K1.01 KIOSK > What is it?   Draft 27 December 2012

KIOSK is a structured framework for built environment design management knowledge. This paper is about its purpose and benefits.

The exponential explosion of information

The professional design world is being reshaped by two powerful, closely related forces: the exponential growth of information and the accessibility of that information. Research by EMC[1] showed that the amount of information in the world is doubling every two years, and our observation is that is the case in information required to design in the built environment. The Internet has enabled undreamed of access to that information. The combination has created such a massive quantity of data that it is rapidly becoming impossible to effectively apply it to the design process.

Unlike other similarly affected profession (such as medicine and law), built environment design disciplines are still comparatively "general" i.e. not specialized. For example, at right is a list of the 42 "practice areas" of one Boston law firm – and there are many more that they *don't* offer! Although specialization in design is growing and will continue to grow, today there are still many more generalists than specialists in design.

PRACTICES»

Bankruptcy and Corporate Restructuring	Leasing
Biotechnology	Licensing and Strategic Alliances
Cleantech	Life Sciences
Commercial Finance	Litigation
Construction	Media and Publishing
Corporate	Medical Devices
Corporate Finance	Mergers and Acquisitions
Distressed Debt	Patents
Distressed Real Estate Restructuring	Pharmaceuticals
Emerging Technologies	Private Equity
Employee Benefits and Compensation	Real Estate
Energy, Utilities and Environmental	Renewable Energy
Environmental, Zoning, and Land Use	Restaurants and Hospitality
Finance	Retail and Shopping Centers
Funds	Securities and Corporate Governance
Gaming	Structured Finance
Government Contracts	Tax
Government Law and Strategies	Telecommunications
Health Care	Venture Capital
Information Technology	Wage and Hour
Intellectual Property	White Collar Defense and Government Investigations

Why a "structured" framework?

Until one human generation ago, almost all information organization systems were hierarchical in nature - think Dewey Decimal System, invented in 1876. Indeed the model was "natural" - often expressed as "trunk to branch to twig to leaf" – all connected in a linear fashion. In the late 70's – early 80's, a new model emerged from the Xerox PARC (Palo Alto Research Center) lab, with the invention of the hyperlink, that created the possibility of "matrix" structures that no longer needed the old linear framework to function. This invention is at the heart of all of today's computer-based systems; most notably Google Search and Wikipedia.

Hyperlink-connected matrix systems are brilliant: Google "matrix" and in 0.15 seconds you get 394,000,000 links. We can be connected to any information we want, in milliseconds. But how do we find the information we need in those millions of returns?

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[1] See http://www.emc.com/about/news/press/2011/20110628-01.htm.

The 85% solution

To find the answer, we need to return to what I call the "85% solution", which I first used in developing the CHECKIT! system of quality control checklists for the Royal Australian Institute of Architects in 1986. The rule is that it is better to have an easy-to-use system that gets 85% of things right most of the time than to have a system that would get 100% of things right, but be too lengthy to use[2].

This rule recognises that there are a relatively small number of elements that make up the great majority (about 85%) of most building projects, and a vast number of elements that are selectively used to provide the rest. Put another way: every project is unique, but every project is, at its core, made up of universal components. In fact, just as are people.

This rule seems to work: today the great majority of Australian architectural firms use quality management systems that have either adapted or embedded the CHECKIT! logic in them.

The growing imperative for coordination and integration

Only rarely do built-environment disciplines work in isolation: most projects require a multiplicity of design disciplines; many require a dozen or more. Clearly, as the ever-increasing demands for incorporating more and more information into design solutions forces greater specialization in the design professions, the need for coordination and integration of their collective output will increase in kind.

Therefore we need an accessible, easy-to-use method for approaching this integration and coordination function. A lot of very smart people have been on this problem for several years now, on a major project known as Omniclass (www.omniclass.org), subtitled as "a strategy for classifying the built environment". This strategy merges previous classifications known as Masterformat and Uniformat, and extends the logic for use in the emerging world of BIM (Building Information Modelling).

Process vs Content

I personally have a problem with the structure of the Omniclass solution: it requires the use of up to 14 numbers to define a building component or system – and I cannot see how a classification system of that complexity will ever be accessible or easy to use.

To be fair and give credit where due: a 100% solution no doubt requires a 14-character classification system. A 14-character solution has 14^{13} possibilities. That's 14 to the 13th power – you can do the math.

We need to "think different" about the problem in order to come up with a more accessible answer. My own research over the last quarter-century convinces me that the solution lies in separating *process* from *content*. The Omniclass system is a *content* classification structure. But to make sense of the issue of coordination and integration between the disparate design disciplines, we need to think *process*, rather than *content*.

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[2] See *TQM and ISO 9000 for Architects and Designers*, Charles Nelson, p. 203 (McGraw-Hill, 1996).

The invention of the CHECKIT! system was a *process* model: describing actions that users needed to take, rather than prescribing outcomes. Extending the logic, it turns out that the differences between the design disciplines are essentially *content* differences, not *process* differences. Each discipline approaches their work based on a varying set of inputs, and applies universal design processes to produces a set of responsive, unique outputs.

The coordination and integration of the outputs of the different design disciplines requires an understanding of the differences and similarities of the processes in each, rather than an understanding of the content that each is responsible for – and how these processes are managed.

What is design management?

The above thought train requires some extension of the concept of design management. The Design Management Institute (www.dmi.org) has defined the term: "design management is the business side of design". This definition goes on to include "ongoing processes" and a number of other facets of design practice, but the focus is clearly on the "business side" of design practice.

In the built-environment design professions, to adequately structure interdisciplinary coordination and integration of output, one must drill down into the processes. Accordingly, I have come to see two quite separate meanings of the idea of design management, one being the management of the design practice, and the other being the management of the design process.

My own research over the last quarter-century suggests very strongly that projects vary enormously in content from project to project, from building type to building type, and from design discipline to design discipline – but that the essential core of design *process* varies little across all three of these areas.

Simply put: *we all do the same thing*, but with different inputs, different materials and components, and different output requirements.

In that simple but powerful conclusion lies the opportunity for a very high level of coordination and integration of design results.

iProjects

This means that we can create a design management engine that can accommodate the huge differences from project to project, from building type to building type, and from design discipline to design discipline.

This revelation is at the heart of **iProjects**: a ground-breaking design process management tool for any built environment design professional.

Building that solution has been a principal focus of my life over the last decade. The first version was abandoned at the working beta stage because I did not have the resources to bring it to market. The second version, **iProjects**, has taken five years, and the cooperative input of a big development team.

But there was still something missing: as the **iProjects** "project" progressed, we realized that there was no single available resource of information about the various design disciplines – no place to connect references from **iProjects** for more detail on the design processes.

KIOSK

The answer to that important question is called KIOSK. We are building because we need it as a reference base. It's structure is as simple as we could make it, and still provide room for reference to what the great quality management master W. Edwards Deming called the "vital few" versus the "trivial many".

The word has many meanings, from the original Turkish word kösk (pavilion), to the modern-day electronic location information devices one finds in every major city. Our meaning is closest to the Greek "periptero", the ubiquitous small stands where you can get just about anything you really need, any time, anywhere.

KIOSK is a structured framework, for all of the reasons outlined above.

More info:

See also: K1.02: KIOSK Structure
             K1.03: KIOSK Contributing Partners
             K1.04: KIOSK Details

Benefits

The benefits of KIOSK are simple: A free accessible source for connecting to knowledge on the essential links between the various design disciplines working to create the built environment.

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