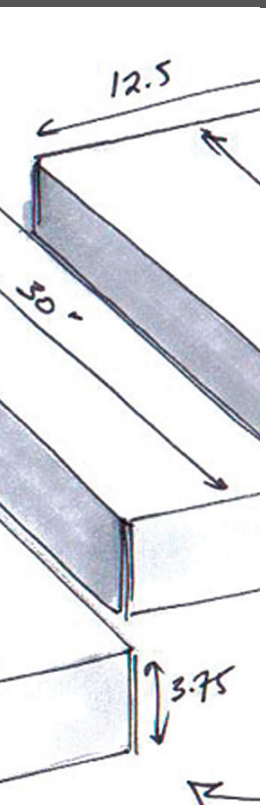
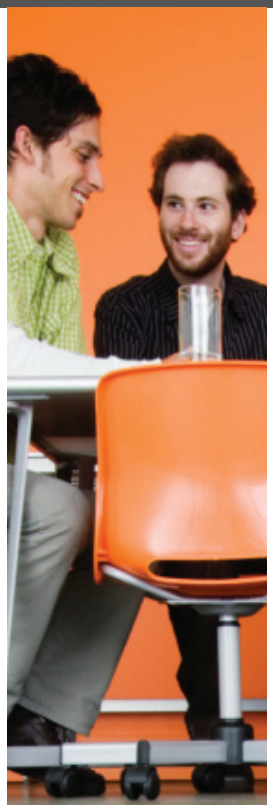
FROM INNOVATION TO COMMERCIALIZATION

Seven Design Tools to Drive Business Success








www.diac.on.ca

diac
DESIGN INDUSTRY ADVISORY COMMITTEE

Who is DIAC?
The Design Industry Advisory Committee (DIAC) is a non-profit, cross-disciplinary research group working to make design a pivotal part of a successful Ontario. DIAC programs and research focus on ways to use design capability and design tools to achieve economic and social prosperity for the province and for all Canadians. DIAC's board represents members of the professional design associations in Ontario.

DIAC Members:
Association of Chartered Industrial Designers of Ontario (ACIDO)
Association of Registered Graphic Designers of Ontario (RGD)
Association of Registered Interior Designers of Ontario (ARIDO)
Ontario Association of Architects / Toronto Society of Architects (OAA / TSA)
Ontario Association of Landscape Architects (OALA)
Sheridan College Institute of Technology and Advanced Learning

DIAC is supported by:
Toronto Economic Development & Culture

The Design Advisory Service (DAS) is supported by:
National Research Council - Industrial Research Assistance Program (NRC-IRAP)

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FROM INNOVATION TO COMMERCIALIZATION

SUPPLYING THE MISSING LINK

Ontario is a North American hub for designers and innovators, but we need to encourage our small and medium-sized businesses to work with local design talent to add value to the innovation process and improve commercialization results.

This is why the Design Industry Advisory Committee (DIAC) created the Design Advisory Service (DAS) in 2009 – to supply the missing link between innovation and commercialization. The Design Advisory Service introduces companies to a design-led approach that can help entrepreneurs to address common challenges in the innovation process and make the products of innovation more competitive. The program is supported by the National Research Council's Industrial Research Assistance Program (IRAP).

DIAC has completed 20 projects in key industry sectors including Automotive, Construction, Manufacturing and Materials, Medical Devices and Information and Communication Technologies.

From this work, we have compiled seven insights about innovation linked to seven design tools that designers bring to the process. These tools and insights demonstrate why it's so important for growth-oriented smaller enterprises to form closer, deeper relationships with designers early in the innovation process to take their best ideas to market in a form that will connect with users and facilitate commercialization success.

The Design Advisory Service team presented these insights and design tools to the IRAP Industry Technology Advisors (ITAs), their clients and the professional design associations of Ontario. We have created this publication to share the research with a broader audience.

TABLE OF CONTENTS

DEFINING DESIGN

What do we mean by Design?

- Design is a process of planning and definition.
- Design creates relationships between products, services and environments and the people who experience them.

How is Design used effectively?

- Design works best when adopted as a core competency to drive innovation.
- Design should be used as a strategic tool rather than a late-stage tactical device.

What can we learn from this?

- Everything is designed.
- Successful things are designed better than others.

WHERE IS THE GAP?

Design Informs Invention, Innovation and Commercialization.

Innovation is a popular topic in government, at business schools and in the media, a topic that usually leads to a discussion of how best to commercialize the next new thing. How an invention or innovation gets to market and succeeds is less well understood.

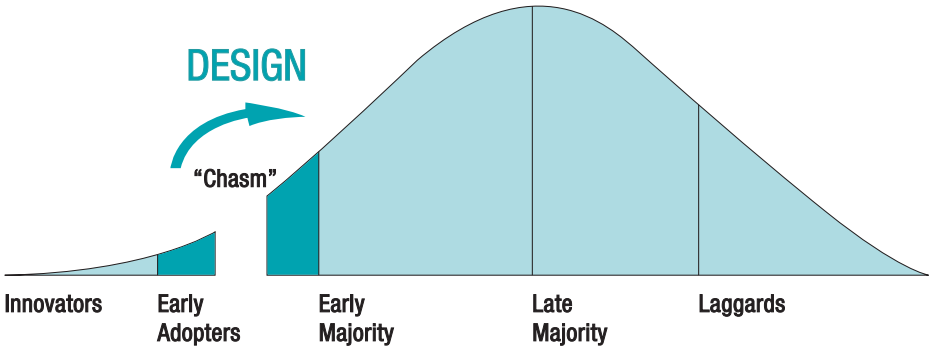
We tend to think of invention and innovation as devoid of design, or as happening before design, because design is often seen as a discrete step that is added afterwards, almost as a decoration or frill. Commercialization is generally seen as the stage where design is added to transform the invention or innovation into a product the market will desire.

But it's important to understand that the process of design actually starts immediately upon the recognition of an opportunity. It's only logical that the design dimension should be part of each phase of the innovation process.

Design should inform invention, innovation and commercialization.

DESIGN
is the missing link in the innovation agenda

DESIGN
is key to commercialization success



Adapted from Geoffrey A. Moore, "Crossing the Chasm", 1991

Canadian innovators are not realizing commercialization success equal to their creativity or their investment in research and development and in innovation spending. The lack of the effective use of design is a contributing factor.

Design is the missing link.

The challenge in crossing the chasm between early adopters and major market success can be more easily overcome with a focus on strategic design.

DESIGN ADVISORY SERVICE

The Design Advisory Service was conceived to connect small to medium-sized enterprises (SMEs) to designers in an effort to add value to the innovation process by introducing design as a strategic business tool. DAS consists of three steps:

1. DESIGN AUDIT

Review the SME's current products, technical assets and skill sets

2. PROJECT PLAN

Identify a project opportunity and connect the SME to a relevant Design Practitioner

3. STRATEGIC DESIGN EXPLORATION

Conduct a one-week project intended to encourage SMEs to think about design strategically

HOW DOES THE DESIGN ADVISORY SERVICE BENEFIT SMALL AND MEDIUM-SIZED BUSINESSES? IT...

- **Connects them to strategic design practitioners**
- **Introduces useful design tools**
- **Adds value to business strategy**

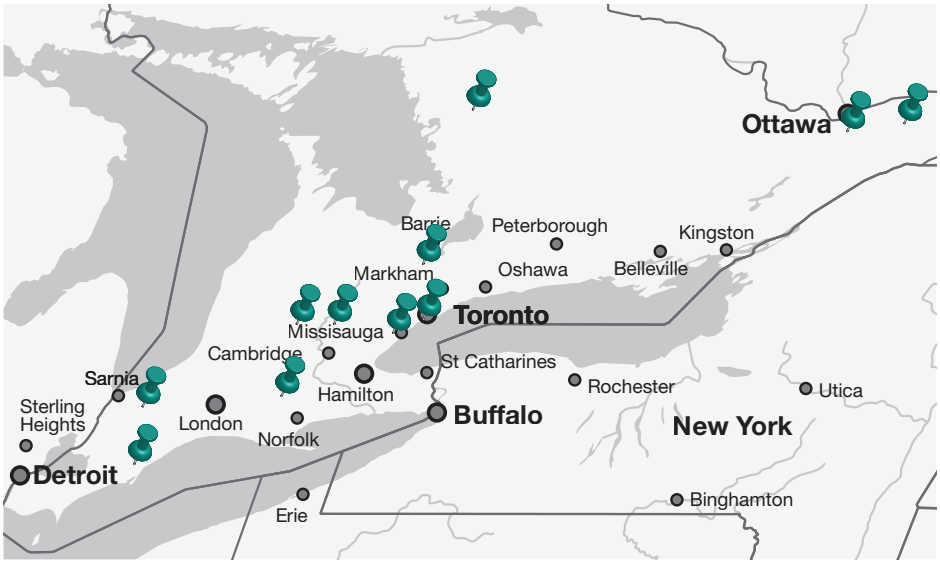
DAS ACHIEVEMENTS

2 YEARS
Working with IRAP Industrial Technology Advisors (ITAs), Businesses and Designers

20 PROJECTS
Completed across southern Ontario

5 IRAP KEY INDUSTRY SECTORS
Automotive, Construction, Manufacturing and Materials, Medical Devices, Information and Communication Technologies

6 DISCIPLINES
Architecture, Landscape Architecture, Fashion, Graphic, Interior, and Industrial Design



The DAS team completed 20 projects for small and medium-sized businesses between 2009 and 2011. Clients were situated across southern Ontario in the Windsor, Waterloo, Toronto and Ottawa regions. The projects engaged companies from five of IRAP's key industry sectors and design consultants were drawn from all six of the design disciplines.

DESIGN TOOLS TO ADDRESS COMMON INNOVATION CHALLENGES

The Design Advisory Service team encourages small business leaders to see innovation through a design lens. The team shares critical insights, tips and tools that can be used to meet some of the most common challenges in innovation such as: attracting investors before a concept is fully formed, verifying early assumptions about the value of specific content, minimizing time and cost in the implementation phase and ensuring an innovation meets market expectations.

Here are our top seven insights about innovation linked to design tools used to engage companies in the strategic design process. In the detailed descriptions that follow we have included examples of how both mature organizations and emerging companies that participated in the Design Advisory Service have used these tools. Businesses of any size and in any sector can adopt this approach to use design to improve innovation results.

1	**INSIGHT #1** Innovation is a cyclical, multistage process and design is a critical component of every stage.	**DESIGN TOOL #1** Adopt the Integrated Design Process (IDP).
2	**INSIGHT #2** Thinking deeply about user needs brings focus to innovation.	**DESIGN TOOL #2** Invest in Design Research.
3	**INSIGHT #3** Innovations are often abstract and unclear until design renders them tangible.	**DESIGN TOOL #3** Work with designers to visualize potential.
4	**INSIGHT #4** Co-creation yields more resilient, broad-based solutions.	**DESIGN TOOL #4** Use the design charrette to integrate designers from various disciplines and other experts on innovation teams.
5	**INSIGHT #5** Modelling ideas lessens risk.	**DESIGN TOOL #5** Test design assumptions early and often. Use early-stage prototyping to separate what works from what doesn't.
6	**INSIGHT #6** Brand Management delivers an innovation's value proposition.	**DESIGN TOOL #6** Leverage brands through storytelling and the compelling articulation of features and benefits.
7	**INSIGHT #7** Design-based Intellectual Property (Design IP) is a powerful tool for competitive advantage.	**DESIGN TOOL #7** Embed design values in products, services, environments and all company activities to create Design IP.

INSIGHT #1

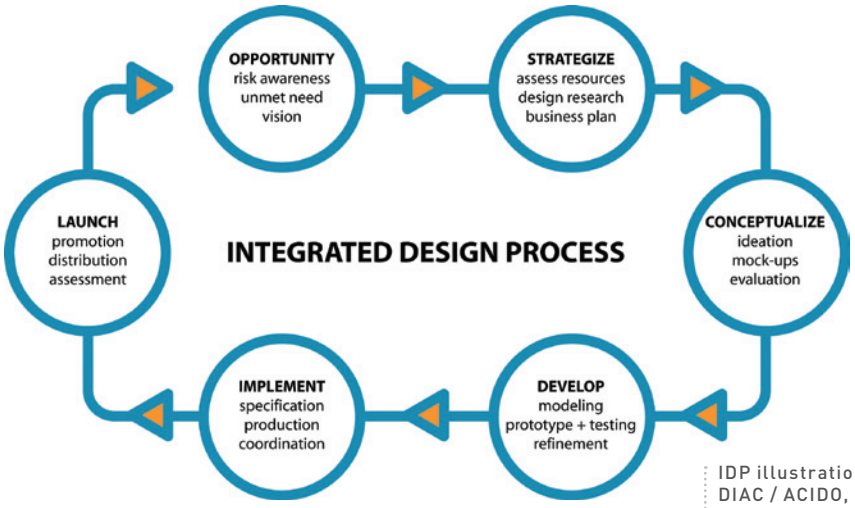
Innovation is a cyclical, multistage process and design is a critical component of every stage.

DESIGN TOOL #1

Adopt the Integrated Design Process (IDP).

Graphic illustrations of the innovation process are typically linear. They have a start and an end, and somewhere in the middle there's usually a stage called "Design". But there is a better way to represent the steps in the process to emphasize the collaborative approach that every entrepreneur should adopt. It's called the Integrated Design Process (IDP).

In this model, the development process is a cycle of continuous improvement. Each successful iteration leads to an improved version of that innovation that is informed by the findings of the previous cycle. The IDP brings all relevant experts to the table at every stage of the innovation process. It applies to all innovation activities, in all disciplines, for all created goods, services, environments and experiences.



"The way we look at things has definitely changed due to this process."

Rob Van Alphen, President, Nu-Co Plastics

How do companies use this Design Tool?

Philips is an international design-led organization working in Health Care, Lighting and Consumer products. Philips Design, its innovation arm, identifies opportunities to add value to new and existing product areas. In this case, Ambient Experience with MRI augments the business opportunity in MRI products by creating a reassuring environment for patient and staff interactions.

An Integrated Design Process helps Philips to think holistically about ways to add value to new product development.

Photo credit: Courtesy of Philips Healthcare

DAS Project: Nu-Co Plastics

You don't have to be a large corporation to benefit from an Integrated Design Process. Nu-Co Plastics is a small manufacturer that supplies injection moulded plastic parts to the auto sector. As the recession affected the sector, Nu-Co's president, Rob Van Alphen, wondered what else he could make. The Design Advisory Service team suggested a design approach to innovation using the Integrated Design Process. It gave Van Alphen a strategy for leveraging the plant's skills and resources to move Nu-Co up the value chain from an Original Equipment Manufacturer to an Original Brand Manufacturer.

DAS connected Nu-Co with industrial designer Scott Grant, ACIDO, who explored product categories and market sectors that could take advantage of Nu-Co's specific technology. His recommendations integrated design into every stage in the new product development process and gave Nu-Co innovative opportunities to distinguish itself with proprietary products.

Photo credit: Nu-Co Plastics, Blenheim, ON

2

INSIGHT #2

Thinking deeply about user needs brings focus to innovation.

DESIGN TOOL #2

Invest in Design Research.

Design research helps companies understand how users will value their innovations and discover what is crucial to market success. Design research differs from traditional market research in that it places designers in the context of the problem, giving them opportunities to observe and experience firsthand the challenges users face. Designers gain new insights and can then use empathy for human factors, pattern recognition skills, technical knowledge and commercial awareness to identify gaps in the market that a new innovation could address. Companies can own their market if they get these things right.

"My observations in the retail market uncovered opportunities to reconfigure packaging to increase visibility and profitability. Bringing a fresh set of eyes to the problem can yield valuable insights." **Stacey Gay, ACIDO**

How do companies use this Design Tool?

There are many ways of exploring user needs and expectations. Images 1 & 2 show the Challenging Environment Assessment Lab (CEAL) at the heart of Toronto Rehab's iDAPT Centre. This is a state-of-the-art facility featuring a motion simulator and separate pods that recreate four challenging physical environments. CEAL allows researchers and manufacturers to study how users react to difficult, real-life conditions and to design products to meet their needs.

It's not always necessary to use such sophisticated technology to discover unmet user needs. It's often enough to watch users and note how they cope with challenges. Image 3 was taken as part of a design research project conducted for Alutron Modules, an Aurora, Ontario manufacturer of vacuum cleaner components. The design team's close observation of users in the act of vacuuming led to valuable improvements in the ergonomic design of the product.

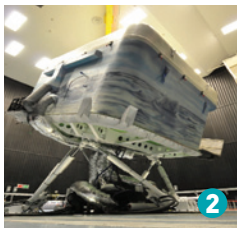


Photo credits: 1&2: Toronto Rehab
3: Alutron Modules / Ove Industrial Design Ltd.

DAS Project: Woodscape artKits

Woodscape artKits is an Ottawa-based manufacturer of wood lath art kits. The company has a loyal customer following but faced challenges in attracting new customers through its retail outlets. Through the Design Advisory Service, Woodscape connected with an industrial designer who spoke with retailers in an effort to understand how customers were interacting with the existing products at point of sale.

After thoroughly reviewing Woodscape's new product development and production processes, Stacey Gay, ACIDO, recommended a series of improvements that unified product sizing, simplified and standardized packaging, reduced production costs and created a more compelling retail presentation to attract new customers in stores. A designer's research-driven knowledge of the factors that affect customer response, combined with familiarity with manufacturing technology, can yield deep insights into solutions that bring real value to a company's bottom line.

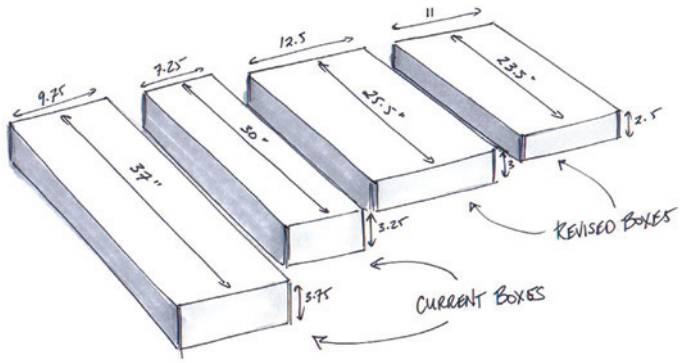


Photo credits:
Stacey Gay, ACIDO

INSIGHT #3

Innovations are often abstract and unclear until design renders them tangible.

DESIGN TOOL #3

Work with designers to visualize potential.

Innovation can be a messy process. It's often hard to focus your thoughts and present an idea in a way that others can appreciate. In this situation a picture can be worth a thousand words. Expressing the potential of an innovation clearly and compellingly at an early stage can help to attract strategic partners and to secure funding. Visualizing opportunities is simply one of the many things designers are trained to do.

"Not many people find a tiny circuit board very interesting, but when you show them what it can do in an imaginative way, it really gets them thinking about how they might be able to use it to enhance their own products. This demonstration of our product's potential is an effective business tool."

Michael Kosic, CEO, XYZ Interactive Technologies Inc.

How do companies use this Design Tool?

Consider this rendering of the Keating Channel Cherry Street crossing on Toronto's waterfront (1). This visualization is a valuable means of presenting a possible infrastructure project to the public for review. Other visualizations, such as this electronic handheld device sketch (2) are often used in product development to present variations and describe details that allow companies to get feedback on product direction and user preference long before more concrete examples exist.

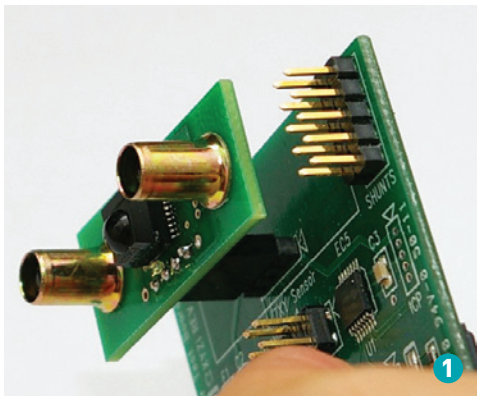
Illustration credits: 1: Michael Van Valkenburgh Associates Inc.
2: Ove Industrial Design Ltd.

DAS Project: XYZ Interactive Technologies Inc.

When XYZ Interactive Technologies Inc. connected with the Design Advisory Service team it was considering how best to attract licensees for its range of low-cost, low-power, 3D gesture-sensor technology. An unlimited number of mass-market applications were possible as anything with a switch could be considered a candidate for one of XYZ's components. The DAS team determined that a different approach could attract licensees who could see beyond current reality and imagine a host of future applications. Visualization of the product's potential was an important first step.

DAS introduced XYZ to Rodolphe el-Khoury, OAA, an architect with experience in digitally-enhanced environments. He conceived a hypothetical product with consumer appeal – a muscle wire-driven set of horizontal blinds that responded to gesture control – and illustrated the idea in a short video and booklet.

This demonstrated the potential of XYZ's sensor technology to stimulate the imagination of potential licensees.



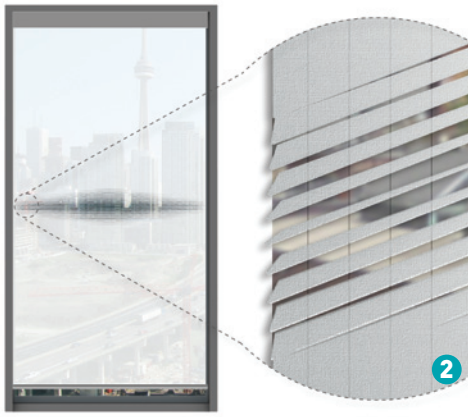


Photo credits: 1: XYZ Interactive Technologies Inc.
2&3: Rodolphe el-Khoury, OAA

INSIGHT #4

Co-creation yields more resilient, broad-based solutions.

DESIGN TOOL #4

Use the design charrette to integrate designers from various disciplines and other experts on innovation teams.

Today, major corporations all over the world draw on ideas from inside and outside sources to advance business opportunities. This open innovation model is critical to small and medium-sized businesses as well.

The multi-disciplinary design charrette is an excellent tool for bringing together experts with different skill sets to address innovation opportunities. A charrette typically lasts one day and allows participants to consider market expectations, user needs, resource constraints and other challenges. Experts share preliminary objectives and assumptions and then work in small groups to model ideas. The day ends with the sharing of results and recommendations to move the ideas forward in an integrated response.

"We tested and evaluated the model from four creative perspectives. What emerged was stronger than what any one of us could have created alone."

Anne Carlyle, ARIDO

How do companies use this Design Tool?

Toronto's University Avenue is a grand boulevard but few people walk there. In 2009, DIAC organized a design charrette to bring architects, landscape architects, interior, industrial and graphic designers together with students and City of Toronto staff to develop a pedestrian-led vision for the street. Designers and other experts were able to propose a broad range of ideas that led to creative recommendations. The visualizations produced at the charrette were published online and exhibited at the IIDEX Neocon Canada trade show and at DIAC's Designers Walking Forum in Toronto.

Photo credits: 1: Jan Michael Salvador, University Avenue Design Charrette
2: Getty Images

DAS Project: intelligent Senior Independent Living Spaces (iSILS)

iSILS is dedicated to developing systems and environments that help seniors to age in place. Their engineering group had created a mechanical prototype of a Transfer Chair to help the elderly and the infirm move from a walker or wheelchair into a bathtub. The Design Advisory Service team organized and conducted a design charrette that brought together four creative professionals and other experts and asked them to evaluate the mechanical concepts from the perspectives of users, installers and manufacturers.

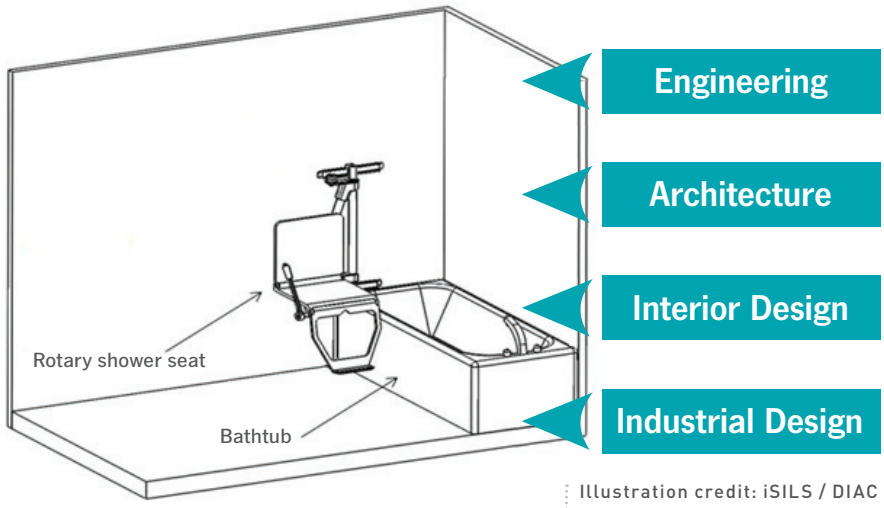


Illustration credit: iSILS / DIAC

DAS engaged industrial and interior designers and an iSILS architect to review the engineering prototype at the charrette and suggest improvements. In addition to validating important engineering issues of strength, safety and reliability, the design charrette explored the psychological expectations of users and their ergonomic and economic concerns. The interior designer brought her knowledge of accessible bathroom design and of the specific challenges related to aging in place. The spatial planning considerations became crucial additions to the design criteria.

5

INSIGHT #5
Modelling ideas lessens risk.

DESIGN TOOL #5
Test design assumptions early and often. Use early-stage prototyping to separate what works from what doesn't.

The testing of innovation concepts is often relegated to a late stage when important decisions about the design have already been made. Early-stage testing enables changes and modifications, based on insights of human interaction with the concept, to be made more efficiently and cost effectively. Every design starts with assumptions ranging from the performance that may be expected to the features a market will find desirable or the price a customer is prepared to pay. Early-stage modelling of ideas and user-scenario simulations can offer essential insights that challenge initial assumptions about what is valuable or necessary.

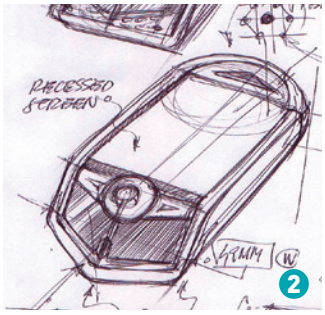
"I knew indigenous mosses made good sense biologically, but building on the recommendations of my DAS design team has really turned this concept into a credible business model."

Kelven Goodridge, President, Verticiel

How do companies use this Design Tool?

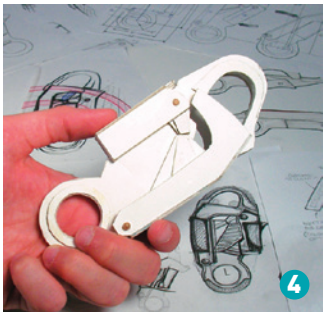
There are many ways assumptions can be modelled and tested at an early stage. For example: (1) Observational research allows designers to note how users perform a sequence of specific actions, yielding significant insights. (2) Visualizations in the form of conceptual sketches can elicit user responses and help to define preferences. (3) Quick mock-ups and paper form studies allow sizes and shapes to be experienced. (4) More complex fabrications in simple materials can simulate basic functionality or ergonomic suitability. (5) Large objects need to be reviewed as full scale models because they often cannot be understood when represented on a small CAD screen. (6) Whenever possible it's critically important to use accurate and realistic rapid prototyping technologies to confirm designs before final commitments for tooling have been made.

Observation

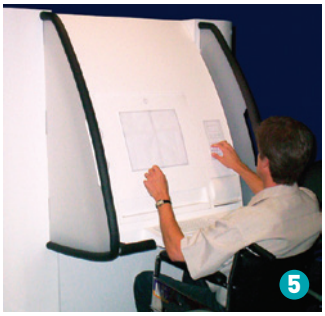


Sketching

Mock-ups



Simulations



Full scale models

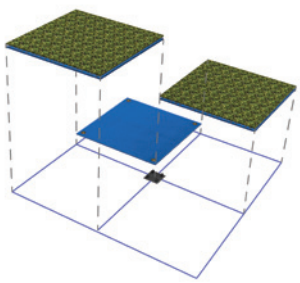
Rapid prototyping

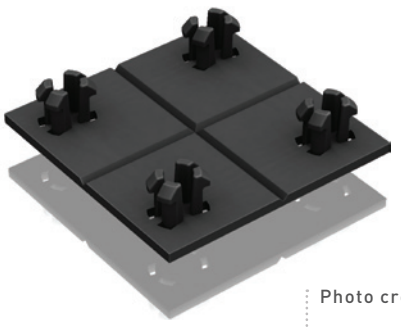
Photo credits: Ove Industrial Design Ltd.

DAS Project: Verticiel

Verticiel is a startup established by a biologist who developed a variation on green roof planting that is low-maintenance, resilient and adaptable to vertical as well as horizontal applications. The innovation is in growing colourful indigenous mosses on discarded carpet tiles. The challenge is to develop a mass production and distribution system for growing, packaging and installing the moss tile modules.

The DAS team paired Verticiel with landscape architect Scott Torrance, OALA, and industrial designer David Green, ACIDO, to consider how best to deliver on the promise of this new approach. Green created a modular growing, packaging and delivery model within a detailed bio-technical solution that combined the particular needs of organisms with an appropriate mass-distribution strategy. Green's early-stage modelling gave Verticiel the confidence to move from concept to development.





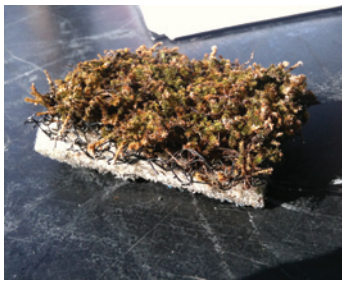


Photo credits: David Green, ACIDO

INSIGHT #6

Brand management delivers an innovation's value proposition.

DESIGN TOOL #6

Leverage brands through storytelling and the compelling articulation of features and benefits.

The value of an innovation is often hidden and intangible, particularly in the case of advanced technologies. Brand management strategies can unleash the potential of these technologies by communicating the features and benefits in a value proposition that engages opinion leaders and targeted customers.

"These recommendations take the management of our brand beyond visual tools and into strategic storytelling. This will really help us differentiate our product in the market." **Mike Strickland, President, iSPAN**

How do companies use this Design Tool?

Creating perceptible value for advanced technology brands through storytelling can expand market growth and support premium pricing. The "Intel Inside" campaign for the Intel Pentium Processor is one of the best historic examples of this approach. More recently, Corning has established a memorable brand image for its Gorilla Glass. Both of these campaigns help customers to connect emotionally with advanced technologies that can't be seen.

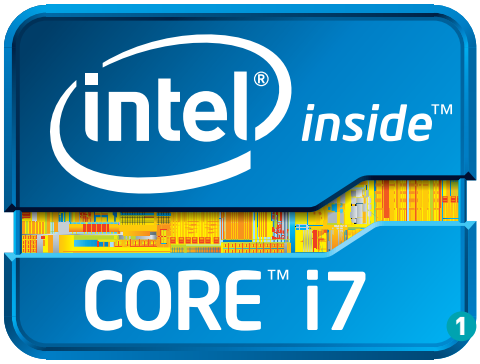


Photo credits: 1. Intel
2. 2012, Corning Incorporated, All rights reserved

DAS Project: iSPAN

Some Ontario small and medium-sized businesses have under-leveraged their potential to create memorable brands in support of their technology innovations. The iSpan Total Joist floor joist system is a case in point. Made in Ontario from recycled steel, Total Joist is a superior building technology. As with many breakthrough innovations, the technological challenges have been solved, but the marketing challenges remain an impediment to significant market growth.

The system is stronger and easier to install than wood joist products, and since it's made from steel it gives firefighters a critical advantage in case of serious fire. The joists can have a wider span than wood providing architects and interior designers with more scope for innovation in their designs. But these benefits need to be explained because the technology is invisible when installed, and the environmental, safety and design benefits are hidden and imperceptible in daily use. So brand building needs to take a different approach. The DAS team engaged Ted Kesik, P. Eng. who is a professor at the Daniels Faculty of Architecture at the University of Toronto and an expert in building technologies. Kesik made specific recommendations to help iSPAN "cross the chasm" and move Total Joist beyond the realm of early adopters by engaging opinion leaders such as architects, designers and developer/contractors in promoting its value proposition.

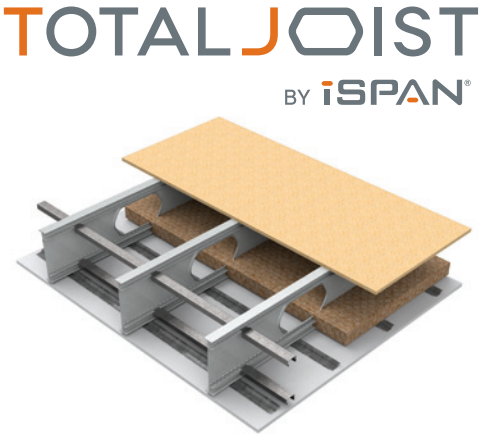


Photo credits: iSPAN

7

INSIGHT #7

Design-based Intellectual Property (Design IP) is a powerful tool for competitive advantage.

DESIGN TOOL #7

Embed design values in products, services, environments and all company activities to create Design IP.

One way to measure innovation is by tracking the number of patents that companies file. From this perspective Ontario lags other jurisdictions. But while patents are necessary to protect intellectual property they are not a good measure of future commercialization success and should not be the sole focus of a company's Intellectual Property strategy.

Innovative companies should also invest in strategic design management as a sustainable form of intellectual property protection. Companies that are able to embed good design in their products, communications and physical environments make it more difficult for competitors to keep up with their holistic approach to innovation. Apple, BMW and Dyson are all excellent examples of global companies that know how to protect market leadership through Design IP. Smaller companies can compete using scaled versions of this strategy.

"Design IP reinforces the promise of consistent performance. This gives the customer a functional benefit and an emotional connection to the product and gives the manufacturer clear differentiation from competitors."

Steve Copeland, ACIDO

How do companies use this Design Tool?

Dyson is an example of a company that appreciates the value design brings to its products through a holistic approach to innovation. The company has succeeded by offering compelling alternatives to its competition. More than mere styling, the striking visual appearance of Dyson products clearly reinforces the sophistication of its engineering. Users experience a strong emotional connection with diverse products across its growing portfolio, and there is no question that a consistent thread of Design IP runs through this company.

Photo credits:
Dyson Direct Inc.

DAS Project: T.H.E. Medical

Many small and medium-sized Canadian businesses are competing in industry sectors where this form of differentiation is increasingly important. But Design IP can take years to build. It's important to get started and a good first step involves partnering with a designer to identify and leverage the company's design assets.

T.H.E. Medical, a Barrie, Ontario-based manufacturer of patient lifts and related products has taken steps to manage design strategically. Their chief competitors are more established Scandinavian manufacturers who appreciate the value of user-centred and aesthetically-compelling design. The designer assigned to the project, Steve Copeland, ACIDO, suggested a design protocol that identified aspects of new product development that could be used to reflect Design IP. Consistent presentation of such factors is critical in establishing a market-leadership presence in the minds of institutional customers.

Photo credit: T.H.E. Medical, Barrie, ON

WORKBOOK:
Key Questions for Entrepreneurs

Answering these questions will help you to adopt a strategic design approach to improve commercialization results.

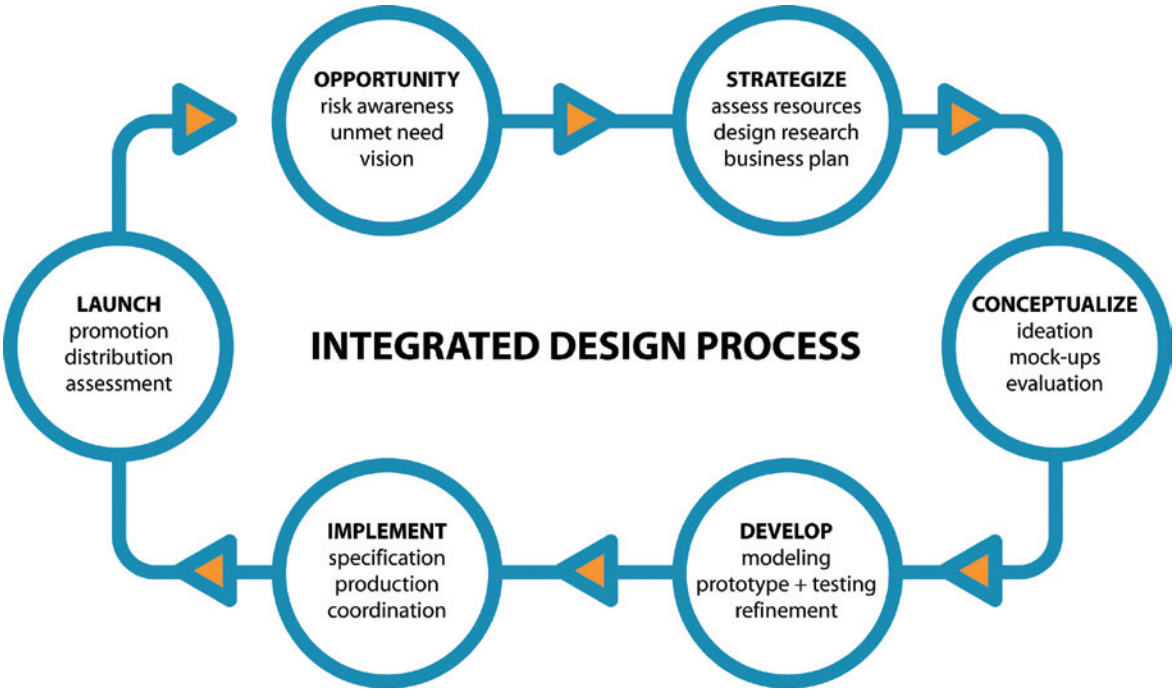
INTEGRATED DESIGN PROCESS (IDP)

Questions

i) At what stage in the innovation cycle do you consider design?

ii) At what stage are designers involved?

iii) What would be the impact of earlier involvement?



DESIGN RESEARCH

Questions

i) How well do you know the needs of your customers?

ii) How do you collect information about those needs and their expectations?

iii) Could having a clearer picture of user needs, behaviours, practices and aspirations inform your innovation process and ultimately create a competitive advantage?

VISUALIZATION

Questions

i) How do you engage investors and partners at the start and in the early stages of an innovation project?

ii) Could design visualization help make the future potential of the innovation more concrete?

iii) What are some other uses for design visualization in your innovation process?

WORKBOOK:
Key Questions for Entrepreneurs

DESIGN CHARRETTE

Questions

i) What skill sets are typically involved in the innovation process?

ii) How could the integration of designers from various disciplines improve this process?

iii) What steps could you take to integrate the engineering, marketing and design functions in the development process to improve commercialization outcomes?

PROTOTYPING

Questions

i) At what stage(s) in the innovation process do you typically model or prototype new concepts?

ii) Could earlier stage prototypes reduce the cost of modifications and improve final outcomes?

iii) What are some other benefits of early stage prototyping and testing?

BRAND MANAGEMENT

Questions

i) To what extent has your organization invested in brand management to reinforce competitive positioning?

ii) Do you use storytelling in the marketing of innovative technologies and other complex new products?

iii) Could a clearer articulation of intangible features and benefits of your products help expand your sales?

DESIGN IP

Questions

i) How do you protect the intellectual property value of new product innovations?

ii) Do you believe there is a strong correlation between patents filed and ultimate commercialization success for Canadian companies?

iii) How can Canadian SMEs compete with low cost, high volume manufacturers in other countries?

iV) How can you start to build Design IP for your company?

CONCLUSION

Innovating is difficult. The process can consume considerable time and resources over a number of iterations before something brilliant results. This is particularly challenging for small business entrepreneurs who may have promising ideas but limited resources to develop them. Connecting with Ontario's expert design community can help SMEs get to the heart of the issue and add value to the end result.

This booklet provides an introduction to design tools that can improve the usability, manufacturability and market adoption rates of any company's products and services. Ontario is a rich source of design talent and by partnering with local designers, entrepreneurs can learn how to work with these tools to simplify the innovation process and improve outcomes.

To connect with accredited designers in one of the specific design disciplines, please contact the professional design associations listed below.

Architecture:
Ontario Association of Architects (OAA). www.oaa.on.ca, or,
The Toronto Society of Architects (TSA).
www.torontosocietyofarchitects.ca

Fashion:
Canadian Apparel Federation. www.apparel.ca
Fashion Design Council of Canada.
http://worldmastercardfashionweek.com/fdcc/
Toronto Fashion Incubator.
www.fashionincubator.com

Graphic Design:
Association of Registered Graphic Designers of Ontario (RGD).
www.rgdontario.com

Industrial Design:
Association of Chartered Industrial Designers of Ontario (ACIDO).
www.acido.info

Interior Design:
Association of Registered Interior Designers of Ontario (ARIDO).
www.arido.ca
Interior Designers of Canada (IDC).
www.idcanada.org

Landscape Architecture:
Ontario Association of Landscape Architects (OALA).
www.oala.ca

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Tim Poupore, ACIDO, is the Chair of DIAC and a Past-President of ACIDO. He is the President of Ove Industrial Design Ltd., a leading industrial design consultancy based in Toronto, and has over thirty years of practical experience assisting Canadian SMEs in the strategic design and development of innovative new products.

The material in this booklet was originally prepared as DIAC's "7 Insights & 7 Best Practices from the Design Advisory Service" presentation. Original presentation graphic design by Wen Ma, Provisional RGD.

Graphic Design:
Shikatani Lacroix Design

Design Advisory Service Participating Companies

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- Avnan Electro Inc., Mississauga, ON
- Bothwell-Accurate Co. Inc., Toronto, ON
- Creative Education of Canada Inc., Point Edward, ON
- Curtis Associates, Guelph, ON
- Dalco Concept Inc., Hawkesbury, ON
- GestureTek Inc., Ottawa, ON
- iSILS, Waterloo, ON
- iSPAN Systems LP, Princeton, ON
- Kenaidan Contracting Ltd., Mississauga, ON
- Morgan Solar Inc., Toronto, ON
- Nu-Co Plastics, Blenheim, ON
- On-The-Water Designs, Kilworthy, ON
- Protek Paint Ltd., Toronto, ON
- Schwank Ltd., Mississauga, ON
- Sherwood Innovations Inc., Toronto, ON
- T.H.E. Medical, Barrie, ON
- Verticiel Inc., Toronto, ON
- Woodscape artKits Inc., Ottawa, ON
- XYZ Interactive Technologies Inc., Toronto, ON

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- Scott Torrance, OALA
- Jeffrey Vanlerberghe, R.G.D.

All DAS participating designers are accredited members of their respective associations.

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