Unshackling the creative business
Breaking the tradeoff between creativity and efficiency
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Creative business
A marriage of action and invention

Construction is arguably one of the industries most resistant to technology-driven disruption. From the pyramids in Egypt to Dubai’s Burj Khalifa, the same essential process has endured through the millennia, absorbing myriad technological innovations without undergoing much in the way of fundamental change; which makes the work of firms such as Australia’s Hickory Group all the more remarkable. Hickory has used techniques and technologies from outside the industry to transform the construction process—and the industry along with it. The firm’s approach to high-rise construction, known as Design for Manufacture and Assembly (DFMA), is a modern modular and digital approach inspired by repeatable parts in the automotive industry. Using DFMA, Hickory can build skyscrapers more economically, much more quickly, and with much less disturbance to local residents and businesses than traditional construction techniques. In fact, DFMA has been so successful that the city of Melbourne, where Hickory Group is headquartered, has considered regulation that would implicitly require all new high-rise construction to be done via DFMA.5

Firms like Hickory are rightly credited with being creative, and for having the spark of new and useful thinking that drives innovation. But innovative as it is, the DFMA process itself wasn’t the most important factor behind Hickory’s success. Even more important was the way Hickory developed its version of DFMA and brought it to market—by engaging in many small acts of creativity across and outside the organization that added up, in the end, to a transformative result. Most important of all, almost none of these creative acts involved inventing new things. Rather, Hickory’s success was largely the result of new and different ways of behaving. Groups within Hickory engaged with each other in new ways to put existing processes and technologies together to create DFMA; simultaneously, Hickory worked with external organizations, such as contractors and regulators, in new ways to smooth DFMA’s path to market.

Hickory’s story showcases creativity in how a firm and groups within the firm collaborate and engage with each other and with the market, rather than creativity as a skill or capability fostered to develop creative products and services.
that is the essence of a creative business. In a world full of interdependencies where accomplishing anything involves a multitude of stakeholders, getting things done depends crucially on the ability to work effectively with others. And when the thing to be done is new, working effectively with others, more often than not, means working in ways that haven’t been tried before. It’s what allows an organization to respond to unforeseen and previously unknown problems, transform a problem into opportunity, and find opportunity where others didn’t think to look. It’s the kind of creativity, born of interactions across many teams, places, times, and problems, that can—given enough time—transform a business, an industry, or the entire market.

DEFINING CREATIVITY

Decades of research into creativity have arrived at the consensus that creativity is not an ineffable thing. It can in fact be defined: It’s the creation of something novel and useful, a creative work, where work can be taken quite broadly to include physical objects, theorems or strategies, systems for understanding the world, stories and narratives, or music that can be performed again and again.

Novelty on its own is not enough. A creative work must also be seen as useful, helping the community move toward its goals. Defining creativity in terms of novelty and usefulness implies that creativity is contextual. Novel and useful to whom? Where? When? This relativity also implies that, while the individual or team is important to creativity, other factors are also, and sometimes even, more important.
A firm is only as creative as its least creative team

The need for creative engagement becomes clear when one considers that, in organizations composed of teams of teams (as many modern organizations are), any particular team’s creativity is contingent on the creativity of others. Unlike in the heyday of the industrial revolution, when simpler production processes and tight vertical integration made it easier for a business to be creative as a whole, the past few decades have seen the unbundling of the firm, with increasingly complex internal functions broken up into neat packages, with suppliers, partners, clients, or even customers taking on responsibility for packages. This unbundling means that organizations have transformed themselves into complex webs of relationships that span across internal groups and external ecosystems. It also means that the average organizational team is small and unable to accomplish much on its own, and hence must rely on the actions of others to turn a creative idea into reality.

Consider a chain of fast food restaurants whose marketers have determined that adding a constantly changing item to the menu, a burger of the week, will attract repeat customers. Novel (to the chain) techniques and ingredients—such as a black bun or a sweet and savory filling, or a burger using ingredients from other cultures, or possibly even ingredients recently developed in the lab—will result in something that stands out from the usual menu items, something with colors and textures perfect for social media. A burger of the week might be just the creative idea, the potential innovation, the restaurants need to catch the public’s eye.
For the burger-of-the-week campaign to succeed, the restaurants will have to coordinate many small changes across the organization and its ecosystem. Signage and menus need to be changed to include that week’s burger, and the burger must be added to cash register systems so that it can be sold. Any novel cooking techniques need to be integrated into kitchen processes, requiring training, at a minimum, and possibly additional tooling. Different ingredients must be sourced from (likely new) suppliers and integrated into the supply chain. And all this needs to be pulled apart at the end of every week and redone in new configurations for each successive burger of the week. To accomplish this, marketing, supply chain, procurement, IT, finance, and frontline restaurant workers and operational teams must all work with each other in ways they are not accustomed to, at least until the burger-of-the-week program becomes established.

The story is the same for Hickory and DFMA. Developments affecting one part of the process, such as the integration of 3D modeling tools with custom engineering plugins to calculate part weights, structural loads, and centers of gravity, informed beneficial changes in other parts of the process, such as performing engineering before design instead of the other way around as in a conventional build. Factory production of modular components made possible a wider range of materials and techniques, such as using low-carbon geopolymers instead of concrete. Because it departs so radically from conventional construction, the DFMA process could not be assessed with established institutional risk models; this made it difficult to obtain debt financing, causing Hickory to seek alternative ways to fund its early DFMA construction projects. And so on.

These examples highlight the value of distributed creativity as well as of creative ways of engaging both within and without the organization. But it also highlights the difficulty. When a creative outcome depends on the sum of many creative acts across the organization and its ecosystem, the effort can stall if any of the participants cannot flex in the needed way. And flexibility, unfortunately, is often hard to come by. The culprit? Institutionalized scalable efficiency.
Efficiency trumps creativity

Almost by definition, scalable efficiency designs creativity out of organizational activities. It prioritizes simplification and standardization as the means to efficiency, prescribing a correct way of doing things for everyone across the organization. Events and behaviors that fall outside these constraints are “exceptions,” undesirable and wasteful disruptions to the process. Tightly specified responsibilities and deliverables provide little room for trial and experimentation. Performance metrics for departments, teams, and individuals drive them to reduce waste and increase productivity rather than to experiment with new ideas and approaches.

We can see how this would work against creativity in the burger-of-the-week example. The supply chain team may balk at sourcing ingredients from unfamiliar and so unproven vendors, or allow it only after a lengthy vetting and approval process. Procurement policies may prohibit ordering signs and menus in smaller quantities than would qualify for a volume discount. Learning and development may not be authorized to contract with instructors to teach line cooks new techniques. Under these circumstances, our fictitious marketing department has the choice of either convincing other teams to step around contracts, service-level agreements, and organizational policies that inhibit realization of the creative idea, or going rogue and establishing new, possibly unsanctioned relationships to bring the idea to life.

That’s not to say that firms built around scalable efficiency don’t try to be more creative. Typically, improving creativity at such firms is approached in two ways. The first is to establish a dedicated creative group, such as “innovation,” “R&D,” or “design,” whose job it is to be creative for the firm, developing new products and processes. The second is to teach creativity methodologies to operating teams, who are then expected to apply them to their daily work. But both of these approaches commonly fail. The first fails because a creative department has no operational role or responsibilities, and so finds itself disconnected from and unable to influence what the operational teams are doing. It may
generate a wealth of creative ideas but few of them will find their way to execution as the creative department’s mandate to be creative is no match for operational pressure to be efficient. The second approach fails because operational teams often struggle to make use of the creativity techniques they have been taught. They too may generate their fair share of creative ideas, but find themselves unable to put them into practice as they run into roadblocks thrown up by the processes, metrics, and time constraints they must work within.

The commonly used “Four P’s” framework for the factors influencing creativity is helpful in understanding why these approaches fall short. According to this concept, creativity is a function of product, person, process, and place. Product is the dependent variable, the output of the formula: the creative work. The other three P’s are the independent variables, the things that we can control, that determine if our product will be new and useful, creative. Person is the individual (or team) doing the creating, their ambitions, attitudes, skills, background, and experience. Process is the creative process, encompassing the entire creative journey through multiple phases of generating ideas and then winnowing them down to arrive at a novel and useful solution (as opposed to techniques such as brainstorming or design thinking). Finally, place is the setting in which the work is done, not just the physical surroundings (as is often noted) but also the larger social and organizational environment that shapes creativity by determining what is easy and what is hard to do, and includes the metrics, assumptions, and principals that are the foundation of a firm’s operating model.

The two methods described above focus on person. The first treats creativity as the responsibility of particular creative individuals rather than being distributed across the firm. The second focuses on the techniques used within the team, the workers’ creative skills, without empowering the team to establish new ways of working with stakeholders across the organization and its ecosystem. Absent a place and process conducive to creativity—flexible, iterative, adaptable—a singular focus on person will get an organization nowhere. While person is undeniably important, process, place, and even products are equally important, as creativity emerges from the interactions between the four P’s.

CREATIVITY AS A GENERATIVE PROCESS

Research in the past few decades has shown us that creativity emerges from human interaction and collaboration. It’s a generative process: Interactions in, and influenced by, the workplace build on domain knowledge, past experience, and differing perspectives on the problem at hand to synthesize a novel and useful response. Recent research contrasts with historical views of creativity that saw it as an attribute of a creative individual, a cognitive approach which assumes that novel ideas originate in the head. On the contrary, creativity is something we do (a verb) rather than something we have (a noun).
Invest in creative engagement

Consider projects—the change
initiatives that we’re all spending an
increasing proportion of our time on—as an
eexample of how product, person, process, and
place need to work in concert for creativity to
emerge. We can staff projects with a diverse team
that pulls together a range of perspectives,
backgrounds, and skills. We can even train the
team in techniques such as design thinking and
provide them with a creative mentor. Projects,
however, are justified and prioritized according to
a cost-benefit analysis, a measure of efficiency.
Strict limitations are placed on the project’s
deliverables, its timeline and resources, and the
reporting and operating procedures that the
project is required to follow. Nor can the project
team work creatively with other project and
operational teams across the organization, as the
other teams are working under the
same limitations.

If we want more creative project outcomes, then we
need to give project teams the space to be creative.
In practical terms, this can mean empowering the
team to change the project’s scope or reframe the
problem they’re addressing. This implies that the
project team may want to change the scope, timing,
or nature of its deliverable, its product, as well as
the process by which they produce it. The team
also needs to be empowered to experiment with
alternative approaches before settling on what
seems to be the best. This requires investing time
and effort in developing and evaluating these alternatives, as well as exploring new ways of working with existing collaborators or establishing relationships with new ones.

Any changes to a project’s product or process will involve negotiating with other stakeholders—projects and operations teams—whose own work will be affected by these changes. This requires an operational environment, a place, that both empowers teams to find new ways of working with its stakeholders and provides them with governance processes that can be used to negotiate deviations from standard operating procedures. The burger-of-the-month team, for example, may ask the firm’s supply chain team to collaborate on creating a lightweight vendor approval process. This would likely create new value for the firm, but the collaboration will also have knock-on effects across the organization as the supply chain team reprioritizes other work—work that other teams depend on and that is unlikely to be accommodated by existing budgets. To account for these knock-on effects, marketing and supply chain will need sanctioned procedures to help other teams accommodate their efforts.

All this experimentation, collaboration, and accommodation can deliver creative solutions that are more valuable and useful than would have been considered otherwise. But this additional effort needs to be planned for and funded. It must also be balanced with the desire to be efficient, standardize, and drive efficiency: Fostering creativity does not and should not imply giving teams a blank check.

To fund the effort needed for creativity without unnecessarily compromising desirable efficiency, both creativity and efficiency need to be explicitly accounted for in a firm’s operating model. This means combining the traditional measure of efficiency—cost-benefit—with some measure of creative potential—investment-opportunity, perhaps—that enables the firm to compare and balance the two. If a firm fails to do this, then efficiency will always trump creativity, because creativity comes with a cost—a cost that, in the eyes of scalable efficiency, is unnecessary.
A creative business needs creative leadership

Creative business—enabling firms to productively engage with change across the entire value chain—presents both an opportunity and challenge. The opportunity is the ability to flexibly respond to unknown (and unforeseen) problems and opportunities, making operating models more flexible and firms more innovative. These attributes may well be what enables an organization to stay at the head of its industry at a time when, for many, the transition to digital is upending many traditional sources of competitive advantage.

On the flip side, the challenge is that capitalizing on this opportunity requires deep changes in a firm’s habits and norms. Investing in training, or giving teams a license to be creative, is important but insufficient. Creativity needs to be integrated into the very fabric of the firm.

At the senior leadership level, instilling habits and norms that foster creativity requires the development of governance frameworks that consider creativity as a key factor when deciding what to invest in. Program portfolio management, for example, needs to consider the possibility of a project creatively generating new value—its investment-opportunity ratio—and not just its ability to deliver effectively, its cost-benefit calculus. To support this, new processes will be required, backed by executive sponsorship that teams can access if they think that their project has the creative potential to deliver new value. These processes will need to institutionalize ways to change the scope of a team’s project, invest in exploring alternatives, and find new ways to collaborate or new groups to collaborate with. Some instances might need direct executive involvement, such as when a new approach departs significantly from commonly accepted organizational or industry norms. This was the case when Hickory’s DFMA construction process outgrew conventional industry partnering practices, requiring creative approaches to collaboration.

These new governance and operating processes are only possible if a firm quantifies the opportunities that creativity presents. In other words, we need to measure creativity. This might sound like a strange if not impossible task, not least because creativity’s value is contextual. It is possible, though, to develop subjective measures of creativity that can be used to determine if, for example, which of two similar projects is the more creative, or if an investment in a project yielded a more creative outcome than would have resulted otherwise. These qualitative measures can be used to develop aggregate quantitative metrics that provide insight into the overall impact of a firm’s investment in creativity.

The glue that binds governance and operations together with metrics is an established methodology or methodologies, such as design thinking, that help translate creativity into action. These methods have two uses. The first is to
provide teams with a language that they can use to both describe and advocate for a creative opportunity that they see in their work. The second is to give teams a formal way to describe how they will explore the creative opportunity and thereby provide an estimate of the investment required.

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Nor should we ignore the cultural aspect of creativity. While training and a general license to be creative are not enough on their own, they are still essential. Some staff might be spontaneously creative, but others will benefit from training in tools and techniques that enable them to tap into their inner muse. Even those who are spontaneously creative will likely benefit from training in when and when not to express their creativity to smooth their interactions with less spontaneous colleagues. And from a cultural standpoint, as well as from an accountability one, appointing a chief creative officer or equivalent could hugely boost a firm’s efforts to become more creative, if that executive is tasked with accomplishing the things described above—developing creativity metrics and working with other executives to integrate the metrics into the governance and operating processes that they are responsible for. Appointing a chief creativity officer with operational responsibility signals to teams and workers not only that it values creativity, but that it is willing to put its money where its mouth is by making someone responsible for getting it done.
Building a creative business

THE ABILITY TO act as a creative business relies on a complex set of norms, processes, and governance mechanisms that must all work together to promote exploration throughout the firm and its ecosystem. It requires some degree of comfort with ambiguity, as creativity’s outcomes are sometimes difficult to precisely define until the creative process is well underway. At the same time, it also requires enough structure to channel creativity toward the good of the firm and to obtain an acceptable return on investment. Although putting structure around ambiguity may seem like a contradiction in terms, it can be done, and it can be done in a disciplined and systematic way. Putting in the work to do so is what can start an organization on the path to becoming a creative business—a path that can lead to sustainable competitive advantage in a world where creativity has become a deciding factor, if not the deciding factor, in setting an organization apart.
Endnotes

1. China’s Broad Sustainable Building has developed a similar approach, though different in its details. The firm is known for its plan to assemble Sky City, a 220-floor building in Changsha, in 90 days. As with all good ideas, it germinated in multiple places.

2. Design for Manufacture and Assembly (DFMA) is a design approach that focuses on efficiency of manufacturing and assembling the final product. The foundation of applying the approach to construction is a digital model of the building—a building information model (BIM). Rather than treating the BIM as a tool to streamline existing operations, which is common, the DFMA approach centers the model and uses it to drive all building activities.

3. Hickory’s approach is built on a set of parametric digital models that enable a bespoke building to be broken down into a set of custom parts—precast stairs and pretensioned concrete flooring system with preattached façades—that are manufactured offsite then assembled onsite. A key difference between Hickory’s and early modular systems is the focus on creating an approach that could be used to construct any bespoke building, rather than restricting the building to a set of predefined manufactured components.


5. The regulation the City of Melbourne was considering would not directly mandate DFMA, however, it would favor night-time construction, with the implication that night time noise restrictions would make it impossible to use a conventional construction process.

6. This two-part definition—where for a thing to be creative it must be both novel and useful—is common in research into creativity. While definitions vary, they all generally adhere to this two-part form. Some definitions have appropriate rather than useful, and while there is a semantic difference, one does imply the other. See Plucker JA, et al., “Why isn’t creativity more important to educational psychologists? Potentials, pitfalls, and future directions in creativity research,” Educational Psychologist 39, no. 2 (2004): pp. 83–96.


8. Early self-checking kiosks are an interesting example of the tension here. It was commonly assumed that good customer service implied doing as much as possible for the customer, so that there was little that they needed to do. A self-service kiosk pushes responsibility for navigating the check-in process to the customer, which contradicts this assumption. Many customers preferred the experience though, as it provided them with more control over the processes.


11. Place is called “press” in the research literature, as in “the influence of the ecological press on the person” in Rhodes’ initial formulation (ibid). The authors have chosen to use “place” instead to avoid confusion.


14. Views on the source of creativity—our understanding of creativity’s cause—have shifted over the centuries, passing through the He and I paradigms to end up at the current We. He is the lone genius, where creativity is due to the influence of god or, later, a person’s genetic inheritance. An essentialist view. I has the “normal” person replacing the genius, with creativity as a quality of the (lone) individual, the “creative personality,” a skill which can be taught, a reductive view. We has creativity as the result of multiple factors that must converge for creativity to occur, a “systems approach” or “social creativity” where creativity is the result of human interaction and collaboration.

15. This is both demographic diversity, diversity in identity and cultural background, and functional diversity, diversity in thinking style, business area or discipline. While the two are correlated they are not the same. See Hong L and Page SE, “Groups of diverse problem solvers can outperform groups of high-ability problem solvers,” Proceedings of the National Academy of Sciences 101, no. 46: pp. 16385–89, accessed April 23, 2020.


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