There is a revolution happening in education: It is being led by students, entrepreneurs and passionate professionals & academics that want to break down the traditional silos of education and prepare more empathetic, creative leaders for tomorrow’s challenges.
A growing number of design and business schools (and private-sector firms) are working to add meaningful design-thinking curricula to programs—as supplemental classes, executive-level courses, short-term workshops, or all-out MBA programs—in order to meet the growing demands of companies seeking graduates with new and more creative skills for their workforces.

Objectives
For this research, we brought together representatives from business, design, and education in a series of facilitated conversations to:

• Define a shared vocabulary around design thinking and design management
• Identify educational outcomes that will meet the changing needs of today’s design managers
• Define the global landscape of graduate schools that teach design thinking to help guide industry and students
• Identify an optimal pathway to educational standards for graduate design education
• Determine a role for DMI in the future of design management education

This study will result in a benchmark analysis of programs, vocabulary, tools, and curricula for training design leaders and ultimately define the future path of design thinking education in both business and design graduate programs.
Innovation in education: An overview

On August 20, 2013, 75 practitioners, educators, and MBA students gathered at the DMI:futurED Conference in Chicago to share research and educational innovations and to generate new roadmaps for the future of graduate education for designers, as well as business leaders.

There appears to be an important and growing role for design thinking as a catalyst for project-based learning and creative collaboration to prepare emerging leaders for more-entrepreneurial roles in today’s unpredictable and rapidly changing business environment. Clearly defining the competencies, core principles, and foundational body of knowledge around design thinking and preparing effective learning design frameworks are the objectives of this effort.

A revolution is happening in education—led by students, entrepreneurs, and passionate professionals and academics who want to break down the traditional silos of education and prepare more empathetic, creative leaders for tomorrow’s challenges.

INSTITUTIONS

The landscape of graduate and executive education innovation that is developing begins with creative networks, nonprofits, well-funded entrepreneurs, and bootstrap startups that are disrupting education with online innovation and creative content curation and delivery. On the other end of the spectrum is a very interesting innovation from Philadelphia University that combines design, engineering, and commerce into a single program with three deans working as a team to deliver truly multidisciplinary design thinking and project learning for graduate and undergraduate students. In the middle of the spectrum lies a range of experiments where some schools have chosen partners to fill in gaps, such as the Massachusetts Institute of Technology.
Rhode Island School of Design, Weatherhead School of Management at Case Western Reserve University, and the Cleveland Institute of Art. Other outliers, such as Stanford’s d.school, have been highly successful for project-based learning across the Stanford campus, as well as for notable executive education programs. A number of business schools, such as Northwestern University, the Rotman School of Management at the University of Toronto, and the Darden School of Business at the University of Virginia, have been offering design thinking and design management degrees for some time. And some traditional business schools, such as Harvard’s, have now made design-thinking classes a core requirement for their MBA students. At the same time, progressive design and art schools, such as California College of the Arts, are offering an MBA specializing in strategic design. Other new models deliver project-based learning in which design thinking is used as a catalyst for innovation, as is the case inside the Live Well Collaborative at the University of Cincinnati. This program provides a nonprofit business platform that enables outside organizations to co-create with students and faculty from across the university. Its structure creates opportunities for students to participate in applied research—in the types of multidisciplinary team projects that students are seeking—and it simplifies intellectual-property issues for the funding companies.

STUDENTS
For students, it’s about connections with peers from multiple disciplines to experience together project-based learning that will prepare them for transitions into work. They believe this type of learning has high impact. They also see that it is underused—there isn’t a lot of opportunity for them to acquire and refine new skills. When students were asked if they believe their graduate education is equipping them to understand design thinking, the consensus was
They want more help with critical thinking and model-based decisions, which in this case are defined as making and then translating ideas into tangible solutions.

Students want their curricula to push against old boundaries and to be primarily focused on collaborative, multidiscipline experiences in which they are working on client-based, industry-sponsored, ambiguous, and complex problems that integrate theory and practice.

Staying connected to academic mentors and having feedback channels about the alignment of their skills with the demands of their postgraduate work is also important. Students want to influence the content of their curriculum to correspond with their specific areas of interest. They want to establish mentor relationships with professors and practitioners who can coach and facilitate network connections with professionals with whom they can remain connected after graduation.

They want their graduate programs and educators to use design thinking as an integrated approach to their education. They believe it enhances the educational experience and drives continuous innovation in academia to keep pace with the innovation in the business community.

**INDUSTRY**
The industry response was extensive and full of insights shared by many people with a strong passion for design and for their work.

A key trend in the responses indicated that empathy—in this case, referring to the ability to have a strong customer-centric, customer-value orientation—is a leading core competency that drives the design thinking process. The ability to teach or nurture empathy—defined as the ability to relate to and understand another human’s perception of his or her own personal value—and the ability to get to the core values of groups of people or subcultures is where design thinkers can and should differentiate themselves in business.

Respondents also indicated that graduate education should include a formal analysis and understanding of design-thinking principles, practices, and tool sets, complemented with studies of leadership, organizational behavior, psychology, anthropology, and other social
The core design thinking principles of empathy, creativity and making need to be nurtured in every discipline, from primary through graduate education.

EDUCATORS
Empathy, as well as reframing—the ability to ask why and how and to understand that there could be more than one right answer—are skillsets that are still missing from the student’s toolbox.

The principles of design thinking need to be taught throughout the disciplines—beginning with elementary education. Our answer to those who wonder if this means that anybody can practice design thinking is that what separates designers from the rest is their gift for empathy, visualization, and craft-based skills.

Design thinking has its roots in the literature of creative thinking, and systems thinking and research and publications should tie more closely with these fields of study to further validate findings and acceptance. This will help business circles understand how design and designers’ thought processes and creativity are valuable across the business spectrum—from strategy to interaction to product development to experience design. That’s why the new graduate design and MBA programs are integrating design with MBA work and are predicated on design-thinking principles.

To stay competitive, the principles of design thinking need to be applied to the pedagogy of what and how graduate programs are teaching; indeed, they should be applied to the change process itself.

The integration of disciplines is most likely within programs that benefit from good political support. Consider that observers who are still on the fence can be made into converts if they are given opportunities to engage and experience what students are experiencing.

A COMPETENCY MAP
The word cloud pictured in Figure 5 (on page 18) was generated from numerous interviews and the responses of more than 150 practitioners, educators, and students who were asked which core competencies are most important for design thinkers in business. It could serve as a starting point for next-generation design-thinking courses. The Chicago workshop added to this with the inclusion of a wider range of
key characteristics deemed important for future leaders. They are as follows:

- **Leadership.** Your leadership style is about empowerment and humanizing organizations (empathy is at the core of design thinking). You empower people because you help them see the problem or situation in a way that is empowering for them. You help them create something new. You bring out the creative energy of individuals and groups, and creativity is what makes people truly fulfilled and happy.

- **Self-awareness.** You have to learn how you think. This suggests that you have intrapersonal intelligence—a strong self-understanding—and are good at observing yourself so that you can mitigate personal biases from influencing your work inappropriately. You also possess the ability to articulate your discovery and creation processes (especially when you operate without a clear-cut framework) so that others are able to repeat and share them. This allows you to balance your needs as a designer with the needs and constraints of the organization.

- **Collaboration.** You are able to leave your specialized territory or craft, move into the middle, and establish a space in which you can co-author ideas and outcomes with other people. Collaboration involves thinking together, learning together, communicating effectively to each other (rather than past each other), and generating something new together.

- **Entrepreneurial/innovative attitude.** You want to drive innovation in the business world, make new things, and change the status quo.

- **Communication.** You are able to articulate what’s on your mind and describe emerging ideas to give them visual or verbal form.

- **Facilitation.** Conversation is a design tool. The goal for the designer-facilitator is to push people to expand past their comfort zone into the new, which the facilitator has the power to capture, verbally or visually.

- **Visualization.** This is a competency of thinking/communication/social skills that allows you to capture thinking as it emerges. It is also a tool of joint attention—the shared focus of more than one individual on an object.

- **Teaching.** The very definition of teaching is changing: You teach others in a collaborative, not a hierarchical, way. If you consult, you want your clients to be your partners.

- **Storytelling.** You manage ambiguity and complexity and the emergence of thought by creating a conceptual or physical model, which becomes a kernel of the future solution. The kernel is the central story that will be told, developed, and used to realize a final outcome.

- **Maker mentality.** This idea is about thinking through doing. It calls out an orientation to action and an experiential disposition. You are motivated to deliver results. The tools, techniques, and processes you use are all in the service of delivering optimal results. You are grounded in practical reality.

- **Culture making.** You feed your knowledge of culture and cultural change into your design products, whatever they are. You consciously create trends, tastes, and progress. You are
responsible, and you are a change agent—you advance culture.

**Workshop One summary**

In conclusion, we offer some observations by Tom Berno, a practitioner and a full professor of design, as well as a participant in our Chicago workshop.

Today, most graduate education institutions lack agility, and many faculty are surprisingly insulated from—even actively indifferent to—the pace of change in our industry, and its growing relevance outside the realm of its traditional boundaries. It is clear that design thinking is still in its early phase of influence.

The university is being disrupted; there is ample evidence that new institutions and approaches are having an effect on that system. However, these schools may be too late to capture the best minds. Although this is primarily an appeal for diversity and access to education, it is also a potentially disruptive idea as it relates to university models. Consider that many ethnic groups are inclined to drive high-achieving students into traditionally high-value pursuits, such as medicine and law; educating these students about the role and impact of design and emerging career paths will require contact at the secondary and even the primary school levels.

The new ideal hire... is a team. Our discussions made it clear that the increasing emphasis on intellectual and emotional intelligences ensured that few entry-level designers would possess such a broad set of capabilities. At the same time, the imperative for collaboration has been advancing.

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**DMI: Designing Business Curriculum**

DMI is developing a new model for seminars and education that begins with a basic design management curriculum and includes an advanced creative leadership program for designers and business and engineering professionals.

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**FIGURE 6**

DMI is developing a new model for seminars and education that begins with a basic design management curriculum and includes an advanced creative leadership program for designers and business and engineering professionals.
across the practice of design. Elite design programs produce organic teams of friends and collaborators, many of whom enter the profession as an established partnership, as opposed to seeking entry-level employment. Acquiring these types of groups via group hire or even business acquisition is an emerging solution to the gap between desired skills and one individual’s capabilities.

Key personal leadership skills tend to be the most desirable. And although technical skills must remain a focus of design education, the softer skills of empathy, collaboration, and leadership are the most important. These are the skills that improve customer understanding, as well as teamwork and communication across disciplines. But skills and capabilities that address future needs and thus support personal growth are also important.

Many students lack cultural depth and awareness. Several representatives from leading design agencies expressed variations on this theme, describing a lack of curiosity or personal development as particular concerns. They like to see self-initiated projects in portfolios, and they agreed that interpersonal skills—not canned answers—made the biggest impression in interviews.

This paper outlines our progress to date in finding common ground, shared vocabularies, and core competencies. We note that this is also a global process. In 2014, these types of conversations will take place in Europe, the Middle East, and Asia Pacific regions to complete a truly worldwide audit and summary.

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Dianne Hardin has worked in the telecom, IT consulting, and banking industries, where she led cross-functional product development teams. She has spearheaded the adoption of integrated digital marketing and sales initiatives to support the distribution of these products, one of which earned her industry recognition. Hardin graduated from California State University, Sacramento with a BA in economics and finance. In the fall of 2011, she was accepted into the University of Cincinnati’s College of Design, Art, Architecture and Planning (DAAP), where she is currently completing a master’s degree in design. Most recently, she was accepted to the Carl H. Lindner College of Business, where she is working on her master’s degree in marketing. Her design thesis work is focused on leveraging innovation and design thinking principles and practices to create a design-focused culture that measures the value of design.

Tom Berno is an experienced brand communications specialist with more than 20 years of practice in the field. As a past employee at several nationally prominent design and advertising firms based in Texas, he continues to collaborate with them through his design consultancy, idea21. Berno is currently a professor of communication design at Texas State University specializing in corporate brand communications curriculum for both BFA and MFA programs. He recently completed a three-year term as associate director of the School of Art and Design.

Michael Westcott is the president of the Design Management Institute, the largest global community of design and innovation leaders. He has been instrumental in helping to shape the dialogue in experience design and service innovation for more than 20 years, as a software entrepreneur, design strategist, marketing executive, and agency leader. He has created innovative and highly successful brand, strategy, marketing, and service design programs for such companies as Reebok, IBM, Cisco, GE Healthcare, Toyota, Chrysler, Jeep, FedEx, and many others. Westcott is a recognized thought leader in experience design and service innovation and has delivered interactive keynote speeches and workshops worldwide.
Design driven companies outperformed the S&P over ten years by 228%.

DMI: Design Value Index 2014

Is your organization design driven? DMI has the tools and resources to help you measure, manage and educate your organization.

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