live Exchange as "an investigation of how words structure thought, action, and results."

As drivers of change, innovators put a tremendous demand on their communication repertoire. It is not that design strategy teaches self-awareness per se, but rather, as one cohort member put it, the program incubates an "awareness ground." A premise of Live Exchange is that self-knowledge is an ancient and efficient strategy for leading positive, collective change. Live Exchange proves that high-caliber collaboration can teach self-reliance and personal resilience.

The course engages content and process knowledge, and is based in real-world social interactions. It is a Petri dish incubating new communication practices individually, collectively, and, ultimately, in service to clients. As innovators, design strategists require narratives that sustain them and their stakeholders while in the trenches of strategic change. They have to account for the social cost of thinking differently, not merely the financial risks.

At this level communication is more than a top-10 list of tips and techniques. The repertoire of the design strategist must go further than eloquent speech or a seamless presentation (much as we applaud both!). Those tasked with leadership—with intro-

ducing and implementing change—must possess curiosity, compassion, and courage in the face of pushback and resistance. The course curriculum helps students identify their strengths, evaluate the mood they produce in others, put outmoded communications to rest, and engage in 360-degree peer feedback. As a result students will be able to activate their own best practices as they take on leadership roles within an organization.

Rapid Knowledge Transfer:™ Teach Us Something in Seven Minutes (about Managerial Economics, Accounting, Innovation, Business Models, or Marketing Insights)

On the one hand, we cannot say enough about the meticulous, step-by-step, grounded preparation effective strategy requires. On the other, human-centered research requires responsiveness. TUS7M teaches in a shorthand manner how to stick to a script and how to improvise.

Working in groups of two to five, students select a concept from one of their other DMBA courses to teach in seven minutes before a live audience. These rapid-fire performances take on both elegant and epic proportions depending on the students' interpretation, energy, and imagination. For many, this is the first time they allow their creativity to burst forth; for others, it is an important step in taming their stage fright; and for still others, it's the chance to clarify something that may have confused them only weeks before.

Responsive communication is nimble—it is alive and subject to the changing and customized requirements of its users. As they design their TUS7M presentations, students learn agility: how to form a hypothesis, rapidly test it, change direction on a dime, recover from mistakes swiftly, and reinvent, all in tandem with peers doing the same. The clear and compelling messages they deliver allow the audience to be swept up in the fun or gravitas of the lesson.

The brevity of the seven-minute presentation gives it immediacy; even a "serious" lesson (double-entry accounting) can't help but have an edge of delight given the timeframe. This is learning at the intersection of creativity and business. As Brenda Laurel, chair of Graduate Program in Design at CCA, says: "We are having fun, but we are not kidding."

"Play is a great icebreaker and can initiate instant bonds. The recurring pattern of learn-do-reflect, learn-do-reflect has shown me just how different this body of work is from all other experiences I've had."
—LiveE Cohort Member

RECENT TUS7M PERFORMANCES:

Zen and the Art of
(Double-Entry) Accounting

Is It Liquid?
(Identifying Brand Solvency)

The Invisible Hand
(Adam Smith, Self-Interest, Competition, Supply, and Demand)

Bees-ness
(Raising Bees and Lavender
as a Demonstration of
Externalities in Business)

Bud, Barbie, and
Brand Positioning

The Epic Battle Between Tactics and
Strategy

Happy Hour!
(Designing a Cardboard Bar from
Simple Materials)

Triple Pundit

Each semester, students in LiveE post a reflective article on the LiveE Blog at TriplePundit.com (a site providing Triple Bottom Line reporting for green and sustainable business and conversations for entrepreneurs, intrapreneurs, and professionals on green business). Students choose one of the following sustainable business topics to address vis-à-vis communication:

- Sustainability
- Marketing
- Advertising
- Internal Communications
- Public Relations
- Stakeholder Dialogue (Internal and External)

These articles lean into business as usual while blending the personal and professional, articulating "studio ways of thinking" and highlighting teamwork and play at work, all with an ethos of "we are in this together."

Peer Coaching: Bring Your Best, Bring Out the Best

At the start of class, LiveE students form peer coaching duos that meet throughout the semester. These peer sounding boards encourage students to bring their best and offer the sustained opportunity to bring out the best in their partner. Peer coaching is based in an ethos of equivalency. Here, empathy does not go far enough; peer coaching is about learning to build rapport.

The peer coaching project is both a critical learning-by-doing opportunity as well as practice for future facilitation of the conversations demanded of a design strategist. These discussions require self-organization, astute listening, and observational and conversational skills.

In my professional practice as an innovation coach, I make a connection between design strategy and coaching. The design strategist as coach is adept at guiding clients to rethink, review, and reformulate their questions. Instead of rushing to immediately problem-solve or provide answers, a seasoned design strategist will assist clients in moving beyond "I like or I don't like" responses. Like a coach, the design strategist must provide evidence of the rewards of foregoing instant gratification and the quick fix in order to facilitate long-range sustainable solutions.

A novice rushes to action but a design strategist's successes, like a coach, depends to a large degree on the quality of the context they have created. Newbies "problem-solve" without appreciating the remarkable difference preparing a context makes for well-formed client outcomes. By contrast, a practiced design strategist has learned to diagnose before prescribing action. Creating a framework that lets participants know where they are, where they going, what next steps to take (or avoid), and what results they can expect enables all players to co-construct a vibrant context which accounts for the dynamic between the known and the emergent. This thoughtful, slow-paced, methodical inquiry produces not only personal well-being but higher-quality business outcomes.

"Understanding that to solve that problem does not always require our hands sculpting the solution. Our ability to give those sculpting tools to the person with the problem is an epiphany."
— LiveE Cohort Member

1: A simple definition of strategy is a plan for getting from here to there. Effective, authentic, positive communication is its variable sea. Setting sail with kindred spirits makes all the difference in the journey.

Leadership by Design

The need to design a sustainable future for our businesses and communities has never been more pressing. Indeed, everything is up for grabs: the economy is going through a fundamental restructuring, iconic business leaders are being pulled down, and innovative entrepreneurs are stepping up to redefine the rules of the game. Management theorist Peter Drucker observed, "We are in one of those great historical periods that occur every 200 or 300 years when people don't understand the world anymore, and the past is not sufficient to explain the future."[1]

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During this time of change and uncertainty, leaders who can respond to the demands of a complex and dynamic situation are at a premium. Today's leaders are faced with the unprecedented requirement to think differently and respond quickly to opportunities and problems in collaboration with a diverse team of employees. The challenge for business educators is that the "old school" methods of teaching and learning are inadequate for preparing students to be the change makers of tomorrow. As observed by a team of business and design faculty seeking a new model of business education, "The consensus is that educators need to adapt their programs to match the contemporary business climate—one that is fast-paced and complex."[2] In order to craft an adequate response to the demands of a 21st-century world, higher education will need to build a new curriculum that emphasizes design, innovation, systems, and sustainability, while providing a space for students and faculty to collaboratively apply their emerging knowledge.

To teach leadership by design we explore two intersecting paths. The first considers the questions, "How can we redesign leadership and management?" and "What would leadership and management developed for the 21st century really look like?" The second path engages the potential of "leading like a designer" by applying the principles of user-centered focus, integrative thinking, prototyping, and teams to create work environments characterized by high levels of innovation, energy, and collaboration. Students in these leadership programs are active, not passive, participants in their education. They serve as the users who inform the redesign of leadership where they work, and they function as the designers who collaborate to craft a new work experience for themselves and their coworkers. Assignments and class activities are designed to provoke innovative thinking about the roles of leader and manager, and to put ideas into play within the context of the class and a "real-world" organization.

Redesigning Leadership and Management

For much of the 20th century, the model manager was the effi-cient commander of people and controller of resources. Becom-ing a model manager required experience with the one best way to get ground-level work accomplished, along with deeper knowledge of a primary business function, such as operations or finance. The role of leader was assigned to senior level decision-makers who worked in alignment with strategic planning about the best way to competitively move an enterprise into the future. Preparing to be a leader meant learning to leverage the central functions of the organization (finance, marketing, operations, accounting, et cetera) and making use of data-driven models for understanding and controlling organizational systems to achieve future outcomes. The focus of leadership education was preparation for making objective decisions about the best use of organizational resources to ensure competitive growth, profit-ability, and increased market share. Mastering data collection, analysis, and quantitative modeling was essential. Much of busi-ness education has focused on preparing managers and leaders to make data-driven decisions and meet numerical targets for growth and profitability. This data-driven approach ultimately led one outspoken Dilbert character to observe that an MBA apparently made you a qualified leader because it ensured that you were good at . . . math.[3]

Facility in analytical decision making is essential in today's information-rich business climate. The demands made on man-agers and leaders, however, are changing rapidly. Simply having single-handed command of the numbers is no longer sufficient. The traditional distinction between managers (as information collectors and system stabilizers who "do things right")[4] and leaders (as decision makers and strategists who do the right thing), is becoming increasingly blurred.[5] As change becomes a regular part of daily work, managers who have been respon-sible for maintaining stable, predictable performance outcomes must now exercise skills associated with leading people through ambiguous and complex change. Leaders, who were granted latitude to be corner-office visionaries in traditional organiza-tions, are now expected to "get very deep into the weeds" as team players alongside the people they lead.[6] Management theorist Gary Hamel goes so far as to claim that "management is obsolete" and must be reinvented.[7] The "command and control" leadership/management that was successful in large, slow-moving bureaucracies 50 years ago will no longer work in en-

vironments characterized by "urgency, high stakes, and uncer-tainty," according to leadership theorists Heifetz, Grashow, and Linsky.[8]

Today's leader/managers must work with others to develop new practices, perform comfortably in a changing state of disequilib-rium, and regularly experiment in adapting to change. Leader-ship and management are becoming less a stance and more a dance, engaging a variety of partners in response to emerging musical stylings. How, then, do we best prepare graduate busi-ness students to learn this new dance in today's organizations? One way forward is to adopt the metaphors and practices of artists to develop responses characterized by "new levels of inspiration and passionate creativity."[9]

Setting the Stage For (Re)designing Leadership and Management

A course in leadership and management can model best prac-tices through its teaching process. New models of teaching and learning make use of reflective practice,[10] action learning,[11] and collaborative activities to give students the experience of em-bracing disequilibrium, fostering adaptation, generating shared leadership, and strengthening collaboration.[12] To best prepare leader/managers to "build the bridge as they walk on it,"[13] regular reflective practice, including journal writing, supportive feedback, and post-residency reflection-on-actions, is used to create new ideas with the potential to influence the practice of leadership and management.

The Leadership by Design course begins with a creative reflec-tion on leadership and management roles. Prior to the first class meeting, students are asked to use paper and art supplies to visually represent their notions of management, leadership, and teams. At the beginning of the first class, students describe their management and leadership images as they place them on opposing walls in the classroom. Following the creation of their wall-size management and leadership mosaics, students discuss the themes and patterns related to these core concepts. Seeing the collected images stimulates the recognition of deep assumptions, individual preferences, and shared ideals for the two roles. The inquiry is revisited throughout the semester within discussions of stress and sustainability, communication, motivation, creativity and problem solving, conflict, and power. The afternoon of the final residency is devoted to imagining and articulating what conventional practices of leadership and man-

agement might mean for "creative clever people"[14]—those who bring the required skills and ideas to today's organizations, who don't like hierarchy, and don't want to be led, but do want to be recognized and supported. In other words, students discuss how leadership and management will be defined for people like themselves (and, largely, upcoming generations).

Actionable Reflection:
What I Learned, What Worked, What Could Change

The best leaders ask for feedback and listen to what others say, then adapt and change course as needed. To model and practice this process, students are asked to post their reflections on three questions following each residency: what I learned, what worked, and what could change. The postings are visible to all class participants, and students are invited to add observations and feedback about classmates' reflections. By reading what others have learned, students revisit the class from a new perspective. In reflecting on what worked, participants begin to articulate how they learn best, with the opportunity to see how colleagues respond differently to the same situation. And finally, through stating in a positive way what could change to support the learning process, students engage in redesigning the course. Feedback from these suggestions is used to inform subsequent classes. Students report increased engagement as they participate in course design and experience responsive leadership.

Self-Reflect in Order to (Re)design Yourself

In their 2009 book *The Practice of Adaptive Leadership,* authors Heifetz, Grashow, and Linsky suggest that flexible, responsive leadership and management begins with understanding who you are as "a system (an individual) operating within a system (your organization)."[16] This requires knowing your "personal tuning" and how it affects interactions with others and environmental challenges. This fits with the growing evidence that effective leaders have a high level of self-awareness, and that the degree to which manager/leaders are self-aware has a direct impact on their ability to set priorities and goals, manage time and people, and cope with stress.[17] Research completed with 2,400 executives over the course of six years by Barsh, Mogelof, and Webb confirms that leaders exhibiting the most resilient responses to the volatile, complex business environment are also the most self-aware.[18]

To encourage self-awareness in areas that are most supportive for leader/managers-in-the-making, participants complete a battery of self-assessments. These include the Competing Values Leadership Instrument, from which students derive scores on eight roles and 24 skills associated with management practice.[19] Students also complete the Kolb Learning Style Inventory (a measure of cognitive problem-solving style), the Emotional and Social Competency Inventory (a measure of emotional intelligence), and the Thomas-Kilmann Conflict Mode Instrument (a measure of conflict style).[20] Scores from the instruments are used to assign participants to teams that incorporate a diversity of styles, creating the experience of a cross-functional team. Team members are challenged to expand their awareness of the synthetic interaction of various styles. Teams use paper and art supplies to create visual "maps" of team learning styles, motivators, and conflict modes. Working collaboratively through the process of mapping and seeing the creative representation of team energies is a powerful way to understand how to best "tune" oneself within a quintet of classmates.

Fortunately, there are conceptual guides that can help us navigate the paradoxes and tensions inherent in leadership and management roles. One is the Competing Values Framework developed by Robert Quinn.[21] This framework demonstrates the complementary and contradictory relationships between eight roles, all of which must be filled if an organization is to be effective. Leader/managers must be both flexible and innovative (leadership) as well as controlling and stable (management), and they must maintain an internal, real-time focus within the organization (management) as well as a future-oriented focus external to the organization (leadership). The underlying assumptions of the Competing Values Model stand in stark contrast to the "one best way" assumptions of 20th-century management. Robert Quinn asserts that overemphasizing any of the roles to the detriment of others (for example, too much innovation and not enough stability) results in less-than-optimal outcomes. Sustainable mastery requires a balanced set of capacities as well as a flexible response to the demands of particular circumstances. Class discussions focus on those elements in a work situation that call on particular management or leadership responses, and the flexibility and ease required to smoothly shift gears.

The reinvention of leadership will require rethinking manage-ment via an awareness of how individual style expresses itself in leadership/management roles. Abraham Lincoln, who knew something about leadership, once said "Whatever you are, be a good one." First, know what you are. To achieve that self-awareness, one must make regular inquiries into his or her identity as a leader/manager (as professionals do), his or her preferences and tendencies when relating to others, and his or her capacities for responding to a dynamic and complex environ-ment. Journal writing is introduced as a practice for developing an internal dialogue about capacities such as stress manage-ment ("What are the effective and ineffective methods I use for coping with stress?"), interpersonal communication ("I don't like communicating when . . ."), and creative problem solving ("How and where in my life am I creative?"). Active listening exercises provide a venue to verbally express experiences and insights about topics such as personal motivators and concerns about the exercise of power. Students formally debut their emerging identity in a final writing assignment, where they are instructed to apply for their ideal post-graduation job and respond to a series of standard interview questions about themselves as leaders/managers. Because the questions are representative of those posed by recruiters and hiring managers, students get valuable practice at articulating their unique synthesis of knowl-edge, skills, and perspectives within a particular context.

Action Learning: I Do, I Understand

The Chinese philosopher Confucius made the observation that "I hear and I forget, I see and I remember, I do and I understand." This wisdom provides the foundation for action learning, in which groups representing diverse backgrounds and experi-ences are given a challenge whose resolution requires engaged, collaborative learning.[22] Recently, action learning has become a primary vehicle for generating new ideas and improved pro-cesses in organizations such as Heineken, Novartis, Nokia, and Johnson & Johnson.[23]

In contrast to the traditional business education model that em-phasizes the transmission of text-driven knowledge presented by faculty experts,[24] the action learning method is more repre-sentative of art and design education, which builds on the expe-riential process of demonstration-practice-production-critique. Action learning emphasizes questioning and reflective listening among team members as they engage in role playing, improvisa-

tional acting, and game playing. Students experience the stress of attempting problem solving with incomplete information; the importance of active listening when everyone is talking at once; the challenges of interpersonal tensions in performance management; the opportunities to develop trust during cross-cultural conflict; and the vulnerability and connections that emerge as the group engages in a laughter yoga session.

In addition, action learning blends easily with the design process used in design-led innovation. Because design is already an action-oriented process that focuses on embodying real-world situations, it's easy to integrate action-oriented leadership princi-ples, tools, and techniques. Both sets of techniques complement each other and complete the whole process of innovation from an organizational and product/service-offering standpoint.

Anthony Tjan, venture capitalist and entrepreneur, recently com-pared the entrepreneurial leader to a jazz musician, someone who is able to utilize hard-won skills in support of impromptu improvisation.[25] Similarly, the capacities of the innovative manager/leader—emotional intelligence, curiosity, adapt-ability—are skills acquired through repeated application. They don't come automatically or easily to most new managers, even (perhaps especially) those with business education. Effective leadership/management is an acquired capacity, not a formula to be mastered. Fifteen years ago, after reviewing the emerging literature on successful leaders, Richard Boyatzis and his col-leagues recognized that leadership is skills-based. His challenge to educators demanded a shift from the traditional emphasis on theory to a new approach that developed leadership skills by incorporating repeated opportunities to practice behaviors while engaging with others to learn new skills.[26] The DMBA program emphasizes learning-by-doing throughout its curriculum.

Lead Like a Designer

In her review of the challenges confronting today's leaders, Nancy Adler of McGill University suggests that "Creating the next great thing demands constant innovation; it's a design task, not merely an analytic or administrative function. Historically, such creativity has been the primary competence of artists, not managers."[27] The true inspiration of the DMBA is its synthesis throughout the program of design thinking and business. In

Leadership by Design, students are encouraged to fold design thinking into their developing leader/manager skill set.

In their book *The Leadership Odyssey,* Napolitano and Henderson argue that:

> "Organizational leadership today requires that managers become designers in a very real sense. No longer can they blindly accept existing organizational structures as givens . . . [or] concern themselves with their limited span of control. Instead they must . . . seek to remove barriers to effectiveness, teamwork, creativity, and momentum. They must help to transform not only their own units but the organization as a whole in ways that will allow it to become increasingly responsive to current and future demands."[28]

How do leader/managers become designers? Through practicing design processes as they set out to solve the "wicked problems" facing organizations in a complex, rapidly changing environment.[29] To think like a designer requires the skills of reflection and active learning. Design firms such as IDEO, Stone Yamashita Partners, and frog design have gained notoriety by moving upstream from product design to the redesign of management systems and processes for clients as diverse as IBM, Mercedes-Benz, Kaiser Permanente, and the U.S. Department of Energy.[30] The design approach applied to management, as characterized by Roger Martin, dean of the Rotman School of Management, includes emphasis on project-based collaboration, a user-centered focus, tackling ambiguous and "wicked" problems, iterative problem solving and prototyping, and the abductive reasoning of idea generation.[31] IDEO's Tim Brown states that design thinkers must also empathize with a variety of people, be optimistic in the face of constraints, and be willing to learn from mistakes and move forward.[32] Fledgling design leaders are encouraged to observe management/leadership problems through the lens of an experienced designer, and to imagine organizations that optimize healthy human interactions. As professionals, they will be prepared for the real challenges of leading innovation.

Creativity at a Premium

A recent survey of 1,500 executives from around the world resulted in a surprising outcome. When asked to name the most important competency for 21st-century leaders, the answer given most frequently was creativity.[33] This is in marked contrast to views of 20th-century leaders, who were expected to

have control, be decisive, and be in command at all times. This finding is in line with the future described by Daniel Pink in his 2005 best-seller *A Whole New Mind: The Future Belongs to Those Who Can Create, Empathize, and Develop New, Meaningful Experiences for Others.*[34] For creativity to flourish, innovation must be a daily practice, not a once-a-year strategic exercise. It is rare to find business students using pastels and clay to represent the interpersonal dynamics of a team; nonetheless, learning about leadership and management presents an opportunity to develop creative thinking. Exercises such as playing, drawing, free writing, and improv are all required to grow the innovation muscles that manager/leaders in today's organizations will rely on as they respond to the demands of creative employees and changing environments.

This is not your typical MBA course of study. Teams play with ideas and push through creative blocks.[35] They use decks of Roger von Oech's Creative Whack Pack to spur creative collaboration. Students share music that soothes stress, inspires creativity, fuels motivation, or pumps up power. The class sets the tone for the day and creates group harmony by singing. These techniques are not standard management practices—yet. But all are essential for fostering innovation and thinking differently.

Needs, Findings, Prototyping, Implications

Unlike management classes that give priority to established theory and widely recognized cases, ours ask this new generation of managers and leaders to apply the principles of design thinking to the new leadership processes that will meet the needs of 21st-century organizations. This includes exercises that elicit client-centered problem definition, incorporating feedback and new learnings to share with team members as findings.

Prototyping plays a significant role in design, getting ideas out of individual heads and onto paper.[36] During this phase the design team begins to synthesize their thinking and create images of the management/leadership practices that make their ideas concrete. Finally, during the fourth phase of the design thinking process, called implications, the team grounds the proposed prototypes through critique and implementation feasibility discussions. These include considerations of resource constraints, management and employee resistance, and time limitations. Throughout the process, one of the team members is tasked with capturing the discussion on a large piece of paper that can be referenced during later discussions and saved as an artifact of the group's design process. One outcome of this design think-

ing process is a newfound optimism among students about their capacity to create the environments in which they will be working, managing and leading.

Leading by Design as Creative Collaboration

One of the most significant shifts in organizational structure in the last 20 years is the expanded use of teams. This includes cross-functional and self-directed teams. Research into the changing nature of leadership confirms that to meet current organizational demands, leader/managers must work collaboratively, distribute leadership to others, and view leadership as a collective process.[37] In a recent study of 5,400 leader/managers new to their roles, it was discovered that success was a function of the ability to achieve "collective quick wins" through teamwork, communication skills, a willingness to learn, and the ability to "pull everyone together."[38] As the role of management/leadership adapts to the demands of the new century, the ability to work as team leaders across multiple projects with varied reporting relationships will become an increasingly valuable skill. Collaboration has been identified as a key element of the design process, requiring that managers exercise skills in listening to others and deeply understanding their experiences.[39] Leadership is no longer a spectator sport or an individual glory game. These days, it is experience playing soccer, not a low golf handicap, that gives leaders a leg up in managing others.

How does one best practice the skills required of the leader-as-designer? By working with an eclectic group of smart, creative classmates to redesign a real work environment that supports positive outcomes. Add in shared leadership responsibilities, demanding time pressures, and a requirement for creative deliverables, and you have the challenge of Fun and Play at Work (F&P@W). Management theorists have been designing work for a hundred years, beginning with the time-and-motion studies of job design at the turn of the 20th century. The vast majority of these design efforts have focused on maximized efficiency and increased productivity. Until recently, little consideration has been given to the human toll of extreme specialization and accelerated production: escalating stress and boredom, reduced motivation and engagement, and no room for creative innovation.

Fun and play have been emerging as the design response to work environments that squash motivation and smother creativity. Early in 2005, Dan Pink identified play as one of the

six essential aptitudes that will define success in the Conceptual Age.[40] Later that same year, in an *MIT Sloan Management Review* article, the business scholars Heracleous and Jacobs argued that the next strategic advantage will come from introducing "purposeful play" into organizations.[41] Recent surveys confirm that the millennial workforce is demanding fun and playful work environments. It turns out that engaging in fun and play reduces stress, increases motivation and engagement, fosters creativity, and encourages collaboration.[42]

The task of design leaders in the coming century will be to incorporate the tenets of fun and play at work to reimagine how work itself is designed. That will require nothing less than understanding the needs of employees in a target organization; reviewing the latest findings on stress, motivation, communication, teams, and problem solving; and creating a fun and playful work environment that supports sustainable, collaborative effort. Students report that the knowledge gained through readings and lectures comes alive when they put it into play while completing a complex project in real time. Relatively few MBA programs require the degree of guided team project work that students in the MBA in Design Strategy program experience.[43] After gaining a common language and shared principles in the class, students are able to develop their team leadership skills further in venture projects during their second year.

A new generation of design leaders arrives on the first day of class full of curiosity and open to experience. They represent true diversity in their gender and cultural backgrounds, education, and work experience. A significant percentage of the students are designers by trade, but the balance represents a variety of functional backgrounds. Provided with the opportunity to collaborate in the classroom, they create an engaging, multidisciplinary educational experience critical for today's business and design students.[44] Their challenge requires them to reinvent business as usual. Their enthusiasm for meeting the challenge is contagious and inspiring for all involved.

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Teaching Innovation

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When we think of innovation, most of us conjure images of wire-haired inventors slaving in makeshift laboratories, figures hunched over computer tables working long nights, or highly educated specialists devising patented technologies that few others can understand. But the world of innovation is not limited to strict science, formalized training, and highly refined technology. In fact, many of humankind's most innovative concepts came to those who simply followed their artistic instincts, led their thinking via intuition, and maintained a highly evolved sense of inspiration to support them through their perspiration.

In the MBA in Design Strategy course Innovation Studio, one of the first and perhaps most challenging goals is to let go of preconceived notions of innovation and fear of new thinking. To begin, the class is divided randomly into teams that are then assigned a challenge. The task is not presented as a problem that requires solving, because the approach of "solution-based" thinking or "problem solving" often nullifies innovation simply by biasing creativity with existing conditions, which are most often contributors to the lack of innovative results. Instead, students are invited to look at the root conditions, the economies of the surrounding context, and the behaviors associated with functioning and adapting within these conditions. In the design process, research and evaluation are often more important than conclusions and prototyping.

Because traditional education has embedded so much of our thinking and problem-solving methods into data analysis and structured responses, the first part of the class is dedicated to undoing the tight noose around the chamber of free thinking. Lectures in the first segments of the class review and discuss some of the most innovative thinkers and artists of the modern era. Here, Einstein and Hendrix coexist and are revealed as alchemists of their previously limited metals. Had Einstein chosen to use the same research and thinking that all previous Newtonian physicists had employed, he would likely have never discovered a new way of seeing the universe. Of course many played electric guitar before Hendrix, but no one played it upside down and backward, and no one blended in fluidity or storytelling and spirituality the way he did.

Getting outside of the white-paper approach and theoretical boxes of traditional education is the next step. Here we encourage a product development approach using drawing, field

> **Great thinking** must be accompanied by great storytelling and performance. Without proper presentation, ideas suffer misunderstanding.

research, detailed studies of forms and form language, prototyping, and personal aesthetics to reveal highly visual and tactile presentations of these concepts.

To ensure that our students can easily function in today's product and service development paradigms, we teach explicit product development processes, complete with analytic and quantitative measures and techniques. We introduce our students to a wide variety of design processes, including common ones such as Waterfall, Spiral, Extreme Programming, User-Centric, Skunkworks, Outcome-Driven, Activity Centric, and "Genius Design." However, the process we take them through on their own projects is a hybrid of several of these, emphasizing customer exploration, iteration of prototyping, and collaborative work. This hybrid, Strategic Innovation, forms the basis for most of the studio courses throughout the program.

Great thinking must be accompanied by great storytelling and performance. Without proper presentation, ideas suffer misunderstanding. A great deal of the coursework is devoted to finding an inner voice that we confidently nurture to express ideas in tangible and understandable ways. Furthermore, we encourage the setting aside of basic premises of PowerPoint and the like in favor of experimentation with newer and more dynamic ways of conveying ideas. We thus take advantage of school being a safe environment in which to try new things.

Most students come to this class with the idea that they will be taught how to come up with innovative ideas. Rather than focusing on how to think, we instead place an emphasis on seeking new understandings of customers, contexts, and markets outside of traditional methods. Rather than relying on structured processes for answers, we review those processes and then encourage new ways of evolving team efforts to yield alternative scenarios, which may or may not lead to solutions. We help our students reframe their understanding of the situation and opportunities they see from the data they observe and collect. Finally, we invite and encourage students to engage in the process without the fear of failure—the desire not to be "wrong," feel ashamed, or look ridiculous—that so often limits exploration and innovation in a results-oriented world. Within the context of innovation, what might be thought of as a failure is merely an invitation to try again, this time with a

new perspective. Einstein himself is famous for saying that he never "solved" any problems, but was very pleased with having gotten a lot of smart people to start thinking about how different the structure of our universe might very well be.

We engage in a slight twist as the conclusion of the course approaches. Three-quarters of the way through, each team presents their final solutions, and then the teams trade projects for the last month. They are asked to create alternative scenarios that reinterpret the original research and results, then push past the solution into a next-generation offering. These are presented at the end of the course.

At times, the course challenges the students to engage with a specific theme. At others, it is left entirely up to the students to find domains that interest them. When organizations can present a challenge large enough to give our students room to explore widely, the course works with outside sponsors. The aim, however, is to teach our students new methods and give them confidence to innovate, not to solve the current problems organizations may have. It's possible, of course, for organizations to engage our students in their learning as long as their interest is truly in understanding their customers and markets in new ways and not merely focused on "work for hire."

Innovation Readings

Over the year, we've used several books within the course of the years. Some are focused on process, others on historical context, and others on new ways of thinking. This list is always evolving and has included the following:

Product Design & Development, by Ulrich and Eppinger, McGraw Hill, ISBN: 978-0072471465

Business Model Generation, by Alexander Osterwalder & Yves Pigneur, Wiley, ISBN: 978-0470876411

Prophet of Innovation, by Thomas McCraw, Harvard University Press, ISBN: 978-0674025233

Switch, by Dan and Chip Heath, Crown Business, ISBN: 978-0385528757

Selected HBR and DMI and public articles

For many of us looking to understand the process of innovation, there is no one way to innovate and there are many contexts that require different approaches and different methods. However, of the many and truly novel methods we discover along the way is the nurturing of natural curiosity coupled with the spark of inspiration. our job as educators, whether in business or other programs, is to cultivate and lead the application of inspiration toward the frontiers of innovation.

Evoking Meaning in Business

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"Marketing" might be the most maligned and misunderstood concept in modern business. In the popular imagination it often evokes disdain, and it is often seen as the domain of professional manipulators. This version of marketing runs afoul of anyone concerned with authenticity and its ability to address people's deepest needs. People in design fields, as well as in many small companies and nonprofits, often share these views.

But the best marketing practitioners focus on uncovering and acting on people's needs. While marketing has evolved over the years from revolutionary mindset to prestigious discipline to ubiquitous tactics, its essence is all about delivering real value to people—and that requires, first, understanding what that value is in customers' own terms. All businesspeople need to deeply understand its core assumptions and practices in order to function well in an increasingly competitive business environment.

In the MBA in Design Strategy program, our marketing course follows a trajectory that starts with the introduction and application of a systematic framework for understanding and developing marketing theory, and ends with the acquisition of the skills to plan transformative marketing campaigns.

At one level, the course explores key intellectual frameworks such as:

- the idea of "desire"—the underpinnings of consumer preferences
- needs, benefits, and experiences—the types and their relative value
- basic marketing theory versus contemporary practice
- the ideological and practical relationship between marketing and design
- target markets and segmentation
- marketing systems
- branding/positioning
- marketing planning

Beyond that, however, the course has a significant experiential quality in two key ways:

- Students conduct consumer research in the field; and
- More broadly, they learn how to effectively collaborate in making sense of what's happening in the world, and to develop strategies and tactics based on those understandings.

We teach marketing as a studio course—that is, with a hands-on curriculum that emphasizes students getting out into the world and actually meeting and interacting with people. We often find that students who attend business programs are content with secondary—or even primary—research that was completed by others. Whether this research comes from a partnering company or a research provider is irrelevant. Unless our students actually talk with people who fit customer profiles, they gain no empathy or understanding of their customers, and consequently no ability to provide them with value in new ways.

Our objective is not only to identify and develop new solutions, sometimes in partnership with real organizations (both for-profit and nonprofit), but also to help our students become comfortable interacting directly with others in a variety of ways. By focusing on actual fieldwork they learn a variety of practical techniques, in a safe atmosphere, that they can put into practice immediately when working for organizations.

In addition they gain a unique perspective, around specific frameworks and tools, on how to investigate customer drivers (such as meaning, values, and emotions) that vex most marketing professionals.

The course explores all of these topics through a conceptual framework centered on what people ultimately seek from products and services—namely, experiences. While the conversation in business circles around "experiences" has flourished for more than two decades now, we believe that marketers need a more robust understanding of what makes for valuable, rather than trivial, experiences. The conversation around meaning is of particular importance. It asserts that marketers are capable of helping consumers obtain experiences that make their lives fundamentally richer and more satisfying, that companies that credibly offer such experiences acquire an enduring competitive advantage, and that doing so requires a set of tools that a marketing course for our times must provide its students.

Most conventional marketing courses, not surprisingly, are themselves marketing-centric. In other words, their frame of reference is marketing history, theory, and contemporary practice. Much of that practice, in the day-to-day business world, occurs in arenas such as advertising and public relations.

Because our MBA program also draws on design thinking, it's important to broaden the discussion about marketing so that it enriches and transforms design thinking itself. Because of design's interest in human welfare and sustainability, marketing can be reimagined and, in some sense, redeemed as a comprehensive set of tools to address those human needs.

In addition, by engaging in marketing thinking and practice, the coursework itself broadens the design thinking of students. It provides a venue for collaboration with other designers. It also makes it possible for students to explore often unspoken human needs, in locations far from the organizations in which business people focus their activities. This real-world immersion applies a core marketing insight—that marketing is actually all about uncovering what people really want and then finding a way to profitably deliver it—and places this insight in a design context.

The course also explicitly sets out to compare marketing and design as ideas. While many come into the course thinking of the disciplines almost as opposites, by the end they often have trouble drawing a line between the two fields. Is design the stepchild of marketing? Are they siblings? In a world in which both design and marketing practitioners struggle for relevance in corporations, can design be best understood as the successor to marketing as the core practice of delivering value to people? While the course takes no definitive stand, by raising these questions it both enriches design thinking and produces more sophisticated, enabled business practitioners.

Why It's Important

Design, like marketing, has suffered from a distorted public view that has misunderstood its role and limited its potential. Seen by many as concerned with the superficial "prettification" of objects, contemporary design actually has the tools to solve many of our most complex and difficult challenges. Likewise, marketing has been seen as concerned with the selling of messages and offerings regardless of how authentic or valuable the proposition is, while pretending that customers have little or no ability to think for themselves.

Ironically, the disciplines of marketing and design have, for decades, shared the same concern for human betterment. The history of marketing demonstrates that when it's properly practiced, it uses the widest range of tools imaginable to provide what people want most deeply.

Marketing and design, therefore, have much to teach each other. Consequently, when designers have a full grasp of marketing thinking and tools, they become far better designers. First and foremost, they acquire greater sensitivity to what drives human consumption, be it functional needs, emotional cravings, or the urge for meaning in life.

Second, they develop the ability to uncover what sorts of needs, benefits, and experiences people are seeking from the product categories of concern to them. And third, they acquire the ability to make use of the full range of tools at the disposal of marketing, be it retail channels, brand identity, or just a multi-touch-point mindset, that can dramatically extend their reach.

In short, marketing theory and tools make it possible for contemporary designers to reach their objectives in a far more effective, informed, strategic manner. In the current economic context, designers without a marketing mindset simply can't deliver fully on their promise.

Meaning and Marketing Insight Readings

Making Meaning, Steve Diller, Nathan Shedroff, and Darrel Rhea (2006) New Riders, ISBN 0321374096

Social Marketing: Improving the Quality of Life (second edition), Philip Kotler, et.al. (2002) Sage Publications, ISBN 0761924340

Marketing Management (twelfth edition), Philip Kotler and Kevin Lane Keller (2006) Prentice Hall ISBN 0131457578

Design Research, Brenda Laurel, ed. (2003) MIT Press. ISBN 0262122634

Marketing Plans: How to Prepare Them, How to Use Them (fifth edition), Malcolm McDonald (2002) Butterworth Heinemann ISBN: 0750656255

Other Resources

Aside from the books listed above that are either required or suggested to our students, we have made the syllabi and materials for this course open-source to the world at designmba.org/opensource.html

The Sustainability Imperative

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Sustainability is no longer an optional element to either innovation or business management. In fact, sustainability is more an approach than anything else and it affects all aspects of life and business. In the MBA in Design Strategy program, we teach sustainability as a set of principles, chief among them Systems Thinking. We introduce our students to a variety of frameworks that others have developed to contextualize and organize sustainability efforts, and we teach specific tools and strategies that can be put into practice immediately.

Students enter the class with a high degree of awareness of the importance of sustainability and an intense sense of urgency to make a difference in the world. In four months, our job is to quickly ground them in an understanding of the fundamental principles of sustainability, equip them with the best frameworks and tools available to apply to their careers and lives, and, most importantly, provide them with the creative license to explore and try out ideas in a critiqued yet supportive environment during their time with us.

Sustainability is not merely the understanding and managing of natural resources, described as "natural capital" in a business context. It also refers to the financial, social, and cultural impacts that our actions, both individual and organizational, have on the world and our societies. These have always been understood by some, but only recently have a variety of academic, professional, and personal institutions begun to seriously consider these kinds of issues in their management in an integrated manner. Likewise, new insights and techniques offer considerable opportunities to innovate products, services, and policies to make substantial, positive change across all aspects of life.

The approach our program takes is unique. It's not enough to merely teach sustainability alongside business subjects. It's not even enough to teach sustainability, design, and business alongside one another. To truly realize the power inherent in these subjects, they must be integrated throughout and connections where they overlap must be made visible. In the past, the field of design has limited its influence by skirting business issues or understanding business language and structures. Likewise, the ability of design to create new, important, and creative solutions to challenges has not been adequately applied within the sustainability field, thus limiting not only the solutions most needed to create a more sustainable world, but also the processes by which these solutions can be created.

By integrating all three strands together, each is enriched and strengthened and each is illuminated in way that isn't common. These three themes are integrated across the entire curriculum within the DMBA program, but the Sustainability Studio is where all three likely converge to greatest effect. In fact, we can't imagine how programs that don't teach these three domains at all, let alone through an integrated curriculum and experience, can possibly be preparing future leaders and managers with the skills needed to be successful and effective.

As a studio course, the context for learning is through making, using the design process to envision, create, and prototype new solutions once the context of the challenges of people's needs, the planet's needs, and the market's needs are well researched and understood. The solution orientation and our challenge to the students to "move the needle" in creating them—in other words, to make a meaningful, measureable difference—enable our students to feel empowered with their new knowledge and experience, and to focus their energy on creative change.

Sustainability Principles

The most important and powerful principle from the sustainability world is that of Systems Thinking. This one approach colors all aspects of the topic, our course, and our students' understanding of how to make change happen.

We explore

- The interplay between system parts and the whole, resource stocks and flows
- The balance between centralization and decentralization, competition and cooperation
- The value of diversity in creating resiliency, whether in eco- or other systems.

In addition to Systems Thinking, some of the other principles we teach and help the students put into practice include

- Multi-stakeholder engagement
- Multi-disciplinary teamwork
- Service/value-oriented approaches
- Customer/user-oriented approaches

As anyone with an understanding of how design is currently taught knows, these principles are increasingly considered a part of the design process. Indeed, even the traditional business world has come to recognize and integrate some of these principles, creating increased ability to engage in conversations across the disciplines, despite their different vocabularies for some of these concepts. This overlap also forms the basis for the Systems Strategy Model we teach in the program and in our executive education program, the Leading by Design Fellows Program.

Sustainability Frameworks

It's important to us that our students understand the state of the art in the sustainability field. In particular, there are few popular frameworks practiced as a way of engaging sustainable change, and our students need to be able to know and choose from them when needed. These include

- Natural Capitalism
- The Natural Step
- Cradle to Cradle
- The Living Principles

We introduce each one through readings and challenge our students in their first project to use one or more as a way to evaluate the sustainability of a product they choose. In teams, they use these frameworks and learn firsthand their strengths and limitations, often comparing them in the process.

Students come to appreciate that the best frameworks are often the simplest, since they distill the core principles of sustainability into straightforward guidelines. At the same time, they learn that the best tools for comprehensive, in-depth analysis are complex and can require specialization in order to master them.

Sustainability Tools

There are many tools already available to evaluate, measure, and employ toward more sustainable solutions. It's neither possible nor appropriate to teach them all. We've selected a few specifically within the context of this course and its focus on creating solutions that "move the needle."

The first is Life Cycle Assessment (or Analysis). This is often a complex process that requires insider knowledge of a product's manufacturing process. Our students are able to measure some of the impacts themselves, usually in the use, disposal,

and recycling phases, but they are not able to generate some of the most critical data, within or upstream of the manufacturing phase, which are often the phases with the highest impact. This introduces them to some of the frustrations of the process and quickly dispossesses them of any opinion that sustainability is easy.

Other tools we specifically describe include Biomimicry and the Biomimicry Design Spiral, Edwin Dafchefski's Total Beauty™ system, Sustainable Return on Investment (SROI) and Sustainable Impact Analysis (SIA), and the Natural Capitalism Institute's Sustainability Helix process. These emphasize different aspects of the sustainability rubric: some social impacts, some ecological impacts, some cultural impacts (though there are noticeably few in this category), and still others related to process itself. Together they form a decent tool kit for leaders, managers, and developers to put sustainability into practice, at the corporate as well as product and service offering levels. In addition, they can all be used both strategically and tactically, depending on the challenge and context.

Sustainability Strategies

Lastly, we teach a set of specific strategies that can be put into practice in almost any context for creating more sustainable solutions. These include:

- Design for Use (Usability and Meaning)
- Dematerialization (Materials, Energy and Transportation)
- Substitution (Materials and Energy)
- Localization
- Transmaterialization
- Informationalization
- Design for Durability
- Design for Reuse
- Design for Disassembly
- Close the Loop
- Design for Effectiveness
- Restoration

Together, these strategies can help students as well as professionals create more sustainable offerings, organizations, systems, and societies. They apply to every industry and human endeavor so they become an important and influential foundation of our students' professional skills.

The Emotional Rollercoaster

One of the issues we've observed, but didn't expect, is a kind of emotional rollercoaster. If we were to chart the emotional intensity and engagement of our students throughout the course, we'd find that they enter the course with high expectations of both learning and making solutions. Within the first four weeks of the product evaluation assignment, they quickly become frustrated at the lack of available data and tools with which to make adequate evaluations across the spectrum of sustainability: ecological, social, cultural, and financial. This is compounded over the following four to six weeks as their readings take them into the deep and troubling crises facing human societies as resources become more scarce and ill affects of human industry mount, seemingly uncontrollably.

At this point they actually become depressed, an effect that is exacerbated when they see the early publication dates on some of our assigned readings. Our industries and societies have known about these issues for decades and accomplished little in response. The basic theories and principles have been long established with little impact on organizational management or development.

It's not until we start teaching—and the students start practicing—the strategies and tools that help enable more sustainable decisions, behaviors, and solutions that they begin to rebound. Without this information, and the chance to enact it in practice, they would be left at the bottom of this emotional curve with no means to recover. We suspect that in some programs, this is exactly what happens, the result being sustained gloom in terms of world outlook or a cognitive dissonance that results in a denial of the problems.

Instead, our students' emotional involvement steadily rises throughout the second half of the course. Their spirits rise, and they reach the end of the course considerably more positive, engaged, confident, and excited about their ability to make change in the world than when they entered. It's not an easy process, but it is a valuable one.

Project-Based Learning

As in all of our studio courses and many of our non-studio courses, our students learn the most through projects they create. In the Sustainability Studio, teams of students choose a direction and audience, sometimes based on a theme for the semester. Student teams are challenged to find meaningful foci from direct customer research around these themes and develop their discovered opportunities into solutions. This is no different than our other studio courses but in the Sustainability Studio, they are given guidance and feedback to help them mine the unique opportunities associated with sustainability experientially in order to create more meaningful, successful, and differentiated solutions.

Students are challenged to collaborate on their two main projects, the first being an evaluation of a product in terms of its sustainability impact, and the second the development of a new product, service, or policy that makes significant positive impact.

In their first project, students evaluate a product with sustainability in mind—not only the product's business viability but also how it affects the environment and social realms. In the course of analyzing common objects such as a dollar bill, or more complex items such as wine in Tetrapak® packaging, students quickly realize that the closer—and wider—one looks, the more opportunity there is for improvement.

Examples of student projects:

- Small Steps
- Play Bank
- BLVD
- Biketopia
- Cultural Prism

Student Work

These and many other examples of student work can be found on the website: **dmba.us** as well as the program blog: **designmba.org**

Conclusion

The Sustainability Studio interweaves the three strands of design, sustainability, and business—an integration that is evident and practiced throughout the DMBA program. It is as much a moment of amplification and intensification as of integration. While working in the Sustainability Studio, students are concurrently learning about leadership, business models, stakeholders, and market insight in their other courses. These

five subjects form a further integrated learning experience as they interrelate and reinforce learning. This is no accident. We've specifically designed the program's curriculum to give the students more than one opportunity to experience and explore these intersections from different perspectives. The outcome is a much more integrated understanding and set of skills, giving them superior preparation for change as they move through the program and then back out into the world.

Throughout the course, and the program, we challenge our students to learn in practice, to engage with their customers directly and deeply, and to explore possibilities they otherwise wouldn't see (and that most organizations never do).

Students leave Sustainability Studio cognizant of these possibilities, confident that the only limitation to finding them is an informed imagination, and aware that they can be part of leading the change to realize them.

Readings and Speakers

We challenge our students with different interpretations and perspectives on sustainability. The required texts for the course include:

Design is the Problem, by Nathan Shedroff (2009) Rosenfeld Media ISBN: 1-933820-00-4

Natural Capitalism, by Paul Hawken, Amory Lovins, and Hunter Lovins (1999) Back Bay Books, ISBN: 978-0316353007

Leading Change Toward Sustainability, by Bob Doppelt, Greenleaf Publishers, ISBN-13: 978-1874719649

Optional readings include:

Thinking in Systems, Donella H. Meadows (2008) Chelsea Green Publishing, ISBN: 978-1603580557

These readings cover many of the topics described above as well as managing change within organizations. We discuss these texts both online, where more consideration can be taken when responding to others, as well as in person during class. Discussions help us gauge our students' understanding of the more theoretical side of the course content but also often expose the instructors to new ideas sparked by the students' understanding of the course materials.

Guest speakers feature prominently in the course in order to expose the students to as many facets of sustainability as possible. We are fortunate to have expert guest lecturers join us in diverse fields, from biomimicry to social entrepreneurship, water cycles to electronic waste. Other speakers include accomplished business professionals leading sustainability initiatives in Fortune 500 corporations and successful CEOs who are building new businesses, from toys to paper, who have included sustainability as part of their core mission. Hearing the stories of people who've dedicated their lives to sustainability in one form or another provides students inspiration that emboldens them to think about their own role in creating a better world.

Other Resources

Aside from the books listed above that are either required or suggested, we have made the syllabi and materials for this course open-source to the world at

designmba.org/opensource.html

The Business of Delivering Experiences

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In general, business students and professionals learn very little about creating new products and services, or "design thinking" —the design process and the specific approach to problem-solving it represents. There are a growing number of programs that offer courses in product development, design thinking, and besign-based innovation, but these are still a small minority. Most business people think of product and service development, if at all, as just another self-contained process, like creating an annual report or optimizing a factory's manufacturing capacity. They don't understand the development process and how closely it needs to be integrated with corporate strategy and business models. They don't understand the resilient and flexible nature of the process that allows it to be used in other parts of the organization. And they don't understand the complexity of researching customer needs in order to create new solutions that change the market as well as customers' lives.

Teaching the design process is a start but this subject is one of those that can only be taught effectively by practice. When learning to drive, one could read a shelf of books about driving, but in the driver's seat for the first time, it becomes apparent that theory is not terribly useful until it is actually embodied in experience.

In the MBA in Design Strategy program, we cover these and many other issues in the first semester in a course called Innovation Studio. This is an introduction to design and integrative thinking, design processes, and innovation history and theory, and it is all embodied in practice, prototyping, and critique. For other business programs, this would likely suffice and, indeed, it is far more advanced than what business programs have taught about innovation in the past. In the DMBA program, however, this is only the start.

Through the Market Insight Studio, where students learn specific ethnographic and other qualitative techniques aimed at better understanding customers beyond mere price and performance options, students learn how to understand human emotions, values, and meanings in order to make them the focus of the innovation process. This allows them to more successfully propose and develop products, services, events, and other experiences that create more meaningful offerings and, in so doing, add more value to people.

The Experiences Studio takes this foundation and focuses on deepening and widening our students' understanding of the experiences they create for others. As in all our studio courses, the Experiences Studio puts these lessons into practice by assigning students to work on new solutions for specific customers. Our goal is to help students create unique, differentiated offerings that add more value to customers and create meaningful, delightful, satisfying experiences.

Central to this process is collaboration, a tenet of most courses in the program. Our students work in teams in order to bring multiple perspectives to the research and development of new solutions as well as multiple interpretations of the results. Deeper, richer experiences require deeper, richer understandings and, often, this isn't possible from one or two people. We teach our students new approaches and skills in communication, collaboration, and leadership in the semesters leading up to this studio course. That way, by the time students participate in the studio course, they can put these techniques into practice.

The Experience Model

Our program teaches a specific model of experience that is introduced in the first semester and reinforced throughout the program. This Experience Model describes all human experiences in six dimensions and we encourage our students, particularly in the Experiences Studio, to explore these deeply.
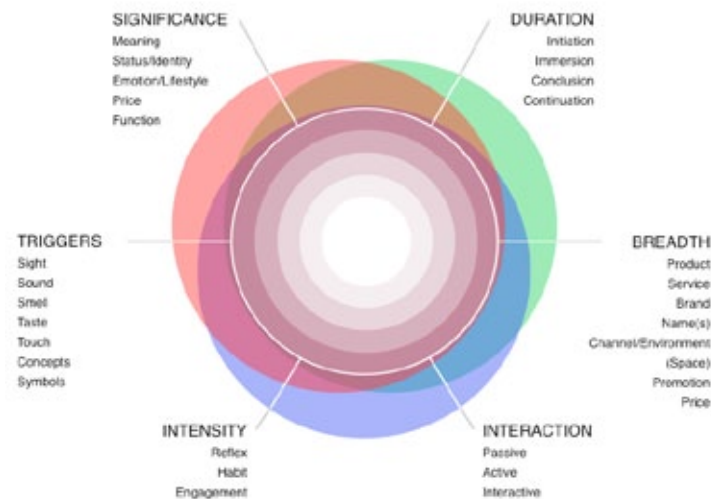
The Experience Model
The six dimensions of experience

The first dimension is of breadth and the core imperative of this dimension is to be wary of the need for consistency across all customer touch points of a brand or organization. Customers view a brand or organization as a coherent whole, much like a person, and thus expect it to exhibit consistent, appropriate behavior, as would an individual. When it does not, it becomes untrustworthy, the object of suspicion.

The challenge to organizations is to explore and gather all of the touch points for planning and development (and these are usually more numerous and widespread than most managers think) and to coordinate these experiences so that they seem consistent. The consistency necessary is a "human consistency"—that is, one that seems human and appropriate to the customer even when it isn't necessarily consistent from the organization's perspective. Because each touch point and medium has its strengths and weaknesses, it needs to be able to express the organization's strategies and messages appropriately for each experience. However inconsistent from a technical or quantitative standpoint, these disparate experiences need to feel consistent to customers, as if they're coming from one person or perspective. This is one of the greatest communications challenges organizations have addressed, since it is not easy, nor can any one vendor or manager coordinate across all of these experiences, deliverables, and variations.

The second dimension is one of duration. Contrary to how most organizations define their product and service offerings, the experiences they offer often stretch many times outside of the timeframe most managers work with. For example, the sales process for nearly every expensive product starts long before the "transaction" of the sale or even the process of customers making a decision. This is particularly true for automobiles, homes, vacations, jobs, and often clothes, furnishings, and electronics.

Imagine the man who has been shopping for a particular car (or type of car) since he was a teen, or the woman who has envisioned herself traveling to a specific country or scaling a mountain for as long as she can remember. These experiences (and purchases) are exactly the kind that offer deeper connections to customers, higher profits, and longer customer loyalty. In order to serve the customers, and reap the resulting rewards, managers and developers need to understand how long these experi-

ences extend before and after the sale and resulting ownership. Within this longer timeline lies the opportunity to understand the "irrational" forces that often short-circuit decisions of price and performance in favor of emotions, values, and meanings.

The third dimension, Intensity, is largely an academic notation. Most designed experiences are, by definition, engagements where customers' attention is present during the experience. It is when we get too familiar with repetitious experiences that they become habit. The business opportunity here is that, often, habitual experiences can be reanimated into engagement experiences, offering the ability to differentiate offerings. This is precisely what happened when the Reach toothbrush disrupted the existing market paradigm for toothbrushes by drawing attention and mindfulness to its unique product. Similar opportunities exist if developers understand these dimensions in order to spot them.

The fourth dimension, interaction, describes the type of engagement people have in an experience, whether passive, active, or interactive. We place no value judgment on this spectrum; interaction isn't necessarily better when active or passive. Instead, it's critical for developers to understand this spectrum so they can position their solution appropriately to their audience (or participants), their context, and the opportunity. Passive experiences, like reading books or watching films, are still important, satisfying, and influential. Transforming them into interactive experiences either makes them more successful or more satisfying (in fact, the reverse has often been true). Likewise, however, many organizations have failed by offering products and services in interactive media (whether digital or not) that didn't truly take advantage of the opportunities and peculiarities of these media.

The fifth dimension, triggers, is a redefinition of what has traditionally been called "design." No matter the field, in the past, design has been taught and practiced as a process of personal inspiration that results in new solutions that, for the most part, reflect the judgment and preferences of the designers. As organizations have tried to limit the missteps that can occur when designers' visions don't match the interests of customers (resulting in poor sales), they have turned to techniques such as focus groups, mall intersects, and participatory design (where customers codesign solutions alongside designers and engineers). Mostly, the results have been unsatisfying.

In our program, we redefine the design process (not the designer) as an orchestration or curation of a vast set of decisions based on the understanding of how these decisions trigger reactions in potential customers. For example, instead of a designer advocating a particular material, color, or typeface, designers are instead asked to research and understand how their customers react to particular materials, colors, and typefaces. Based on their new understanding, designers then develop solutions in a cohesive, original, and satisfying manner. If teal or birch or Futura don't trigger the desired reactions, then it doesn't matter how much a designer prefers these choices. Conversely, if the sum total of all choices, which independently trigger the desired reactions, don't create a satisfactory result, the designer isn't finished.

These decisions encompass the entire spectrum of human senses. They include everything that we see, touch, hear, taste, smell, and feel, including colors, textures, patterns, aromas, flavors, typefaces, sounds, music, voices, icons and symbols, interactions and relationships, layouts, concepts, temperatures, expressions, and more. This variety speaks to the complexity of the design process and suggests why there can be no easy formula for designed solutions. There can only be an informed understanding of the triggered effects of these design decisions so creators can carefully choose them when creating something innovative and satisfying.

The Meaning Model

The sixth and final dimension, significance, introduces the meaning model we teach throughout the program. This model orients classic business offering criteria, such as price and performance, within a larger model in relation to deep customer connections. These classic requirements are actually the most shallow connections to customers, which explains the relative ease with which customers change their minds about products and services when based solely on these requirements. For example, when all they look for is the lowest price, people show little or no loyalty when they find cheaper goods. Instead, when customers are engaged at the deeper levels of emotions, values, and (deepest) meaning, these connections outlast many price and feature considerations, often surpassing customers' set budget or feature requirements. Consider how common it is to buy cars, homes, vacations,

clothes, jewelry, or electronics that either don't meet all of our stated needs (comfort, for example) or are more expensive than the budget limits we initially set, or both.
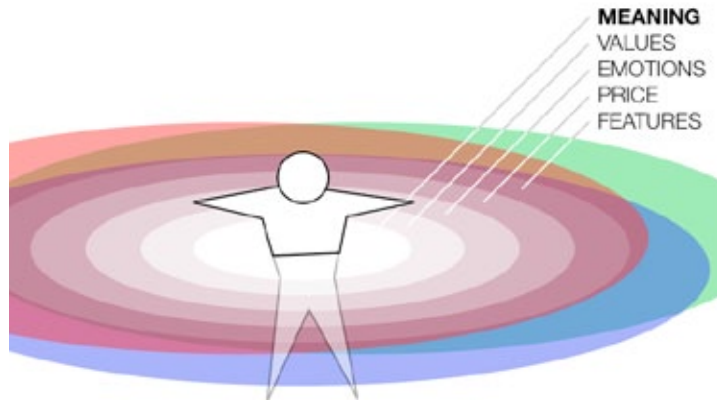
The Meaning Model
The five levels of significance

This is why values and meanings are important to organizations, influencing not merely their marketing and messaging but also their strategy. When an understanding of experience and meaning actually forms the basis for corporate strategy, it affects an organization's offerings; transforms its culture, messages, and structure; enhances its ability to find and serve customers and partners at these deeper, more profitable levels; and ultimately changes its understanding of the business it is (or should be) in.

Sensorial Exploration

In order to help students and professionals understand the depths and breadths of experiential opportunities, we specifically engage them in exercises and experiences designed to explore our senses. For example, for students to understand both the commercial and the human dimensions of smell, we bring in perfumiers to give guest lectures and train the nose via perfume testing. To educate their palates to perceive variations and complexities in taste, we take them through a tasting exercise with a variety of single-source chocolates and other ingredients. We conduct exercises for the other senses as well and ask students to create new sensorial experiences designed to challenge others' understanding of the senses. This helps them both understand a larger context for their own experiences and put this knowledge into practice.

Experiential Reading

We challenge our students with different interpretations and perspectives on experiences and their creation. The required texts for the course include:

A Natural History of the Senses by Diane Ackerman, 1991, Vintage Press, ISBN: 978-0679735663

Experience Design 1.1, by Nathan Shedroff, Experience Design Books, 2009, ISBN: 978- 0982233900
experiencedesignbooks.com

Optional Readings Include

The Third Teacher: 79 Ways You Can Use Design to Transform Teaching and Learning by OWP/P Architects, VS Furniture, Bruce Mau Design, Abrams, ISBN: 978-0-8109-8998-6

The Secret of Scent by Luca Turin, Harper Perennial, ISBN: 978-0-06-113384-8

Experience Design 1 Cards by Nathan Shedroff, Experience Design Books, 2009, ISBN: 978-0982233917
experiencedesignbooks.com

The Spell of the Sensuous by David Abrams, Vintage Books, ISBN: 978-0679776390

The Phenomenology of Perception by Maurice Merleau-Ponty, Routledge ISBN: 978-0415278416

Seeing Is Forgetting the Name of the Thing You See: A Biography of Artist Robert Irwin by Lawrence Weschler, University of California Press, ISBN: 978-0520256095

We use these discussions to help us gauge our students' learning and their understanding of the more theoretical side of the course content. In the best spirit of interactive education, these discussions also expose the instructors to new ideas and understandings related to the course materials.

Project-Based Learning

As in all of our studio courses and many of our non-studio courses, our students learn most through projects they create and oversee. In the Experiences Studio, teams of students choose a direction and an audience, often based on a theme for the semester. In the past these themes have included health care and learning. Student teams are challenged to find meaningful foci from direct customer research around these themes and then develop their uncovered opportunities into solutions. This is no different than our other studio courses but in the Experiences Studio, they are given time and opportunity, as well as feedback, to help them delve deeply into the dimensions of experience in order to mine these opportunities experientially so as to create more meaningful, successful, and differentiated solutions.

Students are challenged by individual assignments to explore specific elements of experience such as community, narrative, identity, and adaptation as these relate to their semester-long projects. Short, weekly assignments relate directly to their readings and discussions and ensure that students explore aspects they might not otherwise. In this way, through various learning modes and contexts, we weave together the strands of theory and practice. This helps students understand the elements of experience already in existence and how to use them to create new, better experiences successfully.

Story Capture
A company's body of stories is a collection of experiences that together give its people knowledge, direction, and purpose.
Nicole Chen
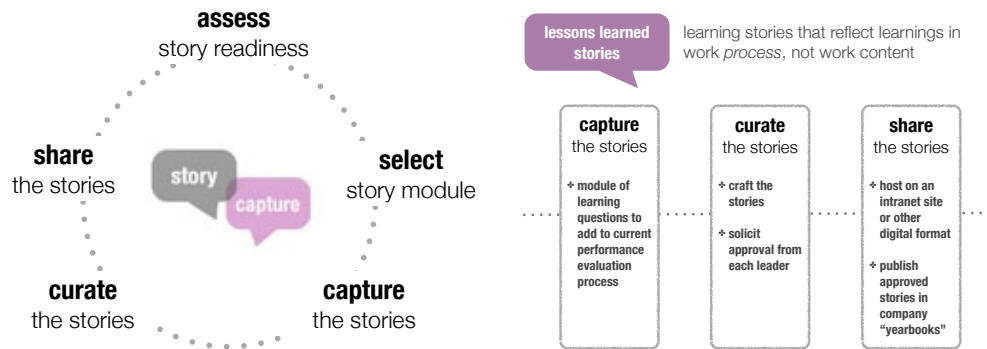
Conclusion

The Experiences Studio integrates the various threads and concepts taught within the DMBA program. It provides students with an opportunity to create holistic solutions that build on their previous two semesters as well as the courses they are taking concurrently. In addition, students have the option to take the solution they create at the end of this course into the final studio, the Venture Studio, where they can focus on creating a business around it.

Throughout the course, and the program, we challenge our students to learn in practice, to engage with their customers directly and deeply, and to explore possibilities they otherwise would never see.

Resources

Aside from the books listed above that are either required or suggested to our students, we have made the syllabi and materials for this course open-source to the world at designmba.org/opensource.html

The Creative Q
While researching people's motivation to express themselves creatively, student Erica Meade identified a common problem: "creative blocks" that are difficult to overcome. In response, The Creative Q is a member service that sends prompt creativity, and shares it among groups.
—Erica Meade

For more examples of student work, visit dmba.us

How is it that companies with radically different cultures can be massively successful, and yet companies in the same industry with similar cultures—for example, HSBC and Barclays Bank—may have different levels of success? Why do some companies expand successfully internationally while others are only successful in their home markets?

Naomi Stanford

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The What and How of Business

The answers to such questions lie in the business model—the "what" and "how" of a business. "The business model of an organization is a simplified representation of its business logic. It describes what a company offers its customers, how it reaches them and relates to them, through what resources, activities and partners it achieves this, and, finally, how it earns money."[1] In a sense, a business model is what someone seeking investor support to create or expand a company would describe in the business plan.
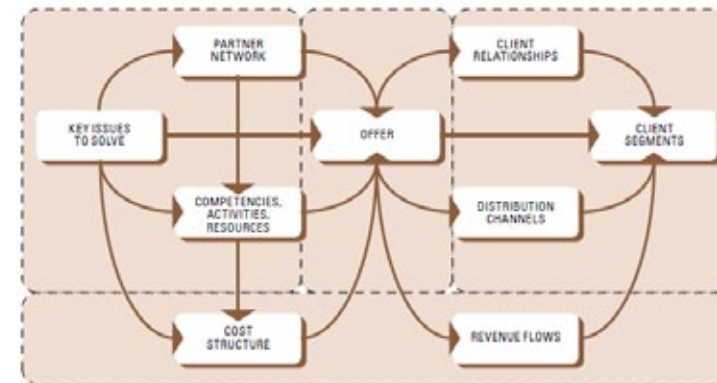
Figure 1
Representation of a business model

The "what" of the organization (represented as boxes in figure 1) are standard business elements requiring conscious choices and decisions. For example, "competences, activities, and resources" requires managers to answer questions such as: What are the main activities we operate to run our business? On which key resources do they rely? To which value propositions, channels, or relationships do they contribute?

The arrows between these "whats" represent how the organization comes to these decisions and include both hard resources, such as IT systems or explicit policies, and soft factors such as leadership style or speed of decision making. Again, people within an organization make choices and decisions around these. For example, the arrow from "customer relationship" to "offer" requires choices and decisions around soft questions

such as: How responsive will we be to customer feedback? Are we going to *tell* the customer, or are we going to make choices and decisions by involving the customer? Will we treat all customers equally? It also involves hard questions: What IT system is the best customer relationship management system for our purposes? What packaging shall we offer our product in? Do we need packaging at all? At what price should we offer?

Each of the choices and decisions have consequences that make for, or sustain, the viability of the business model, as the example of Domino's Pizza illustrates. In July 2009 Domino's reported that international same-store sales (sales revenues for retail stores that have been open for a year or more) grew 4.1 percent. The international division continued its strong performance, posting its 62nd consecutive quarter of same-store sales growth. David Brandon, Domino's CEO, said, "I'm putting this quarter in the win column for Domino's Pizza. I'm proud of my team and our accomplishment of emerging as a leader during tough times. The predictability of our (business) model continues to be a plus in an unpredictable landscape."[2] In this case, the choice to be "predictable" yet remain competitive has a number of consequences, one of which is the requirement for continuous improvement. Brandon acts to develop the concept in his organization, stating that:

> You cannot stay the same; you're either going to get better or you're going to get worse. One of the things that I do over and over again at my organization is to reinforce the concept that we have to get better, that even during times of tremendous success, if we get complacent and start to read the press clippings and believe that we're better than we are, we're going to fall back.[3]

This is a soft (behavioral) example of activating the predictable business model. A hard example is a technology one:

> Domino's, the pizza-delivery kingpin, on Wednesday (February 2008) will unveil a technology, Pizza Tracker, that lets customers literally track their pizza from the moment they place the order until it leaves the store en route to them. What's more, Domino's vows that its online tracking system—for phone or online orders—is accurate to within 40 seconds.[4]

These two examples of continuous improvement relate to the "client relationship" and "offer" business model elements and

the arrow between them. As the Domino's example illustrates, a successful business model must adapt to meet changing circumstances if it is to stay successful. The print newspaper industry is one in which many companies are facing the need to adapt their business models. A number of factors—technological, demographic, and economic—are strongly pressuring newspapers and their ability to stay in business. This is an industry ripe for innovative thinking, not merely regarding the form or delivery of the newspaper but the model on which it operates. How newspapers respond to current external pressures will soon determine whether they survive or not.

Simply spending a semester talking about business models and comparing examples isn't an effective use of time. How the topic is addressed is as important as what is discussed. In addition, the development of business models can be significantly enhanced by examining how design strategy, innovation, and sustainability intersect the processes used to derive, manage, and evolve business models in real time.

The very framework of the organization, especially if it is visualized clearly, is the structure of the organization's culture, operations, and values, and it lays bare how an organization makes decisions, navigates market and other forces, and understands itself and its current situation.

In learning about business models, it is important to explore some fundamental questions: Why are there different definitions of business models? What is yours? Why does the definition matter?

In answering these questions, it is necessary to deeply investigate an organization's context and culture in addition to its organizational structure and product or service offerings. Part of the context is to explore the industries, markets, and customers with which the organization interacts. These answers typically trigger deeper philosophical questions as to why an organization exists in the first place—as well they should. It's healthy for an organization to periodically contemplate its purpose, as this is often easy to lose sight of in the day-to-day business needs of operation.

To be effective in exploring these contexts and cultures, it is important to build a multidisciplinary team with a variety of analytical, integrative, and intuitive skills. This work requires several people working together to uncover necessary informa-
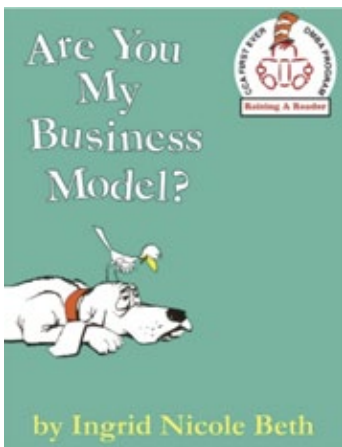
tion. It is also important to engage with stakeholders during the process to uncover insights that may be unclear from an insider's perspective. These stakeholders might include customers, partners, employees, investors, and various groups within the organization's community or environment.

Raising a Reader

One example of an effective research process, business model formulation, and presentation comes from a student project in the DMBA program focused on an existing nonprofit organization, Raising a Reader. This San Francisco organization is at a turning point in its history and exploring different paths to take. It exists to help preschool-aged children learn to read so that they're better prepared for school and life.

A team of students met extensively with Raising a Reader as well as with many of the organization's stakeholders. Their final presentation to Raising a Reader outlined several appropriate options for the organization to evolve its business model, presented in an original, fun way that contextualized the organization's values and approach.

One of our teams worked with Raising a Reader, a local nonprofit focused on early childhood reading. They developed appropriate new business models and presented them in a fun context related to the organization's mission.

They presented as if they were reading to preschoolers, but the information they communicated was important and professional. Their client appreciated the entertaining context of the presentation and was impressed with the analysis and recommendations.

Multidisciplinary Teams

As with many of the assignments in the DMBA program, students in this course work in teams. Not everyone thrives in a team, yet it is critical for people to learn how to collaborate effectively. These teams also work with a variety of organizations, including nonprofits, startups, social entrepreneurs, government agencies, and large, for-profit corporations. This diversity is key to their learning about the variety of issues and variation in business models, as well as overlaps and similarities. Many in the business world view nonprofits and for-profits as different types of organizations, with distinct cultures, that require separate solutions. This is usually not the case. More often than not, while the missions of these organizations might differ, everything about their management and culture, as well as their business model, is similar. The techniques to explore possibilities, engage stakeholders, and learn from the markets are thus entirely the same, and it is important for students to learn this.

In addition to a larger project that involves working directly with an outside organization, we assign a smaller project. We're also in constant dialogue around business model issues. Each week we tackle a different question, either outlined in the reading material, related to current business issues in the news, or concerning specific existing companies. Two different students lead the discussion each week so that all get experience leading. Participation by all is mandatory.

The students keep a shared online log of resources and best practices that all can access. This helps them build a tool kit they can use and update for the rest of their careers. The students gain both knowledge and experience situated in consulting with real organizations but with the safety and resources of a school atmosphere.

Because classes in the DMBA program meet all day, for only a few days a month, the class is tightly structured. Coasting through is not possible, as the days in class are filled with discussions, projects, speakers, and work sessions, and the days in between are filled with interviews, team meetings, readings, deliverables, and online discussions. These discussions are designed to guide the work between in-person classes and expand the knowledge students gain through their interactions with outside organizations. Because students and instructors are not meeting in person between classes, timely and exten-

sive feedback on student work is mandatory. We supplement this feedback with clear instructions and occasional online, real-time conversations (via Skype or iChat) and conference calls.

At the end of the class, we ask each student to develop a press release or other targeted communication that summarizes his or her experience in the class and with their organization. This serves the purpose of a "lessons learned" document and frames the experience in a professional context for business communications. It further allows the students to stretch their creativity while continuing the thread of appropriate, insightful ideas developed for their partner organizations.

Multiple Points of View

Core to our teaching of business models is the requirement to identify and engage a variety of stakeholders in order to clearly understand an organization's context. Whether an organization is an established for-profit company, a startup, a nonprofit NGO, or a government agency, all need to approach and understand the community they operate within before they develop or evolve their business model. Since our students don't have the time to complete in-depth work with several types of organizations, they get exposure to different types of organizations by watching their peers work and present for their clients.

Evolve or Die

This concept of evolution is critical. Also consider recasting the sentence to say: Organizations that can't or don't evolve are faced with extinction. Whereas the values and mission of the organization shouldn't change drastically or quickly, the way it responds to its markets and customers and adapts its offerings must always be up for review and change in order for it to remain competitive and viable. This is a departure from how most businesspeople think about their business model and how business models are usually taught. A business model that is static reflects an organization that is incapable of nimble response. Such organizations are ill-suited to innovation, responding to rapid changes in the marketplace, or new competitors.

Understanding the changing landscape of stakeholders is one way to ensure that a business model remains appropriate and up to date. This isn't always easy, as many stakeholders—even

committed employees—may not have the time, capability, or empowerment to honestly describe their experience with the organization.

Another example from our class is from an engagement with the innovative company Rickshaw Bags. One distinguishing aspect of this company is its impressively integrated approach to innovating the design, sustainability, and business model of each product. By understanding the context for each, Rickshaw is able to reduce costs, offer mass-customized solutions, increase quality and responsiveness, and build more sustainable products. This wouldn't be possible without the tight integration of decisions across all of these domains.

However, even a company this advanced isn't always easy to explore. In the words of our student, Jason Hui:

> During my third visit to Rickshaw I spent the day shadowing the employees and conducting stakeholder interviews. A lingering question for the group is how the seamstresses fit into the culture at Rickshaw: What they experience, what motivates them, if they even enjoy their work? All three speak little English (they speak Mandarin Chinese) and we didn't have time to arrange for a translator. We accepted that we might not gain much insight into their situation, yet they play such a significant role within the company. However, during an interview with the woman in charge of customer service, we found that she had a great deal of contact with the seamstresses and they all shared a genuine friendship and mutual admiration.
>
> The resulting insight was that the seamstresses really liked their jobs. At first, we didn't understand why factory workers (or service workers, for that matter) would enjoy their jobs. What we found (and this is the totally obvious part) was that the seamstresses like their jobs because they get to see the effects of their personal contribution: the finished goods, materials, and combinations they have chosen, and, most importantly, the smiles on the customers' faces when they come into the store. They are moved by the same things that our overeducated and privileged demographic is moved by: making a difference in people's lives. Their previous factory jobs in China didn't offer this connection. We learned that factory work can be more than just something you do for money, and that a meaningful job is part of the business model for everyone in the organization."

New Value for Consulting

This approach to analyzing and developing business models has implications for design as well. Our students see design-led innovation in a different light and realize that the very same tools and processes they use to develop new products and services can be used to develop new business models and structures.

Our students become comfortable questioning, researching, and developing these new models for both existing and new organizations within real business environments. They learn a variety of tools so that they can deploy appropriate processes to fit a particular organization's needs and culture. In this sense, they are not tied to a single approach or set of tools. We specifically discuss how consulting is changing and how to be effective within that model.

The students are confronted with the complexity of real business models and processes for engaging with these successfully, and they gain confidence that they can devise a plan to explore and tame this complexity in order to bring clarity to an organization's business behavior. This, perhaps, is the most important value of the class. They put theory into practice, and in the process gain experience they can translate into other opportunities.

Recommended Reading

While the Business Models and Stakeholders course is taught with a collaborative, project-learning context, we do assign several texts and many articles to read and discuss.

Guide to Organisation Design: Creating High-Performing and Adaptable Enterprises by Naomi Stanford (2007) Bloomberg Press ISBN: 978-1861978028

Business Model Generation: A Handbook for Visionaries, Game Changers, and Challenger by Alexander Osterwalder and Yves Pigneur (2010) Wiley ISBN: 978-0470876411

Web Resources

Organization Design Listmania on Amazon: www.amazon.com/Organization-Design-Book-List/lm/R3HTN36KRUMHK2

David Baker & Partners Activism:
www.dbarchitect.com/activism.php

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3. Lessons Learned, Making Strategy Work – David Brandon, Chairman and CEO, Domino's Pizza. (2009). Times Online. January 15. http://business.timesonline.co.uk/tol/business/entrepreneur/article5525130.ece

4. Horowitz, B. (2008). Where's your Domino's Pizza? Track it Online. USA Today. January 30 http://www.usatoday.com/money/industries/food/2008-01-29-pizza-tracker_N.htm

New Directions for Economics

The field of economics has undergone tremendous change in recent years. This is in large part due to the perceived gulf between economic theory and observed economic performance, and to insufficient attention to the human influences on models and policies. As a result, economics instruction has also changed.

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Economics instruction has long been influenced by instructors who went through a quantitatively oriented socialization process called "earning an economics degree." For 30 years or more, calculus, algebra, and statistics ("econometrics") have been the languages academic economists use to obtain grants and earn tenure. Under this approach, numerical measures and proofs are not only commonplace, but they crowd out alternate approaches to description, analysis, and evaluation. As a result, "quants" and numeric modelers are disproportionately attracted to the field and they, in turn, go on to teach others and continue to emphasize the technical side in a cycle of numbers begetting more numbers.

Of course, calculus and statistics are means for realizing given ends, not ends in themselves. This distinction is lost not only on academic economists, but also on practitioners in government and business who are more in love with the tools than the insights the tools can uncover. For the rest of us, and the larger society, the practical aspects of economics, and the theoretical models that make sense of them, have as much importance— perhaps more.

Economics is the study of how human beings cope with scarcity. Number crunching is essential, particularly because it is difficult to make comparisons, measure progress, or analyze results without a common language. But number manipulation is just one way of comprehending the challenges that scarcity imposes. It is useful in describing the results of human actions, but it doesn't explain the behaviors underlying those actions. Human behavior presents challenges and complexities beyond what quantification is capable of capturing.

All economics is behavioral. However, the field of economics has held much of this reality to the side because human behavior is difficult to model and predict, and because numbers offer precision and reassurance that qualitative measures do not. Numbers provide professional and scientific accuracy, even when they only tell part of the story—and frequently the easiest part.

All economics
is behavioral.

It is essential that students of economics, whatever their background or profession, grapple with essential concepts such as constraints, costs and benefits, marginality, foregone opportunity, and—of greatest importance—the critical need to let go of the biases that humans bring to every undertaking. Armed with this understanding, students gain a better ability to apply and assess different analytical methodologies in order to determine which may be of value relative to what they wish to accomplish. This approach also reminds students that economics is a behavioral science, not a branch of engineering or mathematics.

The Economics of Design

The MBA in Design Strategy program integrates design into the management of business and nonprofit organizations. The case for relating design to business was made recently by Jay Greene, *BusinessWeek's* former Seattle bureau chief, who argued in the *Wall Street Journal* that Apple will overcome its iPhone 4 hiccup based on its history of strong design. Mr. Greene was not referring to the elegance of the phone, but to the design-based orientation that Apple brings to all of its endeavors:

> The reason is design. And not just the design of the iPhone 4, which looks slick and—despite the antenna glitch—still does more things better than just about every other mobile phone available. It's selling well because Apple's decade-long focus on design has bought it significant goodwill among consumers.[1]

This is also an economic argument. Good will born of strong design translates into market strength that enables the Apples of the world to cope with the occasional product defect and generate sufficient margins to innovate, invest in sustainable systems, manage environmentally conscious resource cycles, and satisfy the diverse and often conflicting preferences of stakeholders.

The Managerial Economics course in the DMBA program brings these economic and design strategy concepts together by addressing some of the theoretical, institutional, and behavioral dimensions of organizational leadership.

The workings of the economic system are examined with an emphasis on the role of markets in allocating scarce resources. Concepts such as cost versus benefit, marginality,

and trade-offs are explored due to their critical importance for making choices in a world of limited resources. Applying these concepts to contemporary managerial concerns helps students develop skills in performing analyses in the private, public, and nonprofit organizational arenas.

Managerial Economics assumes that leaders must understand the environment in which individuals and organizations function. Particularly in positions of responsibility and public trust, students will require a stronger decision-making foundation than that afforded by intuition or common sense. Economics provides a framework for structuring, researching, evaluating, and selecting among alternate courses of action that determine the success or failure of initiatives and organizations.

The perspective of the Managerial Economics course is that design strategy, enlightened management, and economic theory—applied with a commitment to environmental stewardship and the public good—need not put managers in opposition to free markets and commercial enterprise. Such opposition often reflects a politicized world view in which one's ideology is used to interpret events and initiatives, rather than to make judgments based on factual evidence and sound analysis.

Consider the question of whether microfinance (the process by which tiny loans are made to people with few assets and credit) must always be altruistic. This issue is coming to the fore as microfinance entrepreneurs begin to access capital markets to fund their new businesses. Some luminaries in the field, like Nobel laureate Muhammad Yunus, are against public stock offerings because they view microfinance as a service for the public and "an opportunity to make an impact on poor people's lives."[2] But why must the two be opposed? Do microlenders object to competition? Why not broaden investment in an industry where the poorest and least creditworthy can get loans with which to start or expand their new enterprises?

If investors want to put money into firms that do well and do good; and consumers want to buy goods and services that are environmentally and socially conscious; and employees want to work for firms whose ethics they endorse, then market capitalism remains one of society's most compelling methods for enabling those choices and allowing them to effect change in the aggregate. Economic theory and practice—matched with sound strategic management—enables us to make better choices.

Managerial Economics Content and Objectives

Economic theory and analysis are important for understanding both the economy in which individuals and organizations function and the tools of management decision making in the private, public, and nonprofit arenas. Managerial Economics expands upon basic economic concepts by distilling actionable elements from microeconomics to provide students with the essential foundation for applying design and management in their personal and working lives.

The workings of the economic system are examined with an emphasis on the role of markets in allocating scarce resources. Concepts such as valuation, cost benefit, marginality, constraints, and tradeoffs are covered in depth due to their critical importance for assessing organizational challenges and opportunities and for making choices in a world where resources are limited.

Just as valuable as the economic methodologies and tools presented in the course are the ways of viewing—and analyzing—problems and opportunities to which students are exposed. In order to make choices that result in positive outcomes, leaders must have a deep understanding of decision making. Economics plays a key role here by providing a framework for structuring, researching, evaluating, and selecting among alternate courses of action that determine the success or failure of initiatives and organizations.

The Managerial Economics course is designed to ensure that for-profit and nonprofit leaders understand the economic principles that underlie organizational functioning both in "mixed" market and non-market environments. The course begins with an overview of neoclassical microeconomic theory, such as supply and demand theory, market capital, profit and production maximization, types and structures of organizations and markets, market failures and inefficiencies, and the relationships between free markets and public welfare. It explores new approaches to identifying, valuing and employing alternate forms of capital, and how design and innovation can drive strategic value for an organization as well as for the market as a whole.

Where macroeconomics focuses on the functioning and interrelationships of entire economies, microeconomics is the study of a given economy's participants—individuals, firms, markets, industries—and the relationships among them. Managerial Economics draws key concepts and applications from microeco-

nomics (as well as relevant macroeconomic concepts) that are of particular importance to organizational decision making.

As in other areas of economics, supply and demand principles are key. These principles are explored by looking at their application in factor markets, under regulated and unregulated conditions, and when affected by government mandates. Particular attention is paid to various forms of "elasticity," or the responsiveness of quantities supplied and demanded given changes in underlying influences, such as price. Microeconomics is sometimes referred to as "price theory" in recognition of price's role in allocating scarce resources within a market environment.

Attention is also paid to the markets through which producers and consumers transact for capital, labor, raw materials, and consumer goods as well as the market-relevant impacts of regulators, labor unions, voters, and special interests. The influences of taxation and market power are reviewed, as are the negative and positive externalities of market decisions.

Because an understanding of market structures is essential in managerial decision making, the four predominant structures (pure competition, monopolistic competition, monopoly, and oligopoly) are examined in the course. Organizational resource allocation and efficiency are covered, as are the multiple concepts of "cost" essential for minimizing resource use and negative environmental impacts.

Important managerial considerations include the use of incentives to encourage desired behaviors, and the challenges that arise when there are conflicts between individual preferences and organizational objectives. Examples of practical applications include the use of game theory to examine pricing decisions and compensation structures to motivate and reinforce employee behavior.

The course concludes with an examination of organizational structures relative to performance optimization in order to understand the role of design in decision making. Choices about organizational architecture influence and reflect the degree to which an organization's decision authority is centralized or decentralized, the manner in which responsibilities are allocated, and how the firm evaluates and rewards its participants.

Particular attention is paid to human capital, a key competitive differentiator in the increasingly services-oriented economies

of today, as well as the development of an ability to look beyond buzzwords and pop theories to the substance of generating value for shareowners and other stakeholders.

Learning Environment and Outcomes

The majority of the assignments and readings are completed by students prior to each class session. The five residencies in which students gather at CCA's San Francisco campus are formatted as roundtable seminars combining lecture, intra-group projects, and the continuing exchange of perspectives among students and faculty. The course is designed to achieve the following learning outcomes:

Critical Analysis: Students learn to analyze economic events, business strategies, and operations from an economic perspective using a variety of approaches and tools—both longstanding and of recent vintage—that have proven their worth through scholarly analysis, theoretical and empirical testing, and practical experience.

Professional Development: Among the most important course outcomes is an understanding of the economic way of thinking: a particular way of viewing opportunities and problems, performing research, and structuring initiatives. Irrespective of their educational or professional goals, students will encounter situations in which it is useful to apply the concepts covered in Managerial Economics. Course materials and assignments provide knowledge that is useful in their careers and in their lives.

Research: Class assignments foster the development of economic research skills capable of generating information with which to perform assessments and decide upon courses of action. These research skills are not pedagogical niceties to be abandoned after graduation. They are an important key to managing relationships with—and decisions regarding—organizational stakeholders, production, financing, product and service development, and marketing.

Collaboration Skills: While there may not always be a single "right" answer to an economic question, there are incorrect answers, poor methods, and poorly developed and argued positions. Critical here is the process and content of students' contributions: their curiosity, attitude, and analytical approach; the logic they use in arriving at findings and conclusions; and their ability to listen attentively and comment thoughtfully on the positions and approaches of others. While competition may

be the catalyst for generating the benefits of the free market, in Managerial Economics collaboration in the shared learning effort is of overriding importance.

Discipline-Specific Techniques: Students in Managerial Economics learn the fundamental tools, concepts, and theories of microeconomics, with particular attention to their application in decision-making contexts. Some discussion of macroeconomics is undertaken to ensure students understand the relationships between the two views of the discipline and the general role of macroeconomics in management.

Comprehension of Meaning and Value Creation: Economics has specific ways of defining and assessing value. Economic value is not equivalent to making money at any cost, disregarding the impacts of production on third parties or the environment, or even results measured in dollar terms. In this course students explore not only what economists mean by "value," but how it is viewed by the parties within and outside a transaction; how it may be created, captured, and preserved; and the overriding importance of measuring value from the perspective of those who are to receive it.

Creativity and Critical Thinking: At the heart of any science is a basic method: characterizations, hypotheses, predictions, experiments. For any application of this scientific method to be valid it must be designed to avoid or overcome the errors and distortions that bias introduces. Students are encouraged to identify and control for the distorting factors and variables that even professional scientists bring to their work.

Appreciation of Economics' Interdisciplinary Influences: Economics is among the most interdisciplinary of fields. It is a behavioral science that both draws from and contributes to numerous other disciplines. By blending elements of mathematics, psychology, sociology, accounting, statistics, modeling, forecasting, and game theory, economics empowers analysts, managers, and policy makers in the private and public sectors. While cohesive in its attention to the optimization of outcomes, the minimization of costs, fact-based analyses, and the use of methodologies that are appropriate to their objectives, economics provides tools which may be applied in a broad range of decision-making settings.

Textbooks and Course Materials

The Managerial Economics course makes use of specifically selected resource materials from leading academic economists, management researchers, and behavioral scientists:

The Micro Economy Today (12th ed.) by R. Bradley Schiller, New York: Irwin/McGraw-Hill, 2010. ISBN: 978-0-07-724741-6

Managerial Economics by James Forcier, and Amy Whitaker 2010, custom text available through CCA at first residency (school and instructors do not profit from the sale of this book).

John Stuckey and David White, "When and When Not to Vertically Integrate," *Sloan Management Review,* spring 1993: 71– 83.

Selected articles and excerpts are assigned throughout the course.

Students are also encouraged to read a high-quality daily newspaper such as *The Wall Street Journal,* the *New York Times,* the *Financial Times,* the *Washington Post,* or the *Los Angeles Times* as well as periodicals with either a financial (*The Economist, BusinessWeek*) or professional (relevant for the student's current position or career objective) orientation.

Works Cited

1: Jay Greene, "Why Apple Will Survive the iPhone Glitch," *The Wall Street Journal,* July 29, 2010

2: Muhammad Yunus, as quoted in "IPO Pits Profit vs. Altruism," *The Wall Street Journal,* July 9, 2010.

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Often viewed as one of those necessary evils that business students must endure, accounting courses garner quite a reputation—and not usually a good one—before the first class ever begins. Most designers and many, many business people are uncomfortable with numbers and quantitative metrics. Indeed, many go into fields such as design specifically to avoid this discomfort (and, sometimes, distrust). MBA programs offer students the opportunity to pick up what they've missed in their professional experience, including accounting.

In the MBA in Design Strategy program, we aim to do more than simply allay student anxiety. We provide a learning experience that enables students to become increasingly fluent and knowledgeable in the language of business. Many of our students dread and even fear accounting as a subject. What they find, however, is a system of measuring and managing that relates directly to design and other fields. In the words of one of the program's advisors, Ann Morhauser, founder and CEO of Annieglass, "Accounting is a design tool! I find myself building scenarios with my revenues and expenses and I'm better able to forecast the effects of different decisions. It allows me to design my business. It also shows me how we're doing in a critical way. Without it, I wouldn't understand how my business works and how I want to change it."

As the title of the course suggests, Financial and Managerial Accounting is pedagogically divided into two areas. It integrates the principles of financial and managerial accounting to prepare leaders and managers to use accounting data to assess and manage any organization.

From a financial accounting perspective, we help students understand financial statements and their interpretation; the bookkeeping process and transaction analysis; and accounting for assets, liabilities, and owners' equity. Particular emphasis is placed on ethical considerations in the financial reporting process.

From a managerial accounting perspective, the course covers an array of topics that include cost-volume-profit relationships, budget and variance analysis, cost allocations, Activity-Based Costing, Net Present Value, Economic Value Added, and the Death Spiral. We also explore environmental, social, and ethical accounting issues, challenging students to apply existing accounting systems to new settings and critically analyze their strengths and limitations. While these systems do not yet ex-

ist as official accounting tools, we help students understand the basics of an integrated bottom line so they'll be ready for these changes as the industry evolves. This also allows them to integrate these perspectives into the strategies and values of their organizations immediately and not wait for the accounting industry to catch up.

Although the course covers very similar material that one may find at other business schools, the pedagogical manner and epistemological scope are very different.

Combining Two Into One

Traditional MBA programs separate financial and managerial accounting into two different courses, across two different semesters. Consolidating these two courses into a single integrated course ensures that there is greater continuity between the subject matter and that students see the interrelationship between financial and managerial accounting. Furthermore, this also allows students to enjoy an expanded curriculum. It is our aim to familiarize our students with these concepts, help them become proficient and comfortable, and give them the knowledge and skills necessary to work effectively with accounting professionals, CFOs, et cetera in their careers. However, since the DMBA program is focused entirely on creating leaders of innovation, we do not expect our students to become CFOs or accountants, which greatly affects the teaching time and priorities within the program.

Financial Accounting: Pattern Recognition

The focus of the financial accounting course is to build accounting literacy. Some attention is given to transaction analysis, but unlike at other business schools this is not a priority. Rather, the course seeks to build pattern recognition, a term often used by chess grandmasters. It does not allude to memorization so much as to the learning of patterns. Those who have mastered it are better players because they have seen similar positions and can more readily anticipate outcomes.

In the same vein, our approach to financial accounting helps create a similar mode of thinking, particularly for students who may be completely new to the world of financial statements. Rather than concentrate on rote memorization of accounting terms, the course steers into the realm of balance sheets, income statements, and statements of cash flows by asking students to cre-

ate their own financial statements from lists of data. Through the construction of these financial statements, students (especially those who are new to accounting) gain the ability to read, interpret, and analyze these statements.

Furthermore, we spend considerable time comparing financial statements. Students are asked to consider a company's "story" as they look at a balance sheet, income statement, and statement of cash flow. Successful companies tend to have similar patterns. We aim to help students see these patterns, so they attain the wherewithal to ask good and tough questions on the future direction of a given company.

Financial Accounting: Emphasis on Ethical Considerations by Looking at More Than the Shareholder

Nearly every business school can make a valid claim toward emphasizing ethical behavior by business leaders. The DMBA program differs from many others because, by using case studies such as Enron as part of our overall exploration of financial accounting, we consider the impact beyond the shareholder. This program holds the view that, while shareholders are critical, they are not the only stakeholders who need to be addressed. We ask our students to consider the roles and impacts of decisions on a variety of other positions. In this way, the course emphasizes sustainability from environmental and societal perspectives, not merely a financial one.

Managerial Accounting: Learning to Manage and Lead

Many managerial accounting courses teach students the vagaries of cost accounting and how to solve for variances that arise in the production process. While this may have some utility, the DMBA program demands that students learn critical universal skills that will help them be more effective business managers and leaders.

Particular emphasis is placed on skills such as break-even analysis, which applies to virtually every business, and concepts such as opportunity cost, which helps students frame how to consider the choices that businesses need to make. The course examines concepts such as make versus buy (outsourcing), responsibility accounting, budgeting, transfer pricing, and allocation theory with an emphasis on placing students not only in an analytical framework, but also in a managerial position. The course demands that students solve

mathematical problems, but also that they consider all of the risks and opportunities involved in a situation.

The important theme is that the DMBA program allows students, even with limited business backgrounds, an opportunity to put themselves in scenarios where they will have to justify decisions based on quantitative analysis. Understanding the "why" is as important as deriving the "what."

Managerial Accounting: The Value of an MBA

One of the more popular intellectual exercises we do in the managerial accounting course is "The Value of an MBA." For obvious reasons, student attentiveness to this exercise is very high. And, also for obvious reasons, they often comment, "I wish we would have seen this analysis prior to making a decision on an MBA!" The following example refers to a problem in Jerold Zimmerman's *Accounting for Decision-Making and Control*.

Paraphrasing the problem: "Sue is looking forward to a MBA program. She will need to pay $35,000 in the first and second years, and will also forego her $50,000 annual salary. However, once she graduates, she expects to increase her annual salary from $50,000 to $100,000. She is 30 now, and plans to retire when she is 60. As Sue is contemplating this, she knows she could put her money to work by investing in CDs (certificates of deposit) or other investment vehicles that would generate a 5 percent rate of return. From a financial perspective, does it make sense for Sue to pursue her MBA?"

To answer this question, students perform a net present value (NPV) analysis, which generally requires some spreadsheet analysis as well. Conceptually speaking, this is rather straight-forward. A positive NPV suggests "Go ahead, Do it!" Whereas a negative NPV indicates "Don't do it." That said, there are nuances to this problem. Specifically, NPV requires students to consider the incremental changes in their analyses, as well as the opportunity costs. After working through the math, students find that the NPV for Sue is wildly positive at $517,000.

In class, we ponder what it means to have an extremely positive NPV and what we expect would happen (a stampede toward getting a MBA!). We also temper our enthusiasm by considering whether economic profits (which is what NPV analysis captures)

are truly sustainable over the long term. And we discuss that the analysis is really only as good as the assumptions baked within it. Then, we take the analysis one step further and allow students to customize their own MBA investment model by tailoring the assumptions to their own respective situations.

I offer that, ultimately, while we may be able to quantify the monetary aspects associated with a MBA, we cannot truly quantify the value of the knowledge learned, the skills developed, the lifelong bonds and friendships (and networks) created, and the mandate to make the world more sustainable and more humane. We teach our students to know the financial equations and also to realize that this tells only part of the story of value. Simply put, we expect people will look to our graduates to provide business leadership in the areas of innovation, social and environmental responsibility, and better leadership and management, not simply toward their own personal aggrandizement. And that is what makes our program—and our students—invaluable.

Course Readings Include

Financial Accounting by Lyn Fraser and Aileen Ormiston, ISBN: 978-0136086246

Understanding the Corporate Annual Report: Nuts, Bolts, and a Few Loose Screws, Pearson, 2003 ISBN: 978-0131004313

Managerial Accounting by Jerold Zimmerman, McGraw-Hill, 2010, ISBN: 978-0078136726

Accounting For Decision-Making and Control, 6th edition, McGraw-Hill, 2008 ISBN: 978-0071283700

The following Harvard Business School cases:

- *Industrial Grinders*
- *Colorscope* (9-197-040)
- *Dakota Office Products* (9-102-021)

Focusing Finance on Innovation

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Arguably no MBA program could truly call itself an MBA program without addressing finance. After all, aren't the pursuit of financial rewards and the management of money what motivates prospective MBAs in the first place? And isn't finance the focus of business activities and fiduciary responsibility? The answer to both questions is a thunderous "No," but the importance of finance in a business school curriculum cannot be overstated. It is a key skill for managing innovation even if it is not the purpose or focus of innovation.

The study of finance serves as a rite of a passage for those who pursue an MBA degree, and for good reason. Aside from widely being regarded as one of the consistently more difficult courses in an MBA program, quantifying and understanding the drivers behind economic value, the major thrust of finance, has implications in a variety of business settings and circumstances. Finance pervades just about all business activity. As we will discuss further, building models and doing complex calculations in the hopes of ascertaining economic value is a major component of the course, but there is still much more to finance.

Any adequate finance course, whether in a top-ranked business school or not, and using business case studies or not, must challenge students to understand business from a quantitative point of view. However, enlightened approaches, specifically those targeted for innovators and leaders of innovation, must tackle new material and explain more than just the quantitative measures of success and progress.

Finance "PLUS"

One of the most imperative themes to intersect traditional finance is the value of design approaches to innovation. Sustainability is a second imperative that transforms old models of finance, and financial models and business leaders must learn to integrate these new impacts and approaches if they hope to be successful today and in the future.

Building on a foundation of financial and managerial accounting, traditional finance topics such as weighted average cost of capital (WACC) represent the logical progression of more sophisticated approaches to managing financial capital successfully. While this is where many students' experience with finance ends, however, there are more advanced topics that are important to explore, such as raising capital in financial markets, understanding leverage, planning for the optimal capital structure, working capital management, and mergers and acquisitions.

This strategy for teaching finance allows students far greater exposure to deep financial concepts and creates the opportunity to think broadly about business topics, as if they were a C-level executive. This is an important distinction. While the quantitative aspects of finance should still be emphasized, numbers tell only part of the story, and they do not negate the value of, or the desire to be, passionate, caring, brilliant business leaders who are more than number crunchers. Finance influences and is influenced by a broad range of topics, and in order to have the ability to put financial techniques into practice in real settings (and not merely apply theory out of context), these advanced topics and perspectives must be addressed and integrated.

Some of these nontraditional approaches include discussions of tools for addressing ethical issues, sustainability, and behavioral finance as well as a healthy skepticism of the efficient market hypothesis (EMH) while still requiring a thorough understanding of financial modeling and valuation across a range of business situations.

Ethics and Sustainability: Putting the Shareholder Among Other Stakeholders

Ethics and sustainability are common topics in school and business and, to their credit, many companies and schools have developed tools, processes, and values that train and measure performance around these topics. But an increasingly more robust view of ethics and sustainability is required, particularly an understanding that we do not necessarily put the interests of the shareholder above the interests of all other relevant stakeholders. This cannot be understated. While the legal ramifications around fiduciary duty are very real, these alternate issues and tools, even they are not yet represented in the prevailing view on Wall Street, must be explored for business to be successful and meaningful.

For example, when approaching real options in business problems, there are other potential issues than simply finding the path that maximizes NPV (net present value). Specifically, questionable lobbying efforts on behalf of corporate interests have often been undertaken in order to sway government tax policy, resulting in a more favorable "option." This effect is the result of more than mere financial calculations. As there are often deep complexities in business dealings, we do not simply look at the math, but try to understand the incentives and how other players will react. In short, behaving ethically cannot be confined to simple right or wrong, but needs to be placed in business contexts to understand firsthand the pressures around a given business activity.

Similarly, an investigation into capital structure can uncover issues of how over-leveraging (too much debt—owing its intellectual roots to Miller and Modigliani) can run counter to a firm's long-term interest despite short-term rewards. This long-term-versus-short-term perspective is, itself, an issue requiring discussion, exploration, and conscious understanding. It is now a tired tirade that corporations only take a short-term view of their financial performance. Though faulted as the root cause of shortsightedness, investors are beginning to consider the merits of a long-term approach to value and how their actions might limit this outcome. Long-term investors such as pension and mutual funds, especially, are changing their focus to a longer-term horizon, and financial leaders (and leaders in general) must be both aware of this change and skilled in how to respond appropriately.

Sustainability, too, intersects finance in a number of different contexts. For example, a positive-NPV coal mining project can be detrimental to the environment despite the story the financials tell, highlighting the need for more diverse measurements. While financial determinations are often made from the limited, usually self-centered perspective of the corporation, the same calculations can be used at a more macro, governmental, or societal level to inform actions not only for societies and governments but also for the corporation. In addition, not everything of value can be measured, and business leaders must learn how to weigh the measurables with the unmeasurables if they hope to have a positive impact on culture and society beyond the bottom line. Financial tools are used in the service of an organization's success, but how that success is defined has traditionally been narrow.

To be clear, needs of the shareholder cannot and should not be dismissed. However, the value of the organization—even in financial terms—is often affected by concerns that go beyond those of shareholders, and in some cases may even conflict with short-term shareholder requirements. This allows for and requires a very different approach to financial management and organizational leadership than traditional approaches suggest.

> Sustainability, too, intersects finance in a number of different contexts.

Behavioral Finance: What Do People Actually Do?

There is an old joke that goes something like this: A regular Joe and an economics professor are walking down the street. Joe says, "Hey Professor, look down at your feet. There's a Ben Franklin." To which the professor retorts, "Impossible! If it were a real $100 bill, somebody would have already picked it up."

The point of the joke is that finance and economics often have trouble acknowledging the real world when actual circumstances are not in accordance with an approved theory. As a result of this narrow mindset, the fields of behavioral finance and economics have become increasingly popular over the last few years. Texts such as *Freakonomics, Sway, The Black Swan,* and *Predictably Irrational,* among many others, challenge typical economic and finance theory. Both learning and implementation of financial leadership must take advantage of this new emphasis on actual behavior. People are not simple, and our behaviors are often difficult to understand. But people are real, and our actions have effects beyond the application of theory. Behavioral financial tools are still in their infancy, but the need for them is real and their application to current business decisions is clear.

Efficient Market Hypothesis (EMH): Keeping the Baby and Throwing Out the Bathwater

Efficient market hypothesis (EMH) has deservedly come under heavy scrutiny during our ongoing global financial crisis. Alan Greenspan himself, one of the major protagonists of EMH theory, has publicly admitted that he has come to question everything he thought he knew. Without delving into the specifics of EMH theory and why it is inadequate, there is no question that from an asset valuation standpoint, EMH theory continues to be a core part of business school finance curricula. While EMH cannot be dismissed completely, business leaders must understand it and explore its alterations, in real time, in order to lead successfully. Unfortunately, this is not a view held by most businesses or even business schools. Perhaps the most striking specific example relates to valuing options using the Black-Scholes option pricing model. In order to use Black-Scholes, one assumes that the market will behave in a normal distribution. There is much intellectual pedigree associated with Black-Scholes (a Nobel Prize was awarded for it) and the vast majority of business schools teach it and most businesses practice it.

There is a glaring issue with Black-Scholes and increasing evidence that markets do not behave in a normally distributive fashion. (This is just one more point in which the reality of the markets differs from long-standing theory, leading to much of the distress in the global markets today.) As a consequence, these option values have occasionally been wrong—sometimes very wrong. Though Black-Scholes should still be considered, it is irresponsible to do so without acknowledging its deficiencies, different viewpoints (like those suggested by Benoit Mandelbrot of *Fractal Geometry* fame), and alternate tools. In the end, it is not enough to practice business as usual even if it is the prevailing approach. All business leaders, and particularly innovators, must see beyond accepted theory, understand other possibilities, and find better paths to leading, managing, and succeeding.

The DMBA finance course is intellectually deep, robust, and appropriate for students who have a mindset to make this world better. We do not take shortcuts in terms of rigor; it is a deeply quantitative course. But it is not enough to adhere only to tradition, no matter how dogmatically argued. It is critical for leaders to go beyond the numbers and to challenge assumptions typically unpopular and unaddressed elsewhere. Fresh, new thinking arises when we can keep what works and create new models that work better in both theory and practice.

Operations from a Systems Perspective

Operations involves the effective management of human, financial, and natural capital, as well as processes such as supply chain management, quality assurance, process design and improvement, service ecology management, facilities, and human resources. Operations management is a traditional part of most business degrees. In the MBA in Design Strategy program these traditional operational topics are transformed by the addition of perspectives from design, strategy, and sustainability. The integrative discipline of operations pulls together strands from the entire organization. As such, it's necessary for students to first learn about a variety of topics regarding organizations, from accounting and finance to business models and leadership, before they can integrate these effectively into operations strategies. To facilitate these prerequisites, this course takes place in the third semester, as students begin their second and final year of instruction.

The study of operations and systems isn't merely about the optimization of resources and processes. There are strategic implications that must conform to the vision, mission, and goals of the organization, as well as the constraints placed upon the organization by its customers and markets. Management decisions about facilities, production capacity, vertical integration, process technology, information systems, sourcing, human resources, and organizational structure require strategic choices that significantly affect how well the organization competes in the marketplace. Developing operations strategies would be considerably easier without competitive rivalry in the marketplace and opposing forces within an organization. Students learn about the five competitive forces that shape strategy. These business tools and the analyses of 31 case studies help students understand how to reshape the forces so an organization is in a better position to compete and become more profitable. The end result is an organization that is profitable, well balanced, and sustainable.

The topics discussed include how manufacturing and operations functional levels can provide a competitive advantage; critical strategic issues such as outsourcing, globalization, and supply chain integration; and the effective management of human capital. Each of these topics creates an opportunity for an organization to attain competitive advantage through innovations in product development, productivity, cost control, quality, product or service features, delivery, and environmental performance.

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Businesses are at risk if they ignore ecological and social issues or fail to apply integrative management. Future successes will emanate from internalizing design thinking, integrative thinking, and sustainable business practices in all areas of for-profit and nonprofit organizations. Creative new ideas need planning, visibility, and nurturing. This is not an easy task given global competition and the fast pace of business transactions and communication.

Course Projects

The Operations and Systems course is divided into four major sections:

- An examination of general concepts such as competitive leverage using manufacturing and operations and the fit of the various elements.

- An exploration of the key elements and decision categories in an operations strategy, including facilities and capacities, technology, and how these choices affect the business competitively.

- Combining different elements into a coherent strategy. Strategic approaches include competing on cost and productivity, quality, availability, flexibility, features, innovations, and new products as well as environmental performance. The various elements, such as facilities, technology, and product development, must all be consistent with the strategic goal for each means of competition.

- Issues around manufacturing, operations policy, and strategy are particularly relevant today. The issues will include outsourcing, globalization, supply-chain relationships, and sustainability. This section also explores the future of operations and how systems thinking can affect an organization's development.

As part of our approach to education, the students put class learning into practice with case study exercises and a semester-long project to develop an operations plan. Teams of two to four students create a realistic operations plan for a new business, or create a plan for an existing for-profit company, nonprofit organization, or government agency. The semester-long project promotes collaboration and reflects everything the students have

learned from previous courses. In some cases, the operations plans are applicable to other work. When this occurs, the teams of students can integrate strategies across more than one discipline and develop recommendations that more completely meet the challenges faced by a new or existing organization.

An important part of the students' operations plan is a professional-quality oral and written presentation. As in all of the DMBA courses, we require students to research, think, make, and present continuously as a way of constantly honing their skills. Communication and presentation skills are a critical part of effective management and leadership. Students present many times in each course and receive feedback on both the written content of their presentations and their verbal delivery.

Public Bike
Cover slide from an Operations Plan presentation for Public Bikes.

Operations Readings

The main required text for the course is

Operations Strategy: Competing in the 21st Century by Sara L. Beckman and Donald B. Rosenfield, McGraw-Hill, ISBN: 978-0-07-250078-3

Numerous case studies from the Harvard Business School and other sources help students analyze real situations and practice the principles of operations strategy. Some examples include:

- *American Connector Company*
- *Sof-Optics, Inc.*
- *ITT Automotive: Global Manufacturing Strategy*
- *Genentech: Capacity Planning*
- *Green and Competitive: Ending the Stalement*
- *Sensormatic Electronics Corporation*
- *Building Deep Supplier Relationships*
- *Putting the Enterprise into the Enterprise System*
- *Sedalia Engine Plant*
- *Sedalia Revisited*
- *eShip-4U*
- *Delamere Vineyard*
- *BMW: The 7 Series Project*
- *The Limits of Mass Customization*
- *Incat*
- *What Really Makes Factories Flexible?*
- *Flextronics International*
- *Sustainable Growth the DuPont Way*

In addition, guest lecturers with extensive experience in operations management present real-world scenarios related to the course materials. Students have opportunities to pose questions and engage the lecturers in deeper dialogue.

Embodying Negotiation and the Law

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Now more than ever it is crucial that business people are literate and knowledgeable about legal best practices. Every day, businesspeople of all types must understand the legal context in order to make sound decisions. This requires a knowledge of what questions to ask and when and how often to ask them. This equips them with the understanding necessary to successfully structure their businesses to reflect their core interests and values, and then to conduct business in accordance with these values. One of the reasons why business is sometimes characterized as devoid of values is that, without an understanding of the law, business leaders aren't equipped to create and manage organizations aligned to their values and, instead, manage to default criteria and processes that are not values-oriented. This is especially true of social entrepreneurs. Often, the desire to create a socially motivated business is born when an existing industry does not adhere to specific values. To innovate and create the desired organization, entrepreneurs must understand what the law allows and then innovate legal structures within what is allowed.

For example, most corporate charters in the United States require business leaders to always choose courses of action that maximize profits, regardless of values (often even long-term value). For leaders to open their organizational practices to social or ecological values they need to innovate decision structures and business models within what narrowly-defined laws allow — or suffer potential legal action by shareholders.

Likewise, the law does not usually recognize the same range of stakeholders that contemporary managers and leaders must acknowledge in order to develop successful strategies. Usually, only shareholders' interests are taken into account, creating an unexpected challenge for "enlightened" organizations.

A clear understanding of the legal system helps managers and leaders better analyze business situations, make more ethical decisions, manage to an organization's values, better solve problems that arise across the organization, advocate clearly and effectively, and seek appropriate legal help when necessary. This is particularly true when starting a new venture since the very structure itself will incentivize (or not) investors, employees, and other stakeholders while better (or not) serving customers, partners, suppliers, et cetera. Once an organization has started collecting capital from investors, it is likely too late to change the legal basis for the organization's values, behaviors, and priorities.

In addition, an understanding of the legal system often allows managers to prevent problems before they escalate and better engage legal expertise when they do. Coming from a firm foundation of legal awareness also helps decision makers better negotiate with all stakeholders. Additionally it is important that employees of all types know how to negotiate better, whether they are dealing with contracts, schedules, budgets, or other agreements. All leaders and managers should be mindful of this context in order to create the desire organizational culture, structure, goals, and strategy.

Fear and Alienation

In most cases, the first order of teaching is to diffuse the fear, misconceptions, and alienation that most people use to shield themselves from an understanding of the law. I often begin lectures by making the class take a vow of secrecy. If they know all the secret handshakes and words of lawyers, they will put attorneys out of business. If they take the legal gibberish out of their contracts, who will pay to have contracts translated later? If do not regard every opposite party in a negotiation as an adversary, who will hire warriors to negotiate in the secret language on their behalf? To help students penetrate the wall of legal jargon, mythology, and misconception, business law classes should be intentionally informal from the outset.

From the very first session, it is essential to show that legal vocabulary is just shorthand for common and often intuitive social and business concepts. For example, a necessity for a worthwhile deal is an exchange of something valuable between two people or organizations. That's intuitive enough. The legal shorthand for that concept is "consideration." Another intuitive understanding almost all of us share is that it would be unfair to sit by and let someone violate your rights or your contract and do nothing, but later—much later—sue them and collect money for the losses you incurred while you waited to sue them. The legal term for that is "laches." A somewhat legal and pictorial phrase for this concept is "sitting on your laches."

Next, it is necessary to illustrate that, for each topic or area of the law, there is a set of core socioeconomic values embodied in the law and business practices supported by the law. Understanding these core values enables students and organizations to navigate the laws and practices that apply to business, whether or not they support the underlying values they embody.

There is often a gap between the rights we have versus those we think we should have. Complicating this is the fact that our values are not always aligned, thus creating different expectations of rights. In the United States, the Constitution forms the basis for the rights of individuals and businesses, but our understanding (or misunderstanding) of these rights and our Constitution's history can lead to misalignment of the law versus our values. We aim to show how powerfully legal issues reflect the most essential core values in our business choices.

It is essential to begin this engagement at an emotional and heartfelt level so that we can relate to law as an honest vehicle for the rights that mean something to us as individuals. Everyone agrees that food and shelter are fundamental rights, and that health care on some level is essential even if accountability for its delivery mechanism remains unclear. Everyone agrees that free speech, too, is fundamental (even if there are some limits) as well as access to dispute resolution. This healthy dose of pride in our centuries-old legal system guarantees these rights. We can then look at the legal cases that articulate and support these rights, because they are, in fact, not actually spelled out in the Constitution.

Demystifying these legal concepts helps us escape the fear involved in mastering the jargon of legalese (plaintiff, defendant, lower court, appeals courts, higher court, et cetera) and teaches the meaning of common law and precedent.

Personalizing and Internalizing

The process of personalizing legal learning and internalizing legal best practices can now begin. We challenge our students to recall through stories their own legal encounters with individuals, couples, families, and businesses. For example, to explore alternative dispute resolution, we began with family law situations, then move into business dispute mediation, arbitration, and settlement strategies. By thinking through the emotionally charged environment of family law mediation before considering commercial disputes, students and managers can consider strategic ways of diffusing tensions and intransigent positions. Once we understand the law at this basic level it is possible to recognize the role emotions play in disputes over millions of dollars. Thus, we can teach the need for significant strategic finesse in mediation. We also have the students recount to one another their first and worst encounters with the court process.

Best Practices: The Assimilation of Core and Strategic Values

We equip our students with evolving cases and move from a structural understanding of the legal process (including methods of dispute resolution) through intellectual property (particularly licensing) to contract law and maintenance. These are topics critical to innovation, encompassing the development of not only new products and services but also of new business models.

Fundamental to our students' learning is that, unlike the pervasive cultural conception of the legal process as being about winning or losing, best practices involve knowing up front that successful relationships are built on clear, ongoing communication. Contracts memorialize that communication. Disputes are most often the result of ambiguous communication and poor negotiation. The best resolution of a dispute is the construct for a new, clear working situation, or at least a clear dissolution.

Is this ethics, or strategy? Studying the pros and cons of litigation, mediation, arbitration, and the ins and outs of contract law, reveals that it is both—and good business practice.

Near the end of the course, we cover corporate structure, using the students' own venture projects as a basis for learning. They evaluate options such as for-profit and nonprofit, hybrid pairings, and emerging structures such as B Corporations. Even within these structures, students pay close attention to the legal language so their organizations can support their values, and their communities of stakeholders will be considered. Companies such as Google can serve as examples of how real corporations innovate their legal and corporate structure in order to promote their values and culture. Successful local businesspeople also lend credence and reality to the material when they come into class to speak. Being situated in the San Francisco Bay Area, around such a wealth of for-profit, nonprofit, and government agencies focused on innovation and sustainability, makes it easy to find appropriate speakers to share their insights with the students. But every region and community is home to experienced professionals with an outlook to an innovative future. Mixing the enthusiasm and idealism of students and entrepreneurs with the reality of legalese and legal process is a powerful process that legitimizes that enthusiasm instead of extinguishing it.

We end the course with a Best Practice Faire that reviews contract and governmental compliance issues, calendaring legal and business obligations, business and internal company evaluations, and even mundane courtesies such as showing visitors how to find restrooms. This highlights that correct social and political behavior in an organizational setting is not always intuitive, and that successful managers and leaders—especially in innovative circumstances—need to carefully observe, engage, and inquire about correct behaviors, interpreting group dynamics and social cues. Ongoing evaluation and reevaluation of their work, the work of their employees and business partners, the working dynamics within their organization, with other businesses, and a range of stakeholders, as well as other topics of evaluation, need to be part of their regular business calendars.

This list of best practices within organizations is always evolving and is focused on action: training, updating, maintaining, advancing, innovating, evaluating, affirming, ratifying, and communicating. This is the business of business and helps reinforce that law is action, not merely documentation.

Law as Performance

Since our course is taught in a hybrid manner (part online, part in person), when we meet together, we host several types of interactions. One involves competitions related to vocabulary in order to demystify legalese and work through the essential and dangerous task of translating it into English.

One learns to speak legalese by speaking it. One learns to negotiate by negotiating, and learns the nuances by watching others negotiate. One learns to understand the legalese on forms by filling them out and how to navigate eccentric government websites by using them. Since the practice of law is performative, we require our students to write skits and songs and learn by doing. Without a doubt, my favorite performance so far was a rap of a contract between a dwarf and a hobbit by a river, regarding a construction job. In the song, the terms and conditions were certain, definitive, and fair enough to constitute a binding agreement.

Throughout the term, teams of students are charged with reviewing a revolving list of blogs and websites covering arbitration, dispute resolution, the Creative Commons, nonprofit corporations, and business ethics. The teams review posts and

articles, verify facts, and offer commentary, sharing the results with the entire class. Students outside the teams are asked to respond to the topic posts as well. By making posts publicly available to the entire class, all students are able to benefit from the process and assimilate a broader range of material. This works especially well online.

Because it is so important to most business interactions (legal or not), we spend 20 percent of our in-class time learning about negotiation, including negotiation of gender and ethnic issues, negotiation of personal issues, individual and group negotiation, and negotiation within teams. Negotiations are difficult and often require us to step outside of our standard patterns and roles. In order to learn, we must take chances, become embarrassed, and even fail. The students act, blush, and laugh, but these are usually the first times they have performed negotiations in a serious and bold way, and it is important that it happens in the safe environment of the classroom. As with other aspects of the law, there is no substitute for the experience gained by actually performing through difficult situations.

What do you say when a boss makes a racist remark to you or others in the lunchroom? How do you respond when a supervisor asks you to watch his dog for the weekend? We discuss the necessity of making difficult decisions in, for example, contracts and employment terminations as well as corporate dissolution. It would be impossible to cover this material so quickly if the students had not already been through the communication and collaboration experiences they get at the start of the program. Having tackled difficult personal and interpersonal communication issues and having performed them in team settings during group projects, they have the necessary experience and rapport to quickly jump in with less fear.

At the end of this process, students spend an entire day negotiating long-term contracts for their businesses, with the requirement that these must be strategically profitable for themselves.

The Prepared Professional

By the end of the course, students have absorbed massive amounts of new information. Just as importantly, they have practiced many of the situations they will encounter moving forward. In addition to the lists of best practices, actions, and

options they have amassed, we conclude by helping them create a practical survival guide of the items they've voted most useful: duct tape, sticky notes, antibacterial spray, breath mints, to-do lists, and the phone numbers of friends and other important resources. As mundane and silly as this kit can sound, it gives students (and managers) confidence that reinforces what they already know and may just come in handy when a new problem arises.

Strategic Foresight

When you take an umbrella out as clouds gather overhead, when you stash savings in a cookie tin, when you enroll for evening classes to improve your employment prospects: these are all unremarkable acts of everyday foresight. But the kind of thinking ahead that we engage in day to day is different from the systematic and creative exploration of pathways through possible worlds to come over years, decades, and beyond. This is foresight in another register, for the future writ large. Futurist scholar Richard Slaughter writes:

> Strategic foresight is the ability to create and maintain a high-quality, coherent, and functional forward view and to use the insights arising in organizationally useful ways; for example, to detect adverse conditions, guide policy, shape strategy, and to explore new markets, products and services. It represents a fusion of futures methods with those of strategic management.[1]

Whatever your line of business, both it and the wider world are changing faster than ever. For any entrepreneur or leader, looking further ahead in this manner is essential for navigating, in the phrase of the late economist-futurist Robert Theobald, "the rapids of change."[2] The paradox of foresight is that although it is a ubiquitous human capability, it is remarkably underdeveloped in most of us.

"Everyone thinks about the future," observes futures consultant Jake Dunagan, "they just don't do it very well." Few people ever have a formal opportunity in their education to learn how to study the landscape of future possibilities in a strategically relevant way. Nor, unfortunately, is this a practice modeled by other institutions such as politics or the media. So, what could it feel like to live in a world where the UN Millennium Goals have been accomplished? How about one in which the impacts of climate change are seriously felt? Or one in which "post-human" is normal?

We have no idea. These are crucial questions about the contexts in which we might find ourselves living and working the day after tomorrow but, generally, we're not in the habit of even asking them. Instead, we seem strangely willing to leave outcomes to a combination of chance, ideology, blind hope, or successes of the past (regardless of their applicability today). Nowhere is this more important than in setting policy, whether in an organiza-

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tion or within the government at any level. In this domain, even the best educated and well intentioned among us come up short.

Meanwhile, many of the great challenges facing today's organizations, as well as society at large—climate change, peak oil, increased competition for resources, and economic crisis, to name a few—clearly suggest the need for using strategic foresight tools and processes.[3] At both the individual and the cultural levels, we have inherited habits built on assumptions of continuity, which serve us poorly in a world of accelerating, disruptive change.

Cultivating Preferred Futures

In teaching strategic foresight, we expose business leaders to some of the key concepts, theories, and methods of the field. We teach two parallel traditions, one of scholarly, academic thought (futures studies or futures research) and the other in organizational strategy and consulting (such as scenario planning), both of which have been around for close to half a century. In addition, a large body of literature and practice has already grown up concerning both approaches and their contexts.[4] There are many methods in the foresight repertoire, some rare, others more widely known. The list includes environmental and horizon scanning, trend and emerging issue analysis, Delphi, the futures wheel and cross-impact matrices, prediction markets, roadmapping, backcasting, SWOT analysis, statistical modeling, systems mapping, simulation, visioning workshops, and Causal Layered Analysis.[5]

Teaching these tools starts with a principled commitment to the notion that alternative frameworks of sensemaking and storytelling are of paramount significance when it comes to decision making and policy. As the "black swan" argument mounted by Nassim Nicholas Taleb makes clear,[6] past observations—the basic stuff of scientific observation—are of limited application when it comes to the future. This is not about statistics or quantitative modeling. As the philosopher Robert Brumbaugh once noted, "There are no future facts. . . . That past time is a fair sample of all time is a mistaken metaphysical assumption."[7] To come at the point in another way: The future is not predictable but it can, in some ways, be shaped. This is not a class in predicting change, it's a crash course in preparing for and participating in change, more mindfully and effectively.

Our approach highlights the catalytic role that foresightful individuals and groups can play within their organizations and communities. It emphasizes the invention and pursuit of preferred futures, the world-shaping aspects of futures narratives and images, striving for a necessary balance among theory, practice, deep understanding, and effective implementation. Visionary people and organizations are never simply manufactured according to a recipe, but this course aims to draw out and activate the interests and potentials in this direction that each leader brings to the table. In short, this is a sort of boot camp for world changers and culture evolvers that complements and enriches skills acquired elsewhere in the business programs and career experience.

Three Dimensions of Foresight Literacy

The teaching of strategic foresight is structured into three phases.

The first phase is about coming to grips with the unchanging fact of continual change, a macro-historical axiom that is all too easy to forget. Cognitively, we tend to expect continuity, which leads to what futures educator and political scientist Jim Dator calls the "crackpot realism of the present," that "fully understandable but quite misleading belief that the world of the present will dominate the future," resulting in a failure to seriously entertain genuine alternatives.[8] The circumstances shaping life may appear stable enough on a short timescale but, of course, everything is in flux. The corollary of this realization is twofold. First, things will continue to change (albeit at varying rates) just as they always have. Everything that presently *is*, however important or central to life as we know it—from the internal combustion engine to the 40-hour work week to AIDS to the Internet and so on—began somewhere. All such elements have a history, origins, an arc of time, and everything will go away, too, sooner or later. Second, at any given moment at least some of the seeds of tomorrow's changes are visible in the present.

The practical upshot of the above is that we can cultivate the art of perceiving (and re-perceiving[9]) our operating environment in order to better understand both the way things are now and the way they could be. Two of the tools for putting this understanding into action are "environmental scanning" for trends and "horizon scanning" for emerging issues.[10] These practices enable

us to read the landscape of change with more sensitivity and discernment. An alert observer—someone who knows where and how to look—can tune into change as it unfolds, detecting early signals before others notice them.

The second phase builds on this understanding of the fact of constant change, to consider alternativity. It is implicit in the uncertainty of change that at any given moment a number of different directions are open. The "s" in "futures" is critical, signifying contingency and plurality. If "future" implies that tomorrow will be different, "futures" indicates that this difference can, itself, take a range of different forms. Multiple alternative futures are always possible.

The core methods in this area enable us to articulate the logics of those alternatives. There are many ways to generate future scenarios.[11] The main two addressed here are, first, the four archetypes (generic images of the future) identified by Jim Dator in the futures studies program at the University of Hawaii at Manoa, and, second, scenario planning using the widely replicated two-by-two matrix of critical uncertainties developed by Jay Ogilvy and colleagues at the consultancy Global Business Network. The archetypal approach is about mapping the widest array of plausible futures in the fewest number of brushstrokes as a way of interrogating the boundaries and potentials of a system.[12] The two-by-two matrix, in contrast, is about focusing on key contextual factors thought to have a particular bearing on the future of the organization or domain in question.[13] To put it another way, the former is about getting the broadest range of possible changes in the external environment (usually 20 to 50 years out), while the latter is about shedding light on those specific external uncertainties currently regarded as most significant (usually on a 10-year time horizon). Although rarely used or taught together, these protocols are complementary rather than competing, which underlines the deliberately wide-ranging course design. It also points to the fact that strategic foresight is not merely about technical mastery of method; it depends on an ability to select tools appropriate to the situation.

If scanning protocols help us understand how the seeds of change are germinating, scenarios let us spin these forward into coherent images of tomorrow's various landscapes.

The third phase of the course addresses the development and communication of scenarios in detail: How would a given future "work," and what does it mean? This includes platforms for the

collective elaboration and consideration of possible futures such as the FogCatcher process designed by Noah Raford; the 'Foresight Engine developed at futures consultancy Institute for the Future (IFTF); and explicitly game-based strategies of engagement such as Superstruct, the world's first massively multiplayer foresight game (also an IFTF project). It also includes the design and staging of "experiential scenarios," interactions and situations provoking deeper engagement with one or more futures.[14]

The second and third phases, done properly, are inherently collaborative, participatory, and synthetic. (As Superstruct's scenario director Jamais Cascio has put it, "With enough minds, all tomorrows are visible.")[15] Thus, in these last phases, leaders employ skills to help others envision alternative futures, in search of more profound insights and wiser decisions. The culmination of these phases helps clarify that the most significant offer of strategic foresight resides less in the documentation and knowledge artifacts that it produces, and more in the extent of engagement, perceptual change, and transformative action that the practitioner is able to bring about.

The three phases described above correspond to what I call the three dimensions of foresight: distance, breadth, and depth. Here, distance denotes the passage of time, and the prospective history that unfolds toward a particular state of affairs. Breadth refers to the range of possible futures at any given later moment in time. Depth describes the experiential detail and specific qualities that breathe life into a particular hypothetical future, making it viable to entertain an otherwise abstract possibility as a concrete proposition. Each stage builds on the one before. Breadth can be seen as an implication of distance plus contingency, and the depth of any given scenario depends on the specific theory of change (seen in light of distance and breadth) that it embodies. Careful consideration of all three is needed for projections to be well conceived and to stand up to scrutiny.

Facing the Fold

Strategic foresight offers a foundation in the conceptual and methodological basics of the foresight field, which can be applied to deepen thought around any product, service, industry, place, or policy. This augmented awareness of big-picture change can also be useful across whatever other roles—citizen, consumer, customer, businessperson, parent—apply in our lives.

To date, strategic foresight has proven to fit remarkably well with the ethos and vision of the MBA in Design Strategy program itself, perhaps in part because of the program's ambitions, which move along the lines suggested by the designer Bruce Mau in his statement that the great challenge of our time "is not about the world of design; it about the design of the world."[16] The DMBA attracts those who see in business not merely an opportunity to make a living, but a way to play a meaningful and proactive part in change. Unlike many in the physical sciences and their aspiring (read: social) counterparts, people in design disciplines intuitively understand that purely detached intellectual inquiry is not enough. In a sense, it is not even possible. As the late political activist Howard Zinn pointed out, "You can't be neutral on a moving train."

Strategic foresight also requires a combination of analysis and creativity that constitutes, in the excellent term of foresight consultant Riel Miller, rigorous imagining.[17] This rare feat of balance appears to bear a genetic resemblance to the very notion of design strategy.

Among the primary learning outcomes, then, over and above the checklist of technical skills, is the cultivation in neophyte practitioners of a certain disposition, sensibility, or attitude of engagement. In this vein, philosopher and veteran scenarist Jay Ogilvy—a cofounder of Global Business Network, who also taught the scenario planning module within this class the first year it was offered—gives us the wonderful notion of facing the fold:[18]

> In adopting the scenaric stance, facing the fold in which multiple futures are held simultaneously and constantly in view, one achieves a kind of emotional and intellectual maturity that is not available to either the simple optimist or the simple pessimist. Yes, things could turn out badly. But no, that is not in itself reason for inaction. Yes, things could turn out very well, but no, that is not in itself reason for foolish bravado. By holding in mind several different futures at once, one is able to proceed deliberately yet flexibly; resolutely yet cautiously.
>
> He or she who sees no opportunities is blind. He or she who senses no threats is foolish. But he or she who sees both threats and opportunities shining forth in rich and vivid scenarios may just be able to make the choices and implement the plans that will take us to the high road and beyond."

Facing the fold of uncertainty, as we must, perhaps the most powerful choice we can make is to deepen our own capacity for imagining, articulating, and acting toward the futures we want to inhabit.

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Brand Strategy

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Once relegated to corporate identity and the graphics depart-ment, brand has become the catchall for marketing and com-munications. While this provides organizations the opportunity to integrate brand across many touchpoints, it still limits the full potential of brand strategy. When effectively, cohesively, and consistently applied, brand strategy becomes something larger than conventional marketing communications. It can drive the values and cultural blueprints for organizations and even individuals, as described by Erving Goffman in *The Presenta-tion of Self in Everyday Life*. In this way, brand strategy lays the foundation for the interaction between product/service/market and audience/customer/participant. It can become as fiscally compelling, as intellectual property is valued beyond the mere physical assets and revenues of an organization. Brand strategy, then, becomes the sum of intended communication from any organization to any of its stakeholders.

Everyone can "relate to brand" because it is all around us, forc-ing us to engage or disengage. In terms of reputation, in fact, we all have our own brands. Brand is an equalizer; all views are valid since a brand is meant to be received, interpreted, co-opted, or discarded. Even a Luddite hermit is living and express-ing the "Luddite hermit" lifestyle brand.

However, not everyone can articulate "brand." Since its incep-tion as symbols, language, and shorthand for commercial communications, brand inherently expresses an experience, a feeling, but often leaves the details vague. In the MBA in Design Strategy program, we explore the structures of brand commu-nication, looking at brand as a tool that can be wielded inten-tionally, with consequences, for any individual or organization (including nonprofits, governments, and political campaigns). When understood as methods, brand moves beyond the soft and fuzzy into strategic execution and reliable metrics for busi-ness imperatives, such as profitability.

The New Brand World

What is now considered brand in terms of market forces is changing, differentiating product/service innovation and stakeholder experiences. It is necessary to analyze the brand strategies that work so well they sometimes seem insidiously spiritual. This helps us identify best practices that may be mod-eled but also helps us to understand that brand engagement is active and participatory rather than devaluing the audience as unwitting consumers.

Organizations now recognize that their customers own a piece of their brands (potentially a large piece) and are experimenting with where brand belongs. A brand is a dialogue initiated not only by customer research but also by sales reps reporting back from the field, product managers identifying functional needs and feature opportunities, and human resources interviewing potential employees in terms of values and workstyle. All the while, this dialogue is with customers and other audiences. This makes brands infusive.

More and more, companies realize that their employees live the corporate culture and brand, and these employees are the strongest, and sometimes weakest, brand ambassadors. For example, web services such as Glassdoor offer anonymous insight into the hiring and working processes of companies. Glassdoor gives access to what was once confidential and difficult to access: the internal brand and the corporate culture of companies. In a negative example, Dominos Pizza's employees and YouTube intersect to reveal a consumer's worst nightmare of store cleanliness (or lack thereof). The brand is every outfacing touchpoint, embodied by the leadership of the CEO, partners, and vendors—even the driver of the shuttle bus—who reflect back on the company. An interviewee takes the Zappos shuttle from McCarran Airport in Las Vegas to headquarters in Henderson, Nevada, for an interview, and both the individual and Zappos have created brand touchpoints for feedback that ideally reflect positively on the entire experience. Since one of Zappos's core values is "be humble," HR will rendezvous back with the shuttle driver to ask how he or she was treated by the interviewee.

What makes brand strategy pivotal and unprecedented now is that the aplication of design thinking to technology and society create opportunities for brand applications like never before. Consider the instant feedback via Twitter on director Kevin Smith's poor Southwest Airlines service, or focused relationships with audiences fine-tuned beyond demographics to time, place, and frequency via geolocation. Brand is now instant—faster than it takes to fill out a brand recall survey. It is so fast, in fact, that most case studies aren't documented, so organizations execute brand strategy by trial and error on the fly. They can afford to because the implementation costs are much lower while success/failure feedback is instant and voluminous when it shows up as server-side data. For example,

social networking games (which are, basically, viral advertising vehicles) allow organizations to iterate features 24 hours a day, seven days a week.

At the same time, brand is eternal, built over time across many touchpoints, evolving over longer and longer periods for every stakeholder. There is a cumulative effect of brand experiences that form deeper brand impressions, and this is what organizations ultimately seek because it both represents and enables brand loyalty. While brand assessments can take place quickly, organizations need a longer-term strategy so that their brand communications can be experienced by people as coherent.

Traditional industrial structures facilitated control of message and communication vehicles along with production and distribution. We are at that juncture, however, where industrialism is being transformed by technology and information. Most "things" or "objects" are givens, now—almost commodities. Differentiation lies in the expression of the artifact, in the story of the provenance, maker, audience, and details, the context in which it appears, and the active participation of the community.

Publishing, manufacturing, and marketing all are flattening, opening the gates to commercial participation not merely locally but worldwide. For example, retail presence is now possible without a physical store. Today, overhead costs, testing, image, and video creation tools are built into your mobile phone to upload instantly, while cloud computing can distribute the cost and load of information. However, in response, retail experiences are evolving quickly, becoming more satisfying and wonderful in order to remain relevant in an increasingly virtual world.

Music is decentralizing, too. Take a look at the Billboard Top 20. Today's hits are spread widely across genres, while just 20 years ago, pop music offered a narrow selection controlled by publishers who had access to professional sound engineering and distribution.

With collective models like Kickstarter, Kiva, and CarrotMob, people now participate actively in the production, marketing, and distribution processes themselves, redefining both what is popular and how it becomes so.

As individuals and their role in brand communications become commoditized, so does privacy, and the facets that make us individuals and participants in a brand-driven world. Each one of us becomes a brand. Companies pay for access to real email addresses and data points about consumers. Facebook and Nielsen have a partnership that allows each to triangulate customer interests, consumption, and behavior as data for marketing campaigns. The Internet becomes a brand repository, and search results present the beginnings of fleshing out a brand image: Entity X has been documented here, a Wiki entry there, and a Yelp rating there, creating a trail of message boards and opinions as a search result page, which is, essentially, a reflection of the brand.

> Each one of us becomes a brand.

Brands Become Even More Strategic

It is not enough for brand professionals to articulate brand strategies for themselves and their organizations as fundamental business tools. In addition, we need examples of innovation in brand strategy for application and execution. The easiest examples are from the luxury, blue-chip, and consumer markets, as the competition within these has honed some innovative and noteworthy examples. More difficult is finding examples of exemplary brands in the business-to-business, industrial, government, and (less so) nonprofit domains where the imperative isn't as high to build brands (though it is just as important). New approaches to brand strategy push the boundaries of branding by focusing on customer insights and strategic alignment. It is no longer enough to simply create and communicate clear brands with a one-way perspective from the organization outward. Successful brands need to align with corporate and organizational strategy, and always be both informed and relevant to the context created by customer experiences. This requires new research methods as well as new approaches to strategy.

As such, brand strategy is, necessarily, moving beyond the domain of the marketing department to become an essential part of the traditional outward-facing triumvirate: advertising, public relations, and marketing communications.

Effective brand strategy creates a conversation about brand that goes beyond likes and dislikes. It must analyze the means of interacting with a market or audience and then intentionally communicating these values clearly. Once a brand is printed, jingled, rebranded, or advertised, it is out of the organization's

control. And this is where the most effective brands must willingly relinquish that control and let the brand thrive and evolve organically, though with guidance and influence from the organization wherever possible.

Moving forward, brands will sit on a sliding scale of closed to open models: open like Zappos and Wikimedia, closed like Apple. Both ends of the spectrum are valid and successful. The key is correlating the culture, structure, and goals of the organization to the brand model, what I call "transbrand." And in the world of 360-degree transmedia touchpoints and everywhere, always-on information, the transbrand becomes problematic when there is inconsistency. This does not mean that brands need be predictable and stale; it means that while brand strategies can create space for whim, randomness, and surprise, those strategies must do so intentionally and with strategic goals in place.

Brand Strategy Methodology

Brand strategy begins on the inside, with an internal assessment of the organization's core values and strategic goals. Then this is compared to, and informed by, customer insights, the rest of the market, and competitors and opportunities, always evaluating the strengths and weaknesses of each factor in communicating to the intended audiences.

Brand strategies allow managers to chart a course around competitors.
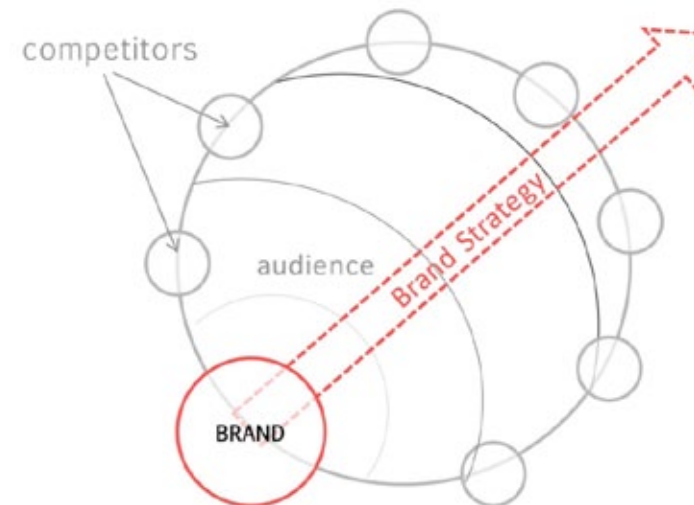
Only in this way is brand strategy fully informed and executable. While all organizations have elements and strengths in parts of the steps towards brand strategy, the most successful brands are confident in all parts and continue to measure regularly and meaningfully. Organizations without all the skills and experience required often look outside for partners (consultants and consultancies) to help them shore up their weaknesses and create and better manage their brand value. Those too confident or ignorant to see their deficiencies, or those using brand processes that don't include deep customer insight and strategic corporate engagement, endanger the value of their brands by attempting shortcuts that require them to guess what they need to do. While this is sometimes successful, it is reckless, shortsighted, and unprofessional.

Regular and meaningful measurement proves competency and benchmarking. Otherwise, this is merely a strategic exercise without value. Our approach is to challenge managers to investigate the purpose of brand measurement as well assessment measurements appropriate to each brand. While traditional standards such as brand recall and brand-attributed purchases may be suitable for some brands, others require investigation into brand loyalty, esteem, and longevity. All of these lead to a deeper understanding of brand identity and feed a stronger approach to building both brand architectures and implementing specific brand work, whether applied physically or virtually to any number of possible touchpoints.

Brand must be considered both internally and externally. The specific ways these dimensions manifest themselves in an organization include:

Inbound and internal
- Mission
- Human resources
- Leadership
- Organizational culture
- Tools and technologies

Outbound and external (customer-facing)
- PR/investor relations
- Advertising, spokespeople, product/service placements
- Sales/partnerships
- Communications: traditional, social networks, cross-media
- Experience: retail, contextual, and temporal

Brand Strategy Reading

While the following texts are required for our course, they are not necessarily followed as blueprints for the study of brand strategy. These selections are made to ensure that participants have a firm foundation in the established study of brand. For example, *No Logo* is assigned to challenge managers on the potential uses and misuses of brand as a tool, and ultimately to instill a conscientious awareness and vocabulary of brand as a strategic tool in professional and personal participation in communications. Extracurricular content is intended to provide cultural context for the prevalence of brand and its role in entrepreneurship, technology, and the marketing future.

Required Reading

No Logo by Naomi Klein, 2000, Flamingo. ISBN: 978-0-312-42927-0

Brand Meaning by Mark Batey, 2008, Routledge. ISBN: 978-0-8058-6455-7

Building Strong Brands by David Aaker, 1996, The Free Press. ISBN: 0-02-900151-X

Optional Readings

Life, Inc. by Douglas Rushkoff, 2009, Random House. ISBN: 978-1-4000-6689-6

Authenticity: What Consumers Really Want by James Gilmore, 2007, Harvard Business School Press. ISBN: 978-1591391456

Extracurricular Content

Dragon's Den, Sony Pictures, 2004. Creator: Jordan Paton.
Mad Men, AMC, 2007. Creator: Matthew Weiner

Pattern Recognition, William Gibson, 2003, Berkley. ISBN: 978-0-425-19868-1

Assignments and Projects

In any exploration of brand as a tool, there needs to be standardization and reference. However, brand strategy is contextual and, in my experience, brand strategy work ranges widely to include internal strategic blueprints, board meeting advocacy, sales presentations, and creative briefs. Underlying this variety

of strategic brand manifestations is an objective, people-based, quantitative, and qualitative methodology that firmly supports strategic brand recommendations and initiatives. Thus, I encourage future leaders to explore different media for communicating brand strategies as long as the results are substantiated by research, insight, and measurement.

Assignments are constructed to enable participants to practice method, means, context, approaches, precedents, and lessons. The fundamental understanding that grounds brand strategy is that "what you put out there" is your permission for others to judge, rate, compare, adopt, and reconsider who and what you are. A literal way to explore this is to evaluate "the Brand of Me." This assignment resulted from one mentor's comment that such an approach would be too touchy-feely for MBA students but, regularly, students use this assignment to successfully audit their personal and professional brands and bring clarity to both their careers and their professional goals.

When teaching brand strategy, the initial assignment is the brand collection, a platform for discussing and analyzing brands. The urge to inject hypothesis and synthesis is irresistible. This exercise focuses on the skill of observation, incorporating skills acquired from the Market Insight and Experiences Studios. The purpose is anthropological and objective. Students bring into one place as many touchpoints as possible, then compare the brands across these touchpoints in terms of their successes and failures. Students collect visual, textual, and experiential artifacts (websites, collateral, press releases, et cetera) and include organizational information (size, type of business/industry, history, et cetera). They are encouraged to present these bringbacks in any medium, and responses have included custom beer coasters, collages, and video. One student, Erica Frye (excerpts pictured below) made a meta-collection comparing the branding of brand agencies focused on sustainability:
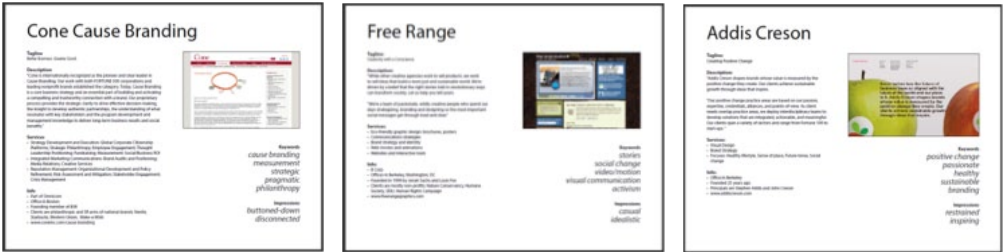
By aligning website imagery, taglines, services, clients, and keywords, Frye created a template for comparing and contrasting these brand agencies using their own visual and verbal language. They could now be easily positioned against each other to analyze overlaps, opportunities, and competitive distinctions.

Another assignment, the brand personality analysis, explores a single brand in the vocabulary of traditional brand analysis. Here, the Aaker models of brand analysis, brand identity systems, and brand identity implementation are the exercise blueprints. This requires the explicit articulation of brand values, audience segmentation, and metrics, among many other factors. It's also casually called the "show your work" assignment. Again, students are encouraged to present this information in formats that feel appropriate and familiar: text outlines, spreadsheets, and more touchpoint collections (editorials, survey results, et cetera). Erica Meade, one of the program's pioneering graduates in 2010, presented the Moleskine brand analysis via, appropriately, a Moleskine notebook.

This analysis is especially challenging when applying it to the Brand of Me, as it requires a rigorous awareness of one's own preferences and biases. References, peer feedback, and questionnaires to friends and family are all used to collect strengths, weaknesses, and associations of the Brand of Me. Following are some examples of this exercise as excerpted from Brand of Me studies:

The Brand Personality
Analysis
Elysa Soffer
Jason Hui
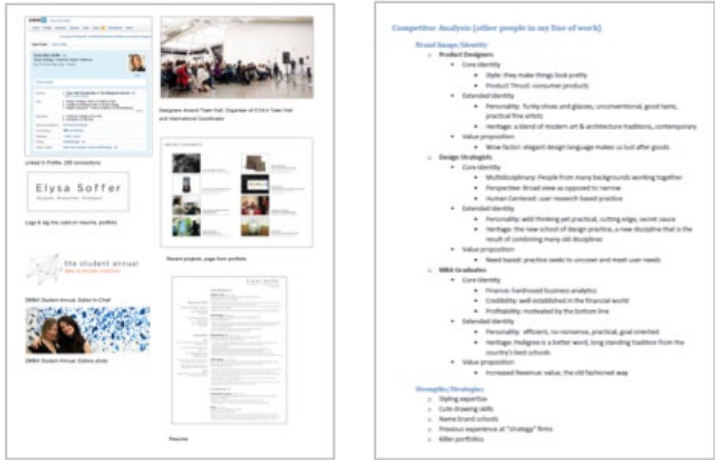
The most unglamorous of brand assignments, the brand person-
ality analysis is a prerequisite to springing into the creative and
synthesizing phase of the brand audit. It methodically bridges
the span between brand and strategy. Without it, these brand
explorations remain exactly that: musings and forays into brand
examples, lacking strategic connection to the overarching goals
and structures of the brand's organization or company. And, as
with corporate clients and brand pratice, the most challenging
(yet valuable) aspects of the analysis are people-based research
and insights, whether they are derived from ethnography, us-
ability, focus groups, interviews, or surveys.

Social media and brand communications case studies document
the current experiments in communications, both successful
and failed. The purpose is to address as many strategic points
as possible, such as measurement, reach, and media, but also to
identify the potential of certain strategies and plans in applica-
tion within an organization or to oneself.

In the now-classic experiment of the Green Skittles Twitter cam-
paign (March 2009), measurement was defined as the number
of mentions of "Green Skittles" on Twitter. However, it failed to
account for either the quality or the context of tweets, result-
ing in non sequiturs and obscenities, and Skittles changed the
campaign after two days, moving its Twitter feed from Web page
prominence to a corner of the screen.

Attempts to standardize financial return on brand investment do
not take into account that the role of brand varies from organi-
zation to product to service. Hence, one company's meaningful
measurement may not be strategically relevant for another.

A guest speaker from PageOne PR presented examples of how
that organization calculates social media impact as compared
to advertising equivalents in media buying. This is applied to
business-to-business social media, but imagines its efficacy
in business-to-consumer. This successful (PageOne PR was
acquired by Lewis PR in October 2010) yet undocumented metric
proves that social media are viable business tools but few prac-
titioners can substantiate hard numbers and methodologies.

The final project, the Brand Audit, is the standard and functional
work product required at the onset of any brand inquiry. Wheth-
er internally conducted or externally requisitioned as an agency,
the brand audit assesses the core competencies of a brand and
its positioning in a greater landscape. It analyzes a brand while
creating strategic relevance within an organization by articulat-
ing how the brand values reinforce the organization's mission
and products/services. It also establishes a benchmark for talking
about the brand, measuring it and developing strategies from it.

When I offer this course at the same time as the Venture Studio,
several students apply projects in the Brand Strategy course to
their venture project, thereby articulating a clear brand message
for new and in-development products and services.

When it is applied to the Brand of Me, the brand audit is used as
a work-in-progress blueprint for communications; guidelines for
editing portfolios, résumés, and websites; as well as clearly de-
lineating social media for personal versus professional audienc-
es. By defining the specific touchpoints for interacting (whether
in person, online, or via artifacts such as a portfolio), Brand of
Me participants can conscientiously and consistently communi-
cate values and differentiators, just as organizations do.

The Brand of Me
TTU, Jennifer Pechacek
Howtoons, Ingrid
Dragotta

The Brand of Me
Jason Hui, 2010

Conclusion

Brand strategy must take a both a dynamic and an holistic view of brands—one that goes beyond established textbooks and case studies. The new brand world is one that reestablishes ages-old understandings of community, values, and dialogue. Brand does not have to be an overbearing experience born of frequency, intensity, and duration. Rather, it can be the shorthand articulation of something larger, and a point of entry into greater meaning and significance in art, science, culture, and business.

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Capital, in all its varied forms—money, assets, inventory, land, creative, human, et cetera—is a necessary component for any business endeavor. Whether for-profit or nonprofit or hybrid of the two, a key element for viability is access to capital and how to use that capital wisely and sustainably.

The majority of trade-oriented economic systems naturally develop marketplaces, commonly referred to as "the market." Markets are the forums or places to go for capital. In fact, there are many markets and all of these markets have different characteristics: markets for products, services, money, and so on. When financial capital is a consideration, numerous markets exist: markets for debt (such as bonds, loans, or other instruments), markets for equities (access to different kinds of shares, such as exchanges, over the counter, the major burses), as well as commodities (such as the Chicago Mercantile). Even loan entities, such as Fannie Mae or Freddie Mac, may be considered a kind of exchange in the packaging and issuance of mortgage-related securities for sale and distribution. Markets enable exchange and acceleration of capital.

Where do design thinking and creative innovation apply in relation to capital access and market activities? When consideration is given to all of the different types of capital, in its many and varied forms, each kind of instrument evolved is a design solution to a particular problem or opportunity. Not all instruments are created alike, and there has been much debate as to the merits and deficiencies of everything from the issuance of cash as U.S. backed dollars to mortgage loans to mortgage-backed securities to derivatives of various forms and flavors.

Underlying all of these considerations, with respect to a graduate business school education that focuses on design, strategy, and innovation, is the basic need to understand both the historical and evolutionary basis of capital and its field of play. In other words, all forms of business-related activity interact and are impacted by the sources, acquisition, and uses of capital.

The Capital and Markets course begins with an overview of capital, money, and financial institutions, and an examination of markets. Financial instruments such as equities, stocks, bonds, options, and derivatives are examined to understand their place in the funding universe. This is just the start of the many questions we tackle throughout the course: Why are they needed and how do they work? How do we achieve a level of comfort

when considering the issues surrounding money? As much as it is an appropriate endeavor to apply design thinking and innovation processes to commodities, products, services, and experiences, it is equally useful to become familiar with the financial tools and methods that feed, nurture, and make possible these same endeavors.

Institutions that comprise the global financial system are reviewed as to their utility, type, the various kinds of banking and funding firms, and what purposes they exist for. Consumer, investment, retail, and commercial banks all have different charters, customers, rules, regulations, sizes, and shapes. Trading houses, hedge funds, investment funds, money managers, community-based lenders, and microfinance banks as well as government institutions such as the Federal Reserve are all explored with an eye toward understanding their role in innovation. Nonprofit actors and foundations are also included in this universe of capital acquisition and deployment.

Risk is a major factor in any consideration of capital acquisition and utilization. How do we evaluate risk in relation to reward? What types of risk can we foresee? What kinds of risk are so obtuse that there really is no visibility? And, when financial instruments (such as certain types of derivative contracts) are created, are the risks associated with these instruments fully explored and understood?

During the latest financial crisis that unfolded at the end of 2008, it became evident that there were substantial, unknown risks in many parts of the economic system, and not enough regulation, policies, and practices to effectively mitigate exposure once the system broke down. Is it possible to fully identify potential risks with new financial instruments during their creation or before they are marketed? Can responsive actions be predetermined as crisis prevention prior to major damage?

Sustainability in Markets

When assessing risk and identifying potential causes, outcomes, and effects, who is responsible? How do we identify responsibility? In any given economic system there are safeguards such as rules, regulations, laws. Within this capitalist, free-market system, we examine what standards and regulations are required, how much is enough, and what level of regulation may be adverse to economic prosperity and actually dampen innovation.

We also consider how financial, social, and ecological sustainability impact financial decisions. Commercial, retail, and investment banks, insurance companies, real estate firms, brokerage houses, private equity, hedge funds, and other players impact the financial markets as well as the availability and terms of capital. They set expectations and exert influence on how financial decisions are framed and how (and if) sustainability of all types of capital is considered. How does sustainability relate to an organization's operational practices? How should the capital instruments that these institutions create be viewed through the various lenses and available metrics of sustainability? Students explore the histories and effects of various types of entities and the products and services that have become accepted, as well as the novel instruments (such as mortgage-backed securities and collateralized debt obligations) that insert significant risk into the system.

Almost every kind of capital instrument, whether cash, equity, debt, or derivative, has enabling qualities and contains exposures. For example, leverage via debt or options may enable better gains on invested assets and impacts the types of innovations an organization values. At the same time, leverage may carry certain levels of risk that can adversely impact that same activity.

Another aspect of sustainability that is open for probe is the focus of capital. In other words, how is it applied through these institutions? What are the target markets? Are there better or worse markets in terms of sustainability? How should we expand the business model or processes to include system, ecological, social, and cultural sustainability functions that may or must be considered?

Sustainability is not solely related to the ongoing access to capital and funding in myriad forms. There is a broader definition that expands the conversation around capital and institutions to include the product environments that require capital to thrive. For example, should capital be allocated to traditional energy companies or to newer, possibly more innovative, renewable forms (such as geothermal) or even unproven technologies such as fusion power? Or to both, and in what measure? In the past, government has provided, and invested, significant resources in fledgling industries such as Internet or space technologies, as well as basic research in almost every branch of science and

engineering. These investments have yielded tremendous commercial breakthroughs that allow businesses and industries to grow in the private sector once a handoff is consummated. Is this still a viable model for nurturing sustainable commerce and innovation?

Allocating Capital

Among a universe of investment choices, what is the role of allocating capital to new innovations? Do capital or market mechanisms hinder innovation by focusing on the least risk, or drive decisions to the shortest-term investment? Do they reduce the consideration of innovative products or services that may need more time to grow into full commercial viability? In typical financial calculations that include net present value (NPV) and the time value of money as key variables, is there a component for "patient capital" that can be a rational part of the calculation?

When capital allocation is the consideration, the investor's needs, interests, and measurement criteria are important aspects to understand. The landscape for investment considerations has been changing significantly within the past 10 years. More focus on global equity, considerations about national and regional regimes, ecological effects, and transparency and socially responsible management are now being included in the capital allocation equation. Add in risk-adjusted returns and the equation for how long investors are willing to sustain investments before achieving an acceptable level of return changes. This becomes the focus of discussions of patient capital.

Corporate Governance

Corporate social responsibility (CSR) is yet another lens that provides a useful exploration of capital and fund assets. Increasingly, investment decisions take into account an organization's social, ecological, and governance policies and performance. This is especially true of investment institutions that favor long-term returns, like mutual funds and pension funds. Transparency is a particular issue with renewed interest in the wake of financial collapses in various markets in recent years. What other forms of capital investment, whether debt or equity, are taking into account the issues tabulated in CSR reports? How are these changing and are these concerns growing among various investors and employees?

Regulations, rules, and laws can only go so far to promote CSR. Adoption of specific kinds of CSR-related criteria in operations,

marketing, messaging, distribution, and product and service development is both cultural and, often, industry specific. These also speak to the core of an organization's values and mission. For example, some organizations may have highly valued human resource benefits such as excellent health care or generous time-off allowances for family situations. However, these same firms may have less-than-desirable CSR ratings when ecological factors or social issues like board diversity are evaluated. Insitutional investors are already exerting pressure on organizations to respond to their CSR visions and we see this only growing in the future.

Finally, the issues surrounding markets and how they function must be explored. Starting with an understanding of how markets functioned traditionally and how they evolve, unforeseen risk have become endemic. The basic functions of markets to facilitate a trade have evolved as technology has advanced, as financial products and services have matured, as new mechanisms for trade appear, and liquidity and leverage have fluctuated. Technology has accelerated to such a degree that the majority of security trading today is automated or computer-mediated. This not only adds to the acceleration of capital activity and liquidity, but these very activities become more opaque and the size and scope of market activities far larger, less understandable, and more prone to unforeseen events. These are all critical topics to understanding the future of investment—both in markets and in innovation.

As markets evolve in the future, will electronic transactions completely overtake human involvement? How might an approach promote and support productive innovation both in the access to capital and its constructive deployment? Capital markets exist as a mechanism to provide a valuable resource—financing—to production markets for goods and services. Finance structures that focus on desired levels of innovation can help promote improved human living and not simply the accumulation of money or profits.

How is capital secured today, especially for new ventures like startups? Credit card debt, venture capital and angel investment, commercial loans, small-business credit, leverage via assets or receivables, shared research and development funding, government grants, and foreign capital are all common sources of innovation financing, but each carries different risks and rewards. Never before has there been such a diversity of potential funding sources and access to capital. Helping innovators,

whether inside or outside an organization, to realize the potential of their innovations requires a firm understanding as well as a sound strategy. The current recession, coupled with a crisis event such as the credit freeze at the end of 2008, has served to withdraw or curtail massive amounts of previously available capital. Liquidity has dried up. It has made securing funding far more difficult for many. Yet even in this kind of capital restraint environment there may be innovative ways and forms of access to capital.

Tools and Processes

The Capital and Markets course incorporates readings from textbooks, case studies, and research reports as well as examinations of current activity in the existing financial markets. By viewing capital, investment, and markets through these multiple lenses, a more rounded view of theoretical, practical, and real-world opportunities is gained.

A grounded understanding of traditional methods and business practices helps to provide the basis for exploring newer forms of capital acquisition and current issues relating to CSR, sustainability, innovative capital frameworks, and appropriate uses for innovative technologies and commercial activities. Understanding historical and current forms of capital provides a solid basis for exploring the potentials for new forms, new market mechanisms, and the viability of innovative practices, products, or services.

One of the best and most engaging tools to gain a real-world grasp of capital allocation, rational decision methods, and market psychology is the trade game. Each student is tasked with building an investment portfolio that is actively traded throughout the course using various types of securities (such as equities, bonds, funds, options, and other instruments). Students have the opportunity to gain direct experience with the various market mechanisms and security types in a risk-free environment. Personal investment rationale and objectives are examined, and students gauge the outcomes of their choices. A key element of inquiry is the psychological and emotional response to the choices made and our emotional relationship to money. Often there is a belief that capital allocation and investment determination are purely rational decision processes. Here we confront the reality.

Our students work together on group projects to explore specific issues related to the questions above. Each team chooses a topic from a broad range, such as innovative derivative products, electronic market mechanisms, corporate social responsibility, sustainable investment funds, et cetera. The students develop these over the course of the class, with interim reports and online discussion. Presentations, findings, and discussions are made during the final class.

Guest speakers, book reports on chosen topics, and presentations of current news and events relating to markets add to the fullness and richness of the class. Students are exposed to differing points of view and may take opposing positions on issues that are informed by current events, academic reports, and their own personal experiences. Indeed, each student brings a wealth of ideas, creativity, and personal beliefs and experiences into the class. Through his or her individual participation, each student adds substantially to the explorations and discussions and ultimately to the value of outcomes within the course.

MBA in Design Strategy

The groundbreaking MBA in Design Strategy program at California College of the Arts prepares the next generation of innovation leaders for a world that is profitable, sustainable, ethical, and truly meaningful. This unique program unites the perspectives of systems thinking, design and integrative thinking, sustainability, finance, entrepreneurship, and generative leadership into a holistic strategic framework. Every course connects these themes so that students develop deep, practical experience in managing today's interconnected markets. Students learn not only how to create innovative products, services, and policies, but also (and more importantly) how to help organizations develop new business models for the future—how to create socially responsive, culturally relevant, and technologically appropriate lasting value.

This full-time, two-year MBA program has a flexible structure, with four-day weekends of instruction and interaction held once a month over the five months that comprise each semester. This allows students to commute from all over North America. The program encompasses 60 units of instruction, combining 10 full-time residencies of in-person instruction with 3 units of online interaction.

Each semester, students develop individual and team solutions to a variety of economic and social challenges using design techniques such as customer-centered research, prototyping, critique, and iteration as well as business metrics. Solutions are evaluated according to how well students serve customer and market needs, as well as organizational and stakeholder value. Optional sponsored projects allow students to work with local businesses and nonprofits. In addition, students may take advantage of graduate-wide electives.

The MBA in Design Strategy has dedicated studio space on CCA's San Francisco campus, which is also home to the college's nationally recognized design and architecture programs. Students have access to wood and metal shops, model-making, welding, and rapid prototyping studios (including a 3D prototyping machine and laser cutters) as well as media studios for editing digital media, film, video, and sound.

With two campuses in the San Francisco Bay Area—one in San Francisco and one in Oakland—CCA is at the heart of one of the world's most fertile innovation centers, a leading hub of sustainability and social change. The DMBA program leverages

this proximity to build close ties and partnerships with industry-leading companies and consultancies throughout the region, nationally, and internationally.

CCA's MBA in Design Strategy is accredited by the Western Association of Schools and Colleges (WASC).

Contact Us

For specific questions about the MBA in Design Strategy please email **designmba@cca.edu**.

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