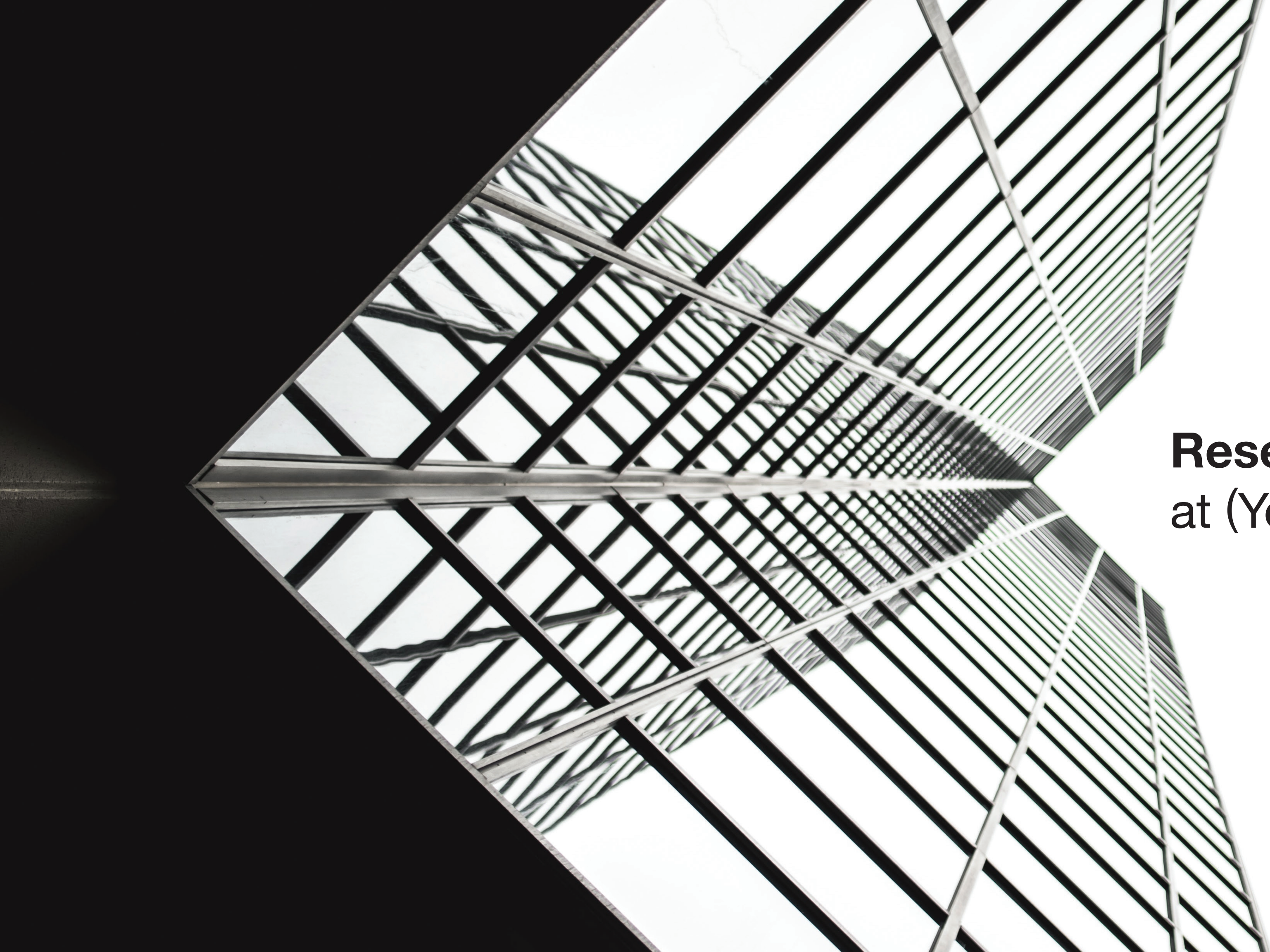

Research
at (Your) Scale

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Research holds great promise to transform practice for firms of all sizes. While exemplars throughout AEC have been building research-driven practices for years, many firms are still grappling with how they must change.

Meetings like these follow the script with tragicomic consistency. I am taking the senior leadership team of a 275-person professional services firm through a vision development exercise. The energy is high. A dozen or so owners and executives are participating. They begin to construct an ambitious picture of their future. The room is alive with potential. Everyone is excited by the clarity that is emerging.

One of the senior partners steers the conversation toward research, and the room follows enthusiastically. In their imagined future, every project begins with funded research to support design exploration. The firm also conducts research outside the context of projects, going where their intellectual curiosity takes them. Research transforms practice, evidence substantiates design decisions, and outcomes for clients improve. The firm develops a powerful new tool for marketing. They become known for not only the elegance of their design, but also for the intelligence that drives it. Their imagined future is full of new capabilities and discoveries.

"This is great!" I say, taken with their enthusiasm. "Research is extraordinarily powerful. Clearly you've been thinking about how it will transform your practice." And then: "Just so I understand—how does your firm define research?"

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>
> — Nicholas Holt

I can hear the big needle scratch sound now.

The room's energy, surging just moments ago, abruptly deflates. Eyes turn down or dart around the conference table, looking for the next person to speak. As two of the partners wade into their responses, a few things become clear. The passion, curiosity, and intent are there, but they believe their future as a research-driven practice is still far away.

Adhering to the script, the leadership team falls prey to complexity, barriers, and doubt. They have invested in research here and there, with mixed results. Their ideas outstrip their resources. They're a mid-sized regional firm—how can they compete with the resources of the multinationals? They can't imagine their current clients, who want to value engineer every screw and light fixture, would be willing to pay more for research. So many possible topics and directions to pursue—how do they focus? Their staff is stretched way too thin as it is, and besides, they don't have the type of expertise in research to be taken seriously.

And on it goes. The tragic part of the script—for this firm and others like them—is that those who follow it place unnecessary limits on themselves. They impede their own growth in an area that is essential for the future of practice.

In such situations, I am reminded of two recent discussions I had with veteran research leader Nicholas Holt. While a director at SOM, Nick spent seven years as a principal at the Center for Architecture, Science, and Ecology (CASE). He was also the head of research in North America for Woods Bagot. "The myth among many firms is that they are too small to do research," he said. "The larger firms have the same constraints regarding staff utilization, financial return, et cetera. They may be at a different scale, but they are in the same boat."

> *Knowing your purpose and underpinning it with some sort of definable rigor is important to establishing credibility.*
>
> — Nicholas Holt

The question is not whether our example firm can achieve its ambitions. After all, KieranTimberlake is smaller than they are, yet a recognized leader in extraordinary, research-driven design. The path for small- to mid-sized firms may look different from their larger cousins, but the way is still open, and the destination is still paramount.

In Nick's view, there are three tiers of research. Each has its purpose, characteristics, advantages, disadvantages, and level of effort. Some can be adopted in the near term, and others can only be attempted with the right in-house talent and structures. He described the tiers this way:

> *The first is 'blue sky,' or pure applied research in which firms, sometimes in partnership with other organizations, develop research simply to grow the base of knowledge in academia and industry. This was the model for the Center for Architecture, Science, and Ecology, a partnership between Rensselaer Polytechnic Institute and SOM that ran from 2008 to 2017. CASE was looking at five to 10 years applied research with the goal to develop products for practical application, but they were also aiming for ancillary benefits along the way, which is similar to NASA's model. It worked, and a lot of value was generated by the journey.*
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> *The second is what I call practical research, which can fit in a 12 to 36-month timeframe and focuses on invention, adapting or applying existing technologies to new purposes, and testing theories on a series of projects until they become viable.*
>
> *The third is solely project-based and is really about technical design innovation supported by empirical data, good knowledge management,*

> *Secondary research can be original and impactful in application. It is an attractive option for firms whose programs are in the early stages of development.*

and collaboration with one or more industry partners. This option tends to be the one that is most accessible for firms and project timelines and can generate very meaningful results.

How do firms, regardless of size or stage of development, find the most effective way to integrate research in their work? To begin, the firm needs to answer a series of both philosophical and practical questions:

- What is the purpose of research for our firm?
- What type of research will we focus on?
- How will we organize ourselves to conduct research?
- How will we adapt our design methodology?
- How can we best leverage research for market advantage?
- What must we change to be successful?
- Where do we begin?

Purpose

"The first step to getting started is to have leadership buy in. Next is to establish a funding model, including a clear value proposition to the firm supported with metrics that inform staff advancement. Is the investment about innovation, invention, or giving yourself a marketable edge in knowledge?" Nick advised. "Knowing your purpose and underpinning it with some sort of definable rigor is important to establishing credibility."

Values and fundamental motivations matter. Some are better than others. Nick favors an open approach that benefits the professions as well as individual firms: "It comes down to what your firm believes; whether the purpose of their research is for internal competitive edge, or if they believe there is greater value in being positioned as an industry leader. Perkins and Will's work on healthy building products is a good example. They have opened up much of their research and are now widely seen as an industry leader. You've got to get teams to think about leading via sharing."

Research Types and Organizational Models

Firms are engaged in research on topics as varied as healthy and sustainable building materials, new technologies, novel construction methods, and the neurological effects of space on building occupants. The type of research a firm chooses stems from a combination of the firm's philosophy, values, passions, and capabilities, as well as what is most relevant to the firm's clientele.

The types of research the firm engages in determines the mix of talent they will need, which in turn drives the organizational model they will use. There are a variety to choose from. Each has advantages and disadvantages.

The choice of organizational model relates to the firm's underlying purpose, desired benefits, and practical constraints. It is not uncommon for firms to use a blend or mix of approaches that tend to include one or more of the following:

- **Dedicated specialists** - models can vary between lab-like groups that conduct highly specialized research, to individuals from research disciplines who become part of design teams as needed
- **Partnerships with academia** - examples run the gamut from long-standing partnerships like CASE, to NBBJ's sponsorships at the University of Washington, to collaborations between smaller firms and individual professors
- **Practitioner-driven** - a common approach is for practitioners to develop and conduct their own research; some firms believe this model is not only the best way to incorporate research into their work, but also it can be a compelling strategy to attract and retain talent

There is a grey line between research and innovation in professional service firms. Consequently, many firms conduct their research within the context of broader innovation programs. One such model includes competitive internal grants. In this approach, employees are encouraged to generate and design their own studies, which are usually supported by a combination of paid time and cash toward expenses. Once they complete their research projects, participants are generally required to communicate their findings throughout the firm in writing and presentations.

Regardless of the type of research, the degree of rigor determines its legitimacy. Criteria may vary based on the discipline—experimental studies in materials science versus observational methods from anthropology, for example. Rigorous research that professional service firms conduct usually includes the following:

- **Repeatability** - the method and conditions can be duplicated by others who seek to replicate the research
- **Peer review** - in order to control for biases and ensure quality, research is subjected to and withstands the scrutiny of outside experts
- **Objectivity** - facts are taken on their own merits and research is conducted without the assumption of a given outcome

Discussions tend to focus on primary research, which firms seem to believe is the key to originality and greater impact. In Nick Holt's experience, even well-done literature review can have a tremendous positive effect on a firm's design work and culture. During his time at SOM, Nick's team created a number of white papers based on secondary research that had significant effects on them: "Beyond having knowledge to share at beginning of

REPEATABILITY

PEER REVIEW

OBJECTIVITY

the design process, thorough literature reviews changed the culture of the teams because every decision needed to be backed up by data. It inspired even our junior staff to rethink the way they looked at their day to day work."

Secondary research can be original and impactful in application. It is an attractive option for firms whose programs are in the early stages of development.

Adapting Design Methodology

Simply because a firm conducts research—even if it has ample resources and a sophisticated program—does not mean its design is research-based. It is not always easy for all parts of a larger organization to remain connected. Knowledge does not always work its way from researchers to those who are practicing day to day.

Firms that are research-driven have internalized the practice. They have consciously shaped their design methodology to incorporate research.

Crucially, these firms are committed. If the data indicate a solution that contradicts their intuitive aesthetic judgement, they follow the direction indicated by the research.

Even with earnest, deeply held intentions, the path to a research-driven practice is neither easy nor fast. "It's a big challenge to ask design teams to change what they do. It takes time. If they don't see immediate results, teams can lose motivation even if the firm's partners are enthusiastic," Nick said. It requires not only a change in approach, but also in culture.

However, in Nick's experience, part of the solution is the research activity itself. "In 'real' research, rigor underscores everything," he said. "Would your work stand up to a peer review? Teams are much more serious when they know their work will be subject to external review. I've seen the effect in practice. It's profound."

Leveraging Research

The surest way to win more research-based work is to attract enlightened clients. Showcasing the firm's research insights is an obvious place to start. But simply making research findings available in their original form usually falls short. Research needs to be framed appropriately for the audience, including the information and medium of delivery. Often it needs to be integrated into a story that makes it accessible. Handled appropriately, research provides powerful fuel for positioning a firm to win the right type of work.

Clearly, research and marketing have a relationship that is both symbiotic and potentially synergistic. But to ensure integrity it must have boundaries. Making completed research understandable and relevant to the audience, and letting them know it exists, is the responsibility of good marketers. Directing, influencing, or reshaping research results is not. Worse yet are firms who conduct research, often of dubious quality, solely to create promotional fodder.

As Nick said during one of our conversations: "Clients can and will see through fluff, or perhaps worse, thin research will be exposed during the project process and damage your credibility."

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Advanced firms successfully define the relationship between research and marketing. Leslie Taylor, global director of marketing at Gensler, explained in a recent conversation how her firm avoids pitfalls and achieves the right balance:

> *Our leaders have structured the firm organizationally so that research and marketing sit right next to one another, meaning on a regular basis we're partnering to look at initiatives strategically. Marketing has an opportunity to be a part of the earliest conversations with the Gensler Research Institute and its projects. There are times we've been able to provide feedback on the insights that will resonate most with our clients and audience. We serve as their in-house agency, communicating the research to the marketplace. I would say it all is very fluid and organic in a really beautiful way. The result has been extraordinary positioning for both our research and the firm.*

External communication is only half of the equation. More important is the free flow of information inside the firm. Too many professional practices conduct good research, only to have it stuck within organizational silos. Insights and potential innovations never make it to design teams, like tools that stay on the ground while workers who need them high above them on the scaffolding. The key, according to Nick, is how a firm chooses to handle the information it generates: "Without an adequate knowledge management infrastructure, be it culture or technology driven, to spread innovation within the firm, research efforts are often wasted."

Back in the conference room, one of three recently elevated partners lets out a sigh. "Are we the most backwards firm you've ever seen?" she asks. Her ironic tone is poor camouflage.

"Not by a long shot," I reply. "You may be a few years behind the known leaders, but so are a lot of firms. The good news is that you are open to change, and you are creating a bold vision for your future. The path ahead will take some time and require investment and commitment, but you won't need to wait to the end to see benefits—and neither will your clients."

Most of the leaders smile. A few mutter jokes of relief to their neighbors.

"We have a lot to figure out," says the CEO. "But it sounds doable. Looks like it's time to get down to work.