A STRATEGIC FRAMEWORK FOR ENTREPRENEURIAL SME'S TO IMPROVE SERVICES AND BUILD DESIGN AND INNOVATION CAPABILITIES.

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EXECUTIVE SUMMARY

Design is increasingly seen as a competency that can drive and co-ordinate innovation. Each company has a set of resources and capabilities from which it seeks to create economic value. Design can link resources and capabilities to create competitive sustainable advantage. Design helps guide innovation and deliver sustainable competitive advantage through new product and service developments and creative communications.

User perception of a service is defined at the touch points of the organisation. This broadens the traditional scope of the Design problem from space, products, and communications, to include the motivation of the internal stakeholders and their input in to service provision. Service design is emerging as an increasingly important discipline as companies seek to differentiate themselves from their competitors. Nearly every company within their value chain delivers services as part of their product offering. Small entrepreneurial companies can find it difficult to repeat initial success. Development is carried out intuitively by key staff who have a clear vision of how the product or service should be. As a company matures, exploitation tends to drive out exploration, and eventually the company hits a performance crisis. Their design capability diminishes. The design effort is an upfront sunk cost and the value attributed to design is not clear. In order to survive and grow small companies need to develop their design capability.

This document outlines a framework to facilitate communications at the beginning of the design process to get people to think about design in order to: (1) recognise and understand their tacit design capability; (2) develop their understanding of the service design perspective; (3) spot opportunities afforded within the design mix where design could provide a competitive advantage, and help decide where money and time should be invested. It also helps the designer understand their customers' requirements and help the designer deal with resistance they might meet when attempting to manage the change process involved in redesigning a service.

The Dublin Chamber of Commerce successfully used this framework to manage resistance to change and spot innovation opportunities. The framework constructively contributed to the Chambers understanding of design and contributed to strategy formulation.

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INTRODUCTION

As an entrepreneurial company matures innovation slows. Exploitation tends to drive out exploration and eventually the company hits a performance crisis. Small companies have to strike a balance between exploration and exploitation[i]. At some point in the small entrepreneurial start-up lifecycle design and innovation capability gets relegated in order to harvest profits from the gem of the idea on which the company was founded. SME's lose dynamism as they grow; they focus on key opportunities to extract profits. We're not arguing that profits shouldn't be extracted, but in order to create long term value companies need to be on top of change factors. Successfully spotting change factors, assessing their importance, and reacting and adapting creates long term value for the enterprise.

This document outlines a framework that can be used at the beginning of the service design process by a designer to engage with people in an organisation to build and share knowledge. The framework gets people within the organisation to think about their design capability. It helps them spot opportunities afforded within the design mix where design could provide a competitive advantage. It helps managers identify where money and time should be invested. Service design changes the way people work, the

designer must address peoples' resistance to change or risk failure. The framework increases the designer's understanding of their customers' requirements and helps them understand the resistance forces within the organisation they might meet.

Examining the design mix at the beginning of a process – how a company and their competitors use design – provides valuable insights. Design outputs are tangible and can be observed: examining a competitors design outputs and benchmarking them against ones own provides valuable insights into how your competitors are reacting to market and industry conditions. Competitors may be reacting to an opportunity or threat that you've missed.

Design activities are often dispersed across functional silos within an organisation, so we seldom see the big picture as to how design contributes to the company's success. Taking a holistic view of the design mix using a competitive evaluation framework may reveal linkages that we may have otherwise missed.

Design thinking can broaden focus; re-invigorate passion; stimulate learning and create knowledge; and develop lead-user expertise within the organisation. Design increases understanding of customers; makes a clear statement about the company's long-term purpose, values and identity; improves communications, re-aligns passions, and creates interest; and provides long term vision: all of which can re-focus the organisation and develop and maintain the firms' specialism's.

BACKGROUND

DESIGN: A STRATEGIC COMPETENCY

Design is increasingly seen as a competency that can drive and co-ordinate innovation[ii]. Innovation is the means by which entrepreneurs create new, wealth producing resources or endow existing resources with enhanced potential for creating wealth. [iii] Innovation is a strategic response to change forces and attempts to improve the economic potential of an enterprise. Design plays a key role in co-ordinating innovation effort; and identifying and commercialising innovation opportunities. When innovation opportunities turn into change factors, design can play an important role in the change management process needed to role out an innovation.

Design informs two fundamental critical strategic decisions: what products should I produce? who are my customers? And strategically, design is (1) an organisational capability (2) with an external end-user, or customer focus (3) that can be used to align a company's resources with the organisational strategy to create value, and (4) stimulate learning and build knowledge in the enterprise. [iv]

Design artefacts such as prototypes, models, and promotional campaigns are an organisations' strategic response to change forces. The artefacts are useful tools that can facilitate the change management

process: they work as storehouses of knowledge that facilitate organisational learning and enable collaboration within the organisation.[v]

Each company has a set of resources and capabilities from which it seeks to create economic value. Design links resources and capabilities within companies. It is the often the linkages between resources and capabilities that create competitive sustainable advantage[vi]. The output of the design activity is explicit: a tangible artefact. Competitors may produce a me-too copy of a successful design. But customers prize the original as demonstrated by the premium it commands. Consumers perceive that the fidelity of the copy is compromised and they value it less then the original. The linkages between the resources and capabilities that created the successful product in the first instance are not necessarily revealed which makes a competitors success difficult to replicate.

Design thinking is a capability that stretches an organisation and creates opportunities for developing sustainable competitive advantage. It helps harness the internal resources of a company to guide innovation and deliver sustainable competitive advantage through new product and service developments and creative communications.

SERVICE DESIGN

Services and the value they create are an important driver of economic growth in the first world. Service design is emerging as an increasingly important discipline as companies seek to differentiate themselves from their competitors. Companies now compete across value chains and have been moving to a less integrated but more focused organisation built around a few highly developed core skills. Manufacturers can no longer see themselves as providers of finished goods: the service component of their supply chain relationships significantly impact on their ability to compete and create value. What we used to think of as products are augmented with service components. Now nearly every company delivers services as part of their product offering.[vii] Service design is an integrated response to the fact that we live in a world where products and services have to be developed rapidly in response to customer suggestions and purchases; there simply isn't time to co-ordinate separate specialists such as marketing and product development.[viii]

User perception of a service is defined at the touch points of the organisation[ix], and services happen over time. Therefore service design as a discipline has to take a broader holistic view of the organisation. In this the designers role overlaps with roles traditionally carried out by management consultants and process engineers. Service design should be seen as complementary activity that focuses on: (1) the requirements of the end user, and (2) the components of the customer-company interface. This broadens the traditional scope of the Design manager from pre-occupation with space, products, and communications, to include the motivation of the internal stakeholders and their input to

service provision. Services are provided by people: their concerns need to be addressed by the designer.

Re-designing a service will involve changing peoples' jobs and roles. Individuals can find this upsetting and can resist the change. Change is problematic for precisely this reason. Getting people to commit to the change process is vital to its success, without their commitment the new process risks failure. The designer needs to engage with employees to understand their concerns and address them as part of the service design process. The greatest resistance to change is the inability of stakeholders to see reasons to change. Change is hard. In every company there are forces of resistance and forces for change. Design is often perceived as an agent of change, it can be perceived as a threat and hit resistance straight away. Culturally designers have a bias towards change and are very focused on trends in fashion, technology, or culture. Sometimes designers need to put the breaks and look at company culture and what change will mean for the company and the competitive landscape in which it operates.

STRATEGIC FOCUS AND PASSION & BUILT IN DESIGN COMPETENCY

A focus strategy concentrates efforts: on one market segment, one product line, or one service and can emerge in any business arena; it provides ways for small companies to compete with large companies. Small companies can nibble at the edges of large markets and create their own markets by targeting segments which are considered un-economical by larger players. Small companies have fewer resources, but have greater flexibility, and therefore can concentrate their limited resources on a single market segment or product platform. This focus builds internal resources and competencies which creates a sustainable advantage. The strategy avoids strategy dilution or distraction; it increases buy-in within the organisation, and builds product or service credibility amongst customers.

Focus strategies emerge in small companies because key people have their passions successfully aligned with the companies' strategic objectives. Development is carried out intuitively. Key staff have a clear vision of how the product or service should be, the products or service captures their imagination and tends to be exciting, innovative, and high-quality. They act as the lead user; their needs and wants reflect the wider audiences. The company's identity develops organically around the offering and the strategic position develops from the value proposition.

Small entrepreneurial companies are much better at handling disruptive innovation then larger companies[x]. New ventures are dominated by start-ups attempting to work in the space created by disruptive innovations. Large companies' have knowledge embedded in their processes: the processes can afford a competitive advantage until a disruptive innovation changes the competitive landscape for all players. New challenges require new processes and large companies find it difficult to change[xi].

SECOND ALBUM SYNDROME

"There is a silent plague that kills more music careers than drug overdoses, plane crashes and guest appearances on American Dreams combined. It's called second-album syndrome, and it is a cruel and unpredictable assassin."[xii] In 2006 'the Stone Roses' was voted the best British album of all time by NME's writers. The debut Album from the Stone Roses was released in 1989 fusing dance music and traditional guitar rock and took the Manchester sound global. In 1994 they released the Second Coming. The world had moved on: the album bombed; the band disbanded. The music industry is littered with the bones of bands with failed second albums. A struggling band will spend years working on their first album: writing dozens of songs; trying them out; choosing the best songs to put on an album once they get a contract.

In most SME's design is typically carried out by non-designers[xiii]. This can be very successful where the non-designer is a passionate protagonist with a clear vision for the product or service. They act as lead users: their wants, needs, and preferences reflect those of their target market segment. Product innovation in the entrepreneurial SME is typically collaborative and multidisciplinary; and it is user centric. In this regard it is similar to the design process.

Small entrepreneurial companies can find it difficult to repeat initial success. An entrepreneur could spend years gestating a killer innovation, execute it, and succeed. The design effort is an upfront sunk cost and the value attributed to design is not clear. The product or service developed around the founder's vision is enough to satisfy the market, and in the short term, it is often better to allocate resources to other business functions such as logistics and finance who traceably contribute to profits. Development freezes as the company commercialises the innovation. Unfortunately this means that a SME's design capability diminishes as it harvests profits from its initial successful innovations. Its initial ability to develop new products and services isn't fully understood or valued; its innovation competency gets relegated. This is further compounded by the fact that new products almost always promise lower profit margins per unit sold than existing products.[xiv] Product development is reduced to producing me-too products, which do not provide value and can destroy credibility amongst their customer base[xv]. The organisation no longer has a clear vision of the customers' need, and fails to create a resonant value proposition.

Design can be a linking force that enables network collaboration within a functional hierarchy. Small companies need to tightly control costs as they grow. Cost-minimization can become the dominant strategy and drive out innovation – innovation becomes regarded as an unnecessary expense. Cost-minimization can also change a company's organisational structure: innovation needs flexibility and an organic structure; cost-minimisation needs the efficiency and stability of hierarchical, formalized structures[xvi]. Organisational structure has an impact on the innovation capability of the organisation: innovation needs cross functional collaboration and communication. Collaborative design techniques can be used to pull people together from different functional areas and hierarchy in the organisation:

(1) to get them thinking about product and service innovations; and (2) to make design the responsibility of everyone in the organisation.

WHY BOTHER?

Opportunities are transient: sources of competitive advantage are being created and eroded at a greater rate through hyper-competition. A company's strategic goal should be to disrupt the existing sources of advantage in the industry (including its own) and create new ones. Companies need to be more future focused and not rest on their laurels. They risk getting their competitive advantage eroded beneath them if they only seek to harvest the advantages they already enjoy.[xvii]

There is a correlation between companies who innovate and increased shareholder value. Share prices of companies using design effectively have outperformed the FTSE All-Share index by 200 per cent over ten years.[xviii]

Design thinking can be used to look internally within a company and externally to identify innovation opportunities. There are four areas of opportunity that exist within a company: (1) unexpected occurrences, (2) incongruities in processes, (3) process needs, and (4) industry and market changes. Three innovation opportunities exist externally outside the company: (5) demographic changes, (6) changes in perception and (7) new knowledge.[xix]

Companies go through periods of growth, decline and rejuvenation. Sectors and industries often share periods of decline and growth that can be directly attributed to factors outside the organisation. During a decline the company that can buck the trend, and rejuvenate, will steal a lead on its competitors. Some companies are better at capitalising opportunities then others, and are constantly rejuvenating such as Honda and Apple who operate in very dynamic conditions. The current wisdom is that companies should look for radical innovations that will disrupt the market and enable them to grab a competitive advantage. Often the first to spot and react to an innovation opportunity may not enjoy first mover advantage: they may not set the standard and derive monopolistic control of the market. But that's not important. What is important is that they are taking action to stop the decline and have started to rejuvenate by developing their innovation capability which will create long term value for the enterprise.

Small companies face the same commercial realities as larger companies and have periods of growth and decline. Rejuvenation can be difficult for small companies as they often operate in niche: the niche disappears and so does the commercial imperative for the company's existence. A primary success factor is the ability of an organisation to strike a balance between exploration and exploitation. As a company matures, exploitation tends to drive out exploration, and eventually the company hits a performance crisis.[xx] Small companies need to be constantly evaluating innovation opportunities in order to survive and grow. Their growth, decline and rejuvenation cycles need to be shorter, tied

together in an upward spiral. They need to maintain the correct balance between exploration and exploitation.

Designers address innovation opportunities in their processes and can create prototypes that demonstrate alternatives and aid communication internally within an organisation to help understand the opportunity and drive change initiatives. Design can be used to share knowledge and aid communication within the organisation by visualising possible futures and approaches.

DESIGN EVALUATION FRAMEWORK

Service design changes the way people work and interact with customers. This means that service designers have to engage with employees at the outset of the design process. Service designers have to deal with the same risks change management consultants have dealt with for years: people who are affected by change experience emotional turmoil. Changes that seem positive or rational can still result in loss and uncertainty; reactions can vary from: passively resisting change, to aggressively trying to undermine it, to simply embracing it. The four most common reasons people resist change are: (1) the desire not to lose something of value, (2) a misunderstanding of change and its implication, (3) belief that change does not make sense for the organisation, (4) low tolerance for change.[xxi] Service designers need a collaborative process to engage with users and stakeholders to get them involved in the design process. Small companies are under resourced. Design creates work: it is a difficult activity; it changes people's jobs, but its reaction to a changing world that keeps a company relevant to its customers. So in order to make it less painful, less risky, you need to get people on board, to understand why change is necessary, you want to engage with them to identify the problems.

Design is a tactical tool often used to capitalise on innovation opportunities. Companies use design to respond to change factors. The products of the design mix are tangible artefacts that are used at the touch points of an enterprise. They are visible. Benchmarking competitor use of the design mix collaboratively in an organisation improves the organisations design capability. It increases organisational understanding of design, its contribution to creating value, which thereby improves the ability of the designer to effect change in the enterprise.

Directly imitating competitors may be a credible strategy undertaken to erode a competitor's advantage but there is risk that you could end up in an arms race needlessly spending on money on an area that has no real lasting value for your customer. It is much more valuable to identify the innovation opportunity rather then ape the response. For example, Harley Davidson is acknowledged leader in experience design. Motorcycles produced by Harley Davidson's are technologically inferior to those produced by Honda. You would imagine that this unpleasant thought would dissuade the Harley purchaser. Harley have managed to alleviate this unpleasant cognition by changing it to: Harleys are mechanically superior to Honda's because they technically simpler, thereby overcoming cognitive

dissonance[1]. Harley Davidson re-enforce this through the Harley Owners Group (HOG) experience by creating two further consonant cognitions: (1) 'Allot of people feel the same way as me' and (2) 'I have an affiliation with them through HOG'. Reframing the cognitions increases the customer's emotional ties with Harley. Honda probably wouldn't derive much value from copying Harleys experience design approach. But Honda could learn from the approach and identify dissonant and constant cognitions that could be utilised in framing their communications strategy.

The purpose of the framework is to:

1. Get people to think about design: (1) recognise and understand their tacit design capability; (2) develop their understanding of the service design perspective; (3) spot opportunities afforded within the design mix where design could gain a competitive advantage, and help them decide where money and time should be invested.
2. Help the designer understand their customers' requirements and help them deal with resistance they might meet when attempting to implement changes through: (1) education and communication; (2) participation and involvement; (3) facilitation and support, (4) manipulation & cooption.
3. Innovate by spotting innovation opportunities in the market already being exploited by competitors.

THE DESIGN MIX

Design: (1) creates, develops and improves products, (2) creates internal and external communications, and (3) creates environments within which people interact with a company. Up to 16 types of design can shape customers perception of a service. Products, Communications, and Space are the main constituents of the Design Mix. Design specialisations have developed within the constituents. Design education and design practice – specifically design consultancies – further support specialisation. We have: industrial designers who design products; graphic designers who design our communications; and architects who create our spaces. Design is a child of technological change and its providence is in the industrial revolution and design specialisation (like all specialisations) is a by-product of that Industrialisation. We've been a through a few revolutions since then, and each has spawned its own design specialisation. (See Appendix 1: Design Timeline for a description of each design activity.)

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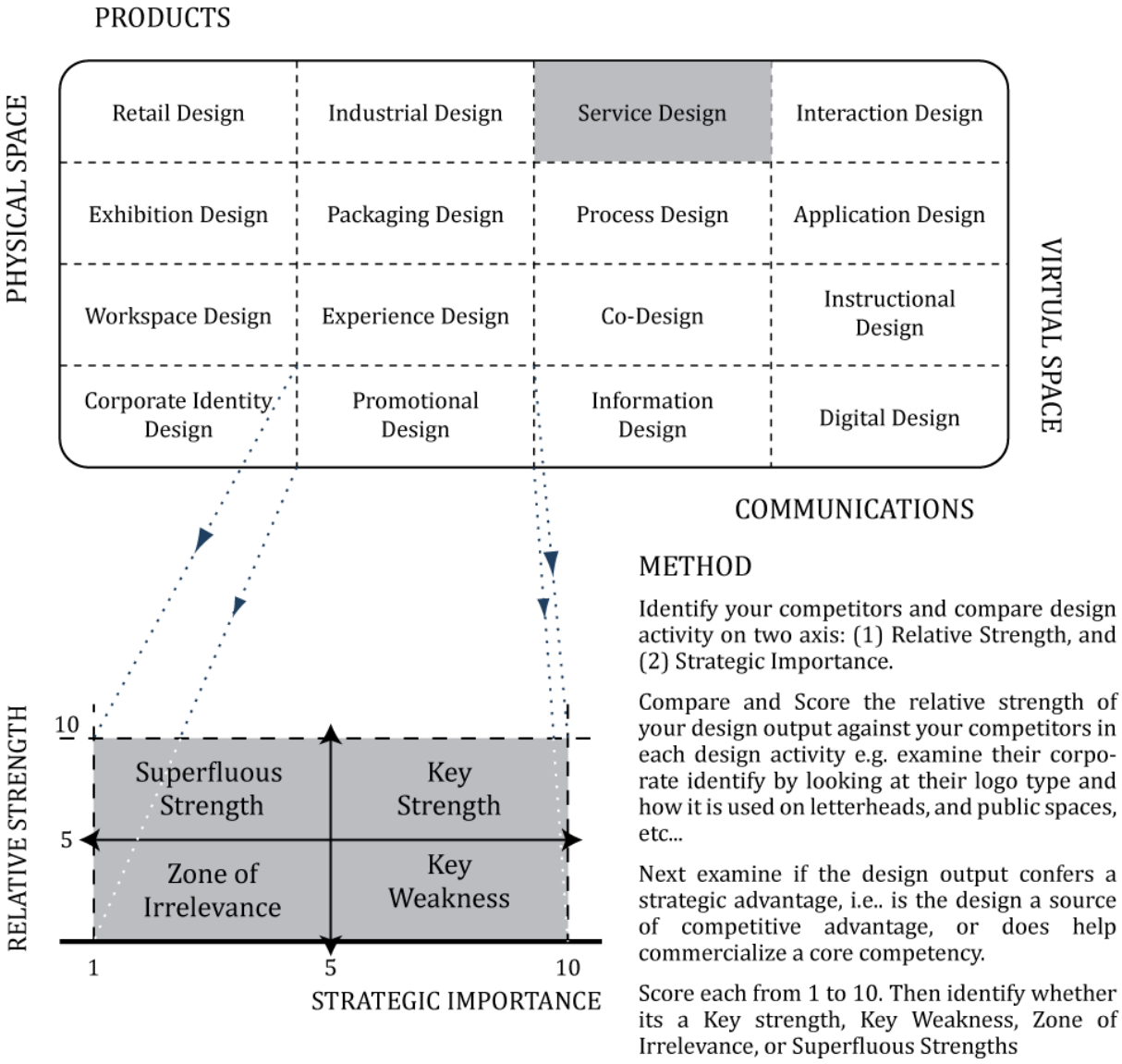
[1] People strive to have consistency with their attitudes, thoughts, and beliefs. Cognitive dissonance is the state of mental discomfort that occurs when a person's attitudes, thoughts or beliefs (i.e. cognitions) conflict. P.36-37, Universal Principles of Design, W. Lidwell et Al, Rockport 2003

For explanation purposes design activity can be loosely grouped into four categories: products, communications, physical spaces and virtual spaces. Design activities are often carried out within different functional silos within an organisation, so we seldom see the big picture as to how design contributes to a company's success. Companies who excel at using design have great products, great communications, great spaces, and strategic focus.



METHOD

Identify your competitors and compare design activity on two axis: (1) Relative Strength, and (2) Strategic Importance.

Compare and Score the relative strength of your design output against your competitors in each design activity e.g. examine their corporate identify by looking at their logo type and how it is used on letterheads, and public spaces, etc...

Next examine if the design output confers a strategic advantage, i.e.. is the design a source of competitive advantage, or does help commercialize a core competency.

Score each from 1 to 10. Then identify whether its a Key strength, Key Weakness, Zone of Irrelevance, or Superfluous Strengths

Above is a Matrix containing all the elements of the Design Mix. The purpose of this Matrix is to help you benchmark your company's use of the design against your competitors; and to help you ascertain if design contributes to success in your industry. Not all elements of the design mix are important to your company; and afford opportunities for development. All or none of these may be important to your organisation.

CASE STUDY: THE DUBLIN CHAMBER OF COMMERCE

The Dublin Chamber of Commerce (DCC) is an Independent membership organisation that represents the interests of businesses in Dublin, and had revenues of 1.8 million in 2006. It has 19 full-time employees and over 1,200 members. The Chamber supports the needs of up to 200,000 people as each employee of a member organisation has access to Dublin Chamber resources.

The Dublin Chamber of Commerce main competitor is the Irish Business and Employers Confederation (IBEC) which is an umbrella group that includes the Irish Small Firms association. IBEC operate nationally and is the dominant player in this market. The Cork Chamber of Commerce is a smaller Chamber of Commerce which represent business interests in Ireland's second city, Cork, and is tightly allied to Chambers Ireland, the umbrella body that represents all Irish Chambers. All three participate in the programme for social partnership with the Irish government – the Dublin Chamber and Cork Chamber participate within Chambers Ireland.

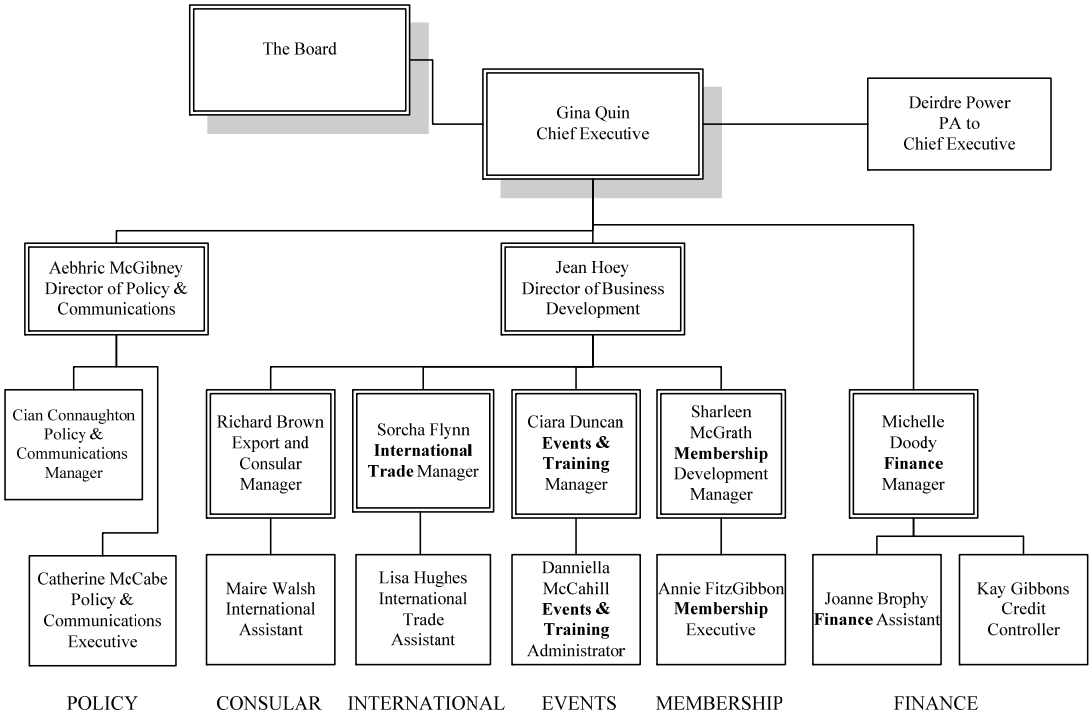
	REVENUE 2006	MEMBERSHIP	STAFF
IBEC	€14,000,000	7,500	150
Cork Chamber of Commerce	€785,000	900	12
Dublin Chamber of Commerce	€1,818,000	1,200	19

The Dublin Chamber fulfils four roles:
(1) Networking: The DCC runs events where members meet and develop relationships with each other.
(2) Education & Development: The DCC facilitates business skill training courses and organises seminars where industry leaders give talks on their experiences in business.
(3) Voice: the DCC formulates policies on key issues that effect business in Dublin; the policies and members interests are promoted in the media.
(4)Influencing: The DCC lobbies government and stakeholders on behalf of its members.

The Chamber earns revenues from five areas (1) membership subscriptions, (2) events, seminars and briefings, (3) providing export documentation, (4) room hire, and (5) visa and legalisation services. Membership, events and room hire are competitive business areas.

The Dublin Chamber has four departments that generate revenue: (1) Consular, (2) International, (3) Events, (4) Membership; and two support departments: (1) Policy, and (2) Finance. The chamber has the following organisational structure:

FIGURE 2: DUBLIN CHAMBER OF COMMERCE ORGANISATIONAL CHART



DESIGN MIX EVALUATION

METHODOLOGY

The Dublin Chambers design outputs were benchmarked against IBEC and the Cork Chamber of Commerce. The Benchmarking exercise was carried out during and after interviews which took place over 5 months. Results were verified with further interviews. Internal and external innovation opportunities were examined to identify factors that could have influenced: (1) the adoption of design approach, or (2) a design investment decision. A summary of the analysis and recommendations appears in Table 2 below.

TABLE 2: DESIGN MIX BENCHMARKING EVALUTION SUMMARY

		DUBLIN CHAMBER	CORK CHAMBER	IBEC	ACTION
PHYSICAL SPACE					
PS.RT	Retail Design	Key Strength	Key Strength	Key Strength	Match investment, monitor, move on. All equal. A have-to-have to compete.
PS.E	Exhibition Design	Key Strength	Key Strength	Key Strength	Match investment, monitor, move on. All equal. A have-to-have to compete.
PS.WS	Workspace Design	Zone of Irrelevance	Zone of Irrelevance	Superfluous Strength	Investigate: what advantage could DCC get from improving workspaces to standard set in public areas?

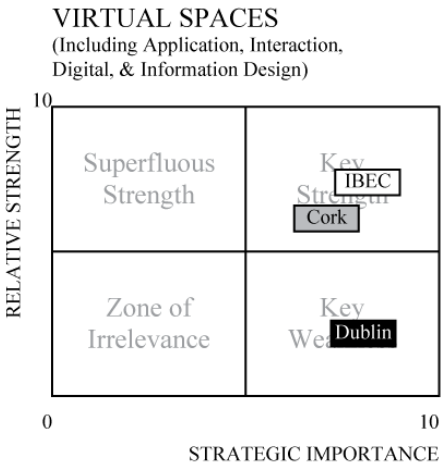
		DUBLIN CHAMBER	CORK CHAMBER	IBEC	ACTION
PRODUCT					
P.ID	Industrial Design	Zone of Irrelevance	Zone of Irrelevance	Zone of Irrelevance	No strategic importance
P.P	Packaging Design	Zone of Irrelevance	Zone of Irrelevance	Zone of Irrelevance	No strategic importance
P.S	Service Design	Core Area	Core Area	Core Area	CORE
P.PR	Process Design	Key Weakness	Key Strength	Key Strength	Invest. Identify resources and capabilities that need to be improved.
COMMUNICATIONS					
C.CI	Corporate Identity Design	Key Strength	Key Strength	Key Strength	Match investment, monitor, move on. All equal. A have-to-have to compete.
C.I	Instructional Design	Zone of Irrelevance	Key Strength	Key Strength	Monitor. Potential threat.
C.E	Experience Design	Key Strength	Key Strength	Key Weakness	Invest. Key point of differentiation. Smaller DCC can tailor events to deliver great experiences to members
C.Co	Co-Design	Key Strength	Key Strength	Key Weakness	Invest time and effort to ensure that the Chamber gets the most value from the Board; involve them in design decisions.
C.Inf	Information Design	Key Strength	Key Weakness	Key Strength	Match investment & monitor. Strategically important: affects DCC's positioning.
C.P	Promotional Design	Zone of Irrelevance	Key Strength	Zone of Irrelevance	Investigate: what advantage would DCC get from using advertising to promote the Chamber?
VIRTUAL SPACE					
VS.I	Interaction Design	Key Strength	Key Strength	Key Strength	Invest
VS.AP	Application Design	Key Weakness	Key Strength	Key Strength	Invest
VS.DD	Digital Design	Zone of Irrelevance	Zone of Irrelevance	Zone of Irrelevance	Investigate: evolving area. Could Chamber gain first mover advantage?

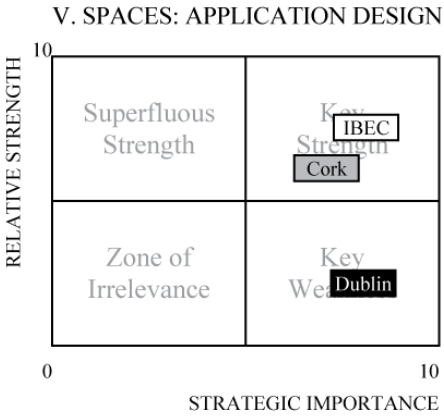
ANALYSIS

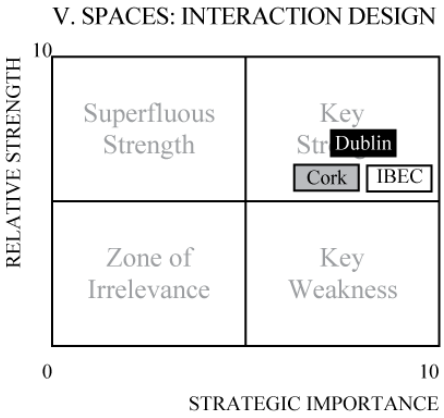
The service design perspective was new to the Dublin Chamber. They understood design in terms of silos such as graphic and web design and regarded design as a tool rather then a capability that builds knowledge in the enterprise. Service design works across all areas of the design mix and impacts across business functions. We needed to illustrate that by carrying out a design activity. Improving the website would impact the Chambers design mix – communications, products, and spaces would change.

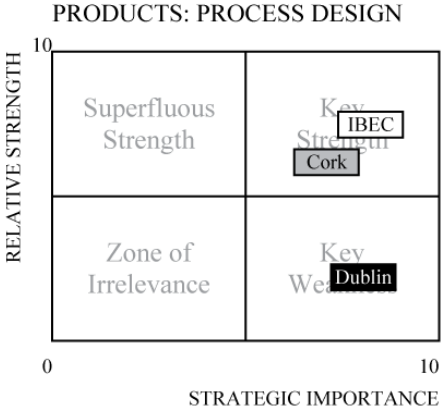
We established ourselves as web design domain experts to build understanding and facilitate engagement and communications so that we could then introduce the design mix evaluation

COMPETITORS & COMPARATORS









framework. We started this exercise by benchmarking the Chambers virtual spaces against those of their competitors. Application, Information, Digital, and Interaction design were bundled together and examined. We quickly identified that the chamber needed to beef up their website, and we started a website improvement programme. Both IBEC and the Cork Chamber supported some of their services on-line: members could book events and had access to a variety of resources. The Chamber's website's interactivity was limited. The Chamber wanted to offer online self-service options: members would be able to mange their accounts online, book events, communicate with other members, and pay for events and membership subscriptions online. We wanted to integrate on-line payment with the Chambers finance department IT systems.

We discovered that the website improvements we suggested would have serious impact on all the chambers processes. The Chambers IT system would have to be overhauled to support the improvements. Updating the IT system would affect for the chambers processes, and change peoples' day-to-day work.

When we broadened and deepened our framework and individually benchmarked (1) Interaction Design, (2) Application Design, (3) Process design we discovered that the quality of the interface and dialogue was equivalent across all three: a key strength. In contrast, application design was a DCC key weakness; this weakness was directly attributed to existing IT structure and processes which was retarding application development and design.

We discovered that the chambers key weakness was their operational processes when we benchmarked the chambers competitors across all 16 subcategories. The processes were fixed by their existing IT systems and were restricting the development of their virtual spaces and their communications.

The Chamber relied on a Siebel Customer Relationship Management system that had been installed and heavily

customised in 2002. The IT system had reached its limit, and was reducing the Chambers flexibility. Chamber staff had to build work-a-rounds: some processes had to be handled manually consuming the Chambers resources, and creating a lack of integration between business functions. This had resulted in number of process incongruities. For example, the chamber ran two unconnected finance packages and manually takes data from both to create management accounts. Siebel had been customised to support the finance department. Two years after the installation the chamber was required to charge VAT on some services; it wasn't commercially viable to further customise Siebel to support VAT payments. Sage Line 50 was installed to support VAT. Each business function had created their own make-do-and-mend processes to handle the process incongruities created by the IT system. Chamber staff had to build work-a-rounds into their process. There was a lack of integration between functions which meant that processes had to be handled manually, consuming the Chambers resources.

Building an Enterprise Resource Planning system on a Customer Relationship Management system may have created process incongruities, but it has also helped make the DCC's culture very customer focused. For example, if a member rings the finance department to query and a DCC invoice, the finance department has access to the customer communications history enabling them to answer the financial query and other simple customer queries; thereby creating an effective dialogue and superior experience for the customer. Nearly all events are currently booked by telephone: web self-service is going to reduce the amount of human contact. The challenge is to maintain the current customer focus when the finance and CRM functions are separated, and to maintain the personal touch once web self service is made available.

All communications affect membership satisfaction and impacts on members' propensity to renew membership. The DCC produces information to fulfil three different functions: financial reporting, member communications, and lobbying. The DCC supersedes its legal responsibilities to its members by reporting information in accordance with the combined code. Policy activities build reputation. Board involvement in policy definition insures that best interest of its members is represented. The Board are voluntary, so the DCC staff put great effort into preparing clear information to facilitate communication and understanding at Board level. The communications are used to gain consensus amongst members and are then built upon to produce communications to lobby government and raise issues in the media. Chamber events create experiences that have meaning and value for members; the events address members' hopes, fears and aspirations; and ultimately this increases the members' commitment and influences the likelihood of renewing their membership in the future. The events increase the overall utility of the Chamber and create value. A number of events are held outside the Chamber. A temporary structure featuring the Chamber corporate ID is erected at most events to help brand the event, but it is not always used for press photo opportunities as evidenced by photographs included in press coverage.

The Dublin Chamber has not invested in promotional activities. The Chamber believed that it has not been necessary: the Chamber is in the public eye because of its events, normal member communications, and its lobbying activities. But this is set to change: the Cork Chamber have increased membership, they attribute the increase to the success of an advertising campaign carried out locally in Cork. The Dublin Chamber is hoping to replicate Corks success and is going to launch a campaign in the coming months. The success of the advertising could be a signal that there has been a shift in perceptions. People are seeing tough times ahead, Irelands growth rate is expected to slow to 1.6% this year ahead of inflation at 4.8%[xxii], economic outlook is poorer then it has been for years. Increasing popularity of internet social networks amongst teens, twenty, and thirty year olds means that there is an emerging number of networking savvy potential customers are now becoming business owners and managers. Companies have devolved all non-core functions and now organisations compete across value chains: there are now more small firms competing in more areas then ever before. The Dublin Chamber needs to tailor its offering and its message to reflect this change in the market.

Training is not regarded as a core competency. Competition amongst training companies has driven the Chamber out of this market. IBEC historically provided training and see it as a core competency which they continue to invest in and promote. DCC act as a facilitator: they hold seminars where business leaders speak. Training may also be offered as complementary activity as part of an event, but the training component is outsourced. The Dublin Chamber has training resources: training rooms, which are rented out to third parties.

The Chambers governing Board is made up of members. The Dublin Chamber Board is unusual in that its composition ensures that customers and board interests are exactly aligned. The Board direct capital expenditure and are involved in all strategic decisions.

The Dublin Chamber offices were entirely refurbished in 2005. Practical thought was put into how visitors would flow through the building and public areas of the Chamber were refurbished to very high standard. Dublin Chamber offices are located in a Georgian building across the road from the National Gallery of Ireland: the new interiors are sympathetic blend of old and new, which reflect the Chambers outlook: a strong tradition yet looking to the future. The Dublin Chamber CEO, Gina Quinn, is the face of the Chamber: her office is always open, and is very much a public area. The CEO's office and finance department are located on the first floor and were refurbished to the same high standards as the rest of the public areas. The quality of the workspaces shared by the CEO and finance department is much better then those used by other DCC departments; this difference could contribute to resentment being directed towards the finance department by other departments. It could be easily addressed by upgrading the other departments' offices.

CONCLUSION

Evaluating design outputs using the design mix increased shared understanding of design and how it contributes to the Chambers success. Staff had varying attitudes to design ranging from: design as strategic tool for innovation; to design as decorative service. The Chamber team recognised their tacit design capability, for example: in the course of re-evaluating their normal activities from the service design perspective they recognised that the Chamber actively co-designs its service with its customers, represented by the Chamber Board. The Board steers strategy, and is directly involved in service and communication development, which re-enforces the Boards duel role in governance and strategy – and designs role in shaping strategy.

Benchmarking competitors' and comparators' use of design – examining their designed outputs – across the16 areas of the design mix evaluation framework enabled the Dublin Chamber spot innovation opportunities being exploited by their competitors and comparators.

The framework revealed linkages between the Chambers IT, service provision, and financial management capabilities. The new IT system will change Chambers processes, and the way the Chamber interacts with its customers. The analysis uncovered that the new IT infrastructure would change the touch points of the Chamber and the way services will be perceived by customers and internally by staff. The Chamber is now putting a plan in place to detail the changes in process, and to smooth the transition and impact on its services. Looking at the organisations touch points – experiences, communications, spaces – increased the Chambers staff understanding of the services design perspective.

The Framework provided guidance and recommendations for further investment: it re-enforced the Chambers decision to invest in IT infrastructure to provide web self service; and made recommendations for further investigation. It helped the designer understand the Chambers requirements and helped them manage staff resistance to changes by educating the Chamber about the design process; and participating with Chamber staff to get them involved in spotting possible threats from the competition, and help Chamber staff to see that change is necessary and desirable. It helped the Chamber spot innovation opportunities in the market already being exploited by competitors.

The structured framework described in this document is a useful tool that crates a shared understanding of the design process. It builds organisational knowledge and gets people in the organisations thinking about the design mix and its strategic contribution. It demonstrates that design methods can be leveraged to guide the investment decision and create value in the enterprise and that design ROI can be maximised by examining all areas of the design mix evaluation framework.

APPENDIX 1: DESIGN TIME LINE

1765 Industrial Design

In 1763 Josiah Wedgewood started using new moulding technology to mass produce ceramics. He described his ceramics as "Queens Ware: a species of earthenware for the table, quite new in appearance…manufactured with ease and expedition and consequently cheap". He commissioned designers and pattern makers to create forms that would be easy to mass produce and would appeal to fashionable tastes (..of 1763). For the first time Designers had to reconcile mass manufacturing techniques, functionality, market demand, and aesthetic considerations. [xxiii]

1786 Information Design

In 1786 the economist William Playfair published The Commercial and Political Atlas. Playfair used bar graphs for the first time to show statistical data of imports and exports to and from Scotland. Playfair realised that when making comparisons representing data in graphical format rather table format increases its utility: it reduces cognitive load and enable users to quickly reach the conclusion intended by the author.[xxiv]

1835 Retail Design

The first department store, Le Bon Marché opened in 1835. The founder, Aristide Bouricaut worked with architect Louis-Charles Boileau and Engineer Gustave Eiffel to create as Emile Zola described "a cathedral of commerce for a congregation of customers" which used cutting edge building technology to create a revolutionary retail environment .

1851 Exhibition Design

Great exhibition of 1851, held at Crystal Palace. The exhibition hall was the first ever pre-fabricated structure made in glass and iron. The exhibition brought together the best machine age products from all parts of the British Empire in one location.

1875 Corporate identity Design

Parliament of the United Kingdom passed the Trade Mark Registration Act in 1875 which recognized an increased use by manufacturers of standard marks, or logotypes, as badges of origin and quality. The law protected the unique rights of the owner to the symbols and their use. Corporate identity design got traction in the US in the early 20th century. Large diversified corporations used Corporate identity to provide cohesion to what otherwise would have been perceived as complex sprawling entity. In 1907 Peter Behrens created the first corporate identity for AEG.

1910 Process Design

Henry Ford combined precision manufacturing, standardized and interchangeable parts, a division of labour, and, in 1913, a continuous moving assembly line in one single process to produce the model T automobile. Workers remained in place, adding one component to each automobile as it moved past them on the line. Delivery of parts by conveyor belt to the workers was carefully timed to keep the assembly line moving smoothly and efficiently. The introduction of the moving assembly line revolutionized automobile production process by significantly reducing assembly time per vehicle, thus lowering costs.

1916 Packaging Design

In 1916 Clarence Saunders opened Piggly Wiggly; the first ever self-service supermarket. Customers entered the store through turnstiles and walked through four aisles to view the store's 605 items sold in packages and organized into departments. The customer selected goods un-aided by a store keeper. Instantly, packaging and product recognition became important to companies and consumers. Companies started using packaging to promote the product's attributes and benefits: packaging became regarded as an important point of sale communications tool that influenced purchasing behaviour, and not just a means of protecting the product.

1924 Promotional Design

In 1924 Proctor and Gamble staged the first mass media radio advertising campaign. They sponsored a cooking show on Network radio. This was the first time that radio show carried a product endorsement nationally across the United States.

1939 Workspace Design

In 1939 Frank Lloyd Wright conceived the first open plan office design for the Johnson Wax Building in Chicago[xxv]. Workspace Design is a response to a growing recognition within companies that the physical working environment can have a profound effect on an organisation's culture and on the individual's performance.

1940 Instructional Design

In 1940 the U.S. military faced the need to rapidly train large numbers of people to perform complex technical tasks, from field-stripping a carbine to navigating across the ocean to building a bomber. Drawing on the research and theories of B.F. Skinner on operant conditioning, training programs focused on observable behaviours. Tasks were broken down into subtasks, and each subtask treated as a separate learning goal. Training was designed to reward correct performance and remediate incorrect performance. Mastery was assumed to be possible for every learner, given enough repetition and feedback. After the war, the success of the wartime training model was replicated in business and industrial training, and to a lesser extent in the primary and secondary classroom.

1945 Application Design

Betty Holberton was convinced that computers needed to be user friendly and in 1951 invented the first programming language: the mnemonic instruction set – called C-10 – and the first universal input device – a typewriter keyboard beside a numeric key pad – thereby paving the way for application design.[xxvi]

1971 Experience Design

Disney World opens in 1971. Experiences have an economic value to customers: this value is driving an emerging industry; companies are offering experiences as a distinct economic offering.[xxvii] In 2002 Nike opened Nike Town on Michigan Avenue, Chicago to create a designed buying experience for the customer.

1972 Interaction Design

In 1971 Alan Kay, at Xerox Park, conceived the Dyna Book: a highly responsive book sized personal computer with a high resolution colour display and a radio link to a worldwide

computer network that could function as secretary, mailbox, reference library, telephone centre and amusement centre. Later in the early 70's Kay developed the Star: the first computer with a graphical user interface and mouse pointer. This created a new paradigm for interacting with a computer.

1994 Digital Design

1994 games industry revenues exceeded the film industry revenues. Digital design in this context refers to Game design; interactive entertainment such as DVD's, Digital TV; and computer mediated communications including web chat rooms, Skype, and TiVo's. The user has to actively seek out and engage with digital media: the user actively engages rather then being passively exposed to the medium.

2002 Service Design

Live|Work first coined the term Service Design in 2002 in response to an emerging realisation that services could be improved and innovated by applying design methods and that 72% of UK GDP is derived from services. According to Charles Leinbach, "Products are merely incredibly slowly deteriorating services."[xxviii] A perspective for innovating and developing services by using user centred design methods.

2007 Co-Design

Co-design is a participatory method that involves consumers in the development of products, services, and brands. It is a response to diversified population. In 2007 Luke Hohmann published his book Innovation Games in which he describes methods for engaging with customers and staff in collaborative play in order to get them to articulate their tacit and explicit requirements in order to develop new products and services[xxix]

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