Why Invest in Design?

Insights from Industry Leaders

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About the Design Industry Advisory Committee (DIAC)

The Design Industry Advisory Committee is a non-profit, cross-disciplinary design research organization established in 2001. DIAC programs and research focus on ways to leverage the capability of designers from all disciplines to achieve economic and social prosperity. DIAC's board represents the design associations in Ontario:

- 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) and
- Fashion Industry Liaison Committee (FILC)

www.diac.on.ca

About the Martin Prosperity Institute (MPI)

The Martin Prosperity Institute brings fresh perspective on the future as we attempt to answer the key question: How can capitalism work best in the 21st century?

Our early work explores approaches and advances ideas that support a better, brighter tomorrow. Topics include: Infrastructure for democratic capitalism; Cities and mega-regions as the key drivers of economic geography; and web-based networks for cooperation, problem solving and governance.

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EXECUTIVE SUMMARY

Design is playing an increasingly vital role in innovation, competitiveness and the determination of economic value. However, assessing the impact of design or isolating the design factor can be a challenge for a number of reasons. Design is an enabling discipline, and designers working with professionals from other disciplines add value to the process and to the end result. Design is also a crucial factor in many activities that successful organizations do well, from innovation and new product development, to operations and human resource management, to communications and branding. And like most serious organizational strategies, design is not a quick fix. It requires investment over time and commitment from organizational leaders in order to deliver significant returns.

To find out why successful organizations have invested in design and how their leaders think about design's role in innovation, the Design Industry Advisory Committee, working with the Martin Prosperity Institute at the Rotman School of Management, University of Toronto, have conducted a series of interviews with industry leaders. Our case study organizations are working at the cutting edge of innovation and they are all internationally recognized in their industry sectors. Funding for this research was provided by Industry Canada, with additional support from the City of Toronto.

The findings of this research project shed light on the impacts and benefits of investing in design by providing specific case study examples and testimony from industry leaders. The in-depth interviews were based on a questionnaire that focused on the role of design in corporate strategy, financial investment, innovation and new product development, manufacturing process and corporate culture. The interviews were videotaped and recorded. Excerpts from the interviews may be viewed in a short video at: https://vimeo.com/97677579.

These organizations operate in different sectors, but all of these leaders talked about a common set of design-related activities that are important to the sustainability of their organizations, to the successful commercialization of innovation, and to the engagement of creative talent at a high level. These activities are summarized in the 10 positive indicators of design investment identified in this report. We have used quotes from the interview subjects to illustrate how each organization leverages design in these activities.

The over-arching indicator of successful investment in design identified in this research is a long-term perspective on innovation. All of our interview subjects talked about the importance of investing for the long term and continuing to invest in design even in recessionary times. This long-term perspective makes it possible for the other activities to take place.

This study aims to increase the appreciation of the role of design and encourage more businesses to use the creativity and problem solving skills of designers to enhance economic, social and environmental outcomes. We hope that this project and the positive indicators of design investment that we have identified will lay the foundation for future research on this theme.

POSITIVE INDICATORS OF DESIGN INVESTMENT

Design is:

- **o.** Long-Term & Short Term positive impact of design comes with long-term investment and some short-term risk. Commitment to design is not bound by quarterly results. Design investment over time involves many of the activities discussed below.
- Disruptive design is a catalyst for change. All of our interviewees talked about using
 design to realize significant change with positive financial implications and to create
 differentiation in their industry.
- **2. Embedded** these leaders view design not as a discrete discipline but as integrated with other disciplines. Design is embedded in the culture of these organizations and, in some cases, designers are physically embedded in the workplace. Design is part of everything, and everyone thinks like a designer including the CEO.
- **3. Intensely Focused** these leaders are intent on getting to know their clients and customers and identifying the unmet needs of users. They invest in ethnographic research to track behaviours and workflows and then conceive solutions to address unmet (and often unarticulated) needs of their target audiences, and other organizational goals.
- **4. Owned** by the CEO. These design leaders are extremely passionate about innovation and achieving their goals. They own the design vision and the implementation of that vision. Many of these leaders are involved with innovation and design projects in a hands-on way.
- **5. Tested** quality is closely aligned with design excellence, brand building and fostering bonds of trust with stakeholder groups. Early stage prototyping, attention to detail, and continuous testing and evaluation of feedback ensure that usability and resilience are built into the end products by the time they reach the marketplace.
- **6. Technology & Materials** advanced technology is central to innovation in these organizations and there is a symbiotic relationship between technology and design. Design makes new technology work; it makes technology accessible to users and ensures that the specific technology products are matched to user needs. Sourcing, testing and integration of new materials is another source of competitive advantage closely aligned with design.
- 7. **Process** designing the process is as important as the end result. Sophisticated process and systems design ensure that these organizations are using human, physical and financial resources efficiently, with minimal waste. Process design is linked to sustainable business practices in operations, facilities, manufacturing and product life-cycle management.
- **8. Holistic** these organizations take an holistic approach to the design disciplines, going beyond products to invest in brand management (often with in-house graphics teams), and strategically designing workplace environments, retail stores and showrooms to reflect the organizations' vision and values.
- **9. Diverse** these organizations work with a diverse creative talent pool comprised of staff and external consultants. Diversity on creative teams (a mix of different disciplines, different cultures and varied professional experience) is key to achieving the vision. Attracting and retaining top creative talent is both a priority and a challenge for these organizations.

Continuously engaging creative staff in challenging innovation and design projects is a way to keep these valuable employees interested and committed to the organization. It's also a part of the leadership function that our interview subjects really enjoy.

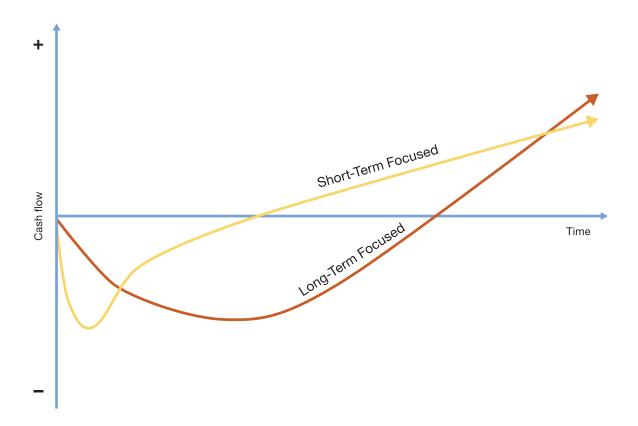


Figure 1: The over-arching indicator of successful investment in design identified in this research is a long-term perspective on innovation.

SDIdub









Long-Term & Short Term You can't build a brand and develop a product on quarterly results. — Les Mandelbaum, Umbra	✓	✓	✓	✓	✓
Disruptive We try to have features that only our products possess — Jeff Bayley, Canplas	✓	√	√	√	√
Embedded Design is embedded in the business — David Labistour, MEC	√	√	√	√	√
Intensely Focused We spend a lot of time observing, watching — Dr. Joseph Cafazzo, HHF	✓	✓	✓	✓	✓
Owned There isn't a product that goes out to the marketplace that I don't approve. — Les Mandelbaum, Umbra	✓	√	✓	✓	✓
Tested It's our Product Management Team who go out and understand the consumer — David Labistour, MEC	√	√	√	√	✓
Technology & Materials Quite often the technology is the driver for the product — Paul Rowan, Umbra	√	√	√	√	√

Process We came up with a concurrent process; where up front all the disciplines were in the game. — David Feldberg, Teknion	✓	✓	√	✓	✓
Holistic I think you should be holistic about the way you design products. — Paul Rowan, Umbra	✓	✓	✓	✓	✓
Diverse I like the diversity that we've achieved largely because I think we're avoiding Groupthink. — Dr. Joseph Cafazzo, HHF	✓	√	√	✓	✓

CASE STUDIES

Canplas Industries



Company Profile

Canplas Industries is a manufacturer of a broad range of plumbing, ventilation and central vacuum products for the construction industry. Its head office and manufacturing base is located in Barrie, Ontario. The company was established in 1966 and since 1984 it has been a member of the Aliaxis Group (formerly Etex Group), a global leader in plastics solutions for fluid transport in building materials for both the commercial and residential sectors. Canplas focuses on continuous innovation to meet and anticipate customer needs. It holds over 50 patents and design registrations for products.

CEO/Interviewee Background

Jeff Bayley, President and CEO

Jeff Bayley graduated from Western University with a degree in engineering. He joined Canplas Industries in 1991 as a product development engineer. After assuming several additional senior roles within the company, he was named President and CEO in 2001.

Interview Summary

In 2007 Camplas recognized that with the volatility in the construction sector and the high cost of manufacturing in Canada there were significant challenges in its industry sector. It could not continue to compete successfully by focusing only on commodity products. The company made a decision to develop differentiated products that would appeal to customers based on their superior features and benefits. The superior value proposition of these differentiated products makes them less price sensitive. Canplas also began to look more closely at the whole supply chain and realized that its customers were not only the wholesalers to whom they sold their products, but also the installers, contractors and end users who would benefit from new features and benefits in the product line. The focus on differentiation by design has helped Canplas to emerge quite strongly from the recession. It has also helped to energize the company and to attract and keep top creative talent in engineering, marketing and sales. Canplas employs a team of engineers and works closely with external industrial design consultants who participate in ethnographic design research (observing how products are used in the field) and contribute their expertise in ergonomics and aesthetics. The in-house marketing department includes graphic designers who work on corporate communications and product marketing materials and also contribute to the product design process. Canplas invests in continuous research and evaluation, observing how products are used and testing prototypes in the field.

Specific Examples

In these case study examples, direct quotes from the interviewees are in italics.

o. Long-Term & Short Term

- For Canplas, innovation linked to design is a long-term investment. Canplas is
 making an investment in research, product development and design to create
 more sophisticated, differentiated products that take years to develop and test.
- Canplas worked for ten years on improving the performance, durability and usability of grease interceptors, culminating in the recently introduced Endura XL, a differentiated product in this market sector.
- The paybacks at the start are slow; you make the most mistakes at the start. The product development process has a very, very long gestation period from inception of an idea to actually having it accepted in the marketplace. In our business it can be 10 years.

1. Disruptive

- Canplas has introduced differentiation to a sector trading in commodity products.
- In 2007 Canplas decided to focus on differentiated products products that not only look different but also perform better because of specific features and benefits. These products tend to be less price sensitive.
- This strategy has worked well for Canplas.

2. Embedded

- A focus on innovation and design is embedded in the culture at Canplas.
- It can take many years to create a culture that is focused on adding value through innovation.
- Also once you start into it then you can attract people who are bright, that want to be involved in that process.

3. Intensely Focused

• We try to have features that only our products possess, that add value to the products. And you have to be really clear about the group to whom you're trying to add value.

4. Owned

• You gravitate to what you enjoy the most. I started at Canplas as a Product Development Engineer, so that's my background. Some things you do at work sap your energy and some give you energy, and this gives me energy. Many people at Canplas feel the same way.

5. Tested

- Canplas has moved to a process of rigorous testing and evaluation of prototypes at various stages in the product development process.
- We are trying to ensure there is considerably more voice of customer feedback prior to launch.

6. Technology & Materials

- The company's expertise is in injection-molded plastics.
- A lot of our business has been earned by taking things previously only made in metal and making them in plastic. But whenever possible, we don't just copy it ...
- We can do things in plastic that would be very difficult to do in metal.
- Grease interceptors in metal were just big square boxes because they started with sheets of metal and welded them up. The injection-molding process doesn't require you to start with flat sheets. We start with a void and we inject plastic into it ... it can be almost any shape we want.
- We designed-in features and benefits that were only possible in plastic and then we patented a lot of these innovations. Previously roof vents were primarily metal and now we make them in plastic and they are superior in a number of ways.

7. Process

• Canplas uses a specific formal internal process for new product design. It starts with observing the products in use and talking to customers about their unmet needs.

8. Holistic

 Canplas has a strong engineering team and it employs graphic designers working on corporate communications and marketing materials. The product development team also works with external industrial design consultants.

9. Diversity

- Canplas sees value in diversity on its innovation team. It is our belief that a group of people with different strengths and perspectives cooperating collaboratively will invariably design better products than an individual.
- A focus on innovation and design enables Canplas to attract and keep creative talent.
- Creative people want to work in an environment where innovation is valued and ideas can be put into action. The more creative we become, the easier it is to attract and retain creative people.

Healthcare Human Factors, Centre for Global eHealth, University Health Network



Profile

Healthcare Human Factors (HHF) was launched in 2004 as a part of a \$6 million grant from the Canadian Foundation for Innovation. At that time embedding Human Factors practitioners in healthcare was a novel idea. Located in the Centre for Global eHealth within the University Health Network (UHN), the facility has grown into a group of close to 40 engineers, designers, psychologists, researchers and computer scientists who test, evaluate and develop medical devices, software and information technologies. The group works for healthcare facilities within UHN, for other hospitals and for private sector clients. Healthcare Human Factors is recognized as a global leader in its research that uses design as a strategic tool in evidence-based assessment and validation of healthcare systems. One focus of the research is enabling patient self-care through the use of user-centred, effective health technologies.

CEO/Interviewee Background

Dr. Joseph Cafazzo, Executive Director, Healthcare Human Factors, University Health Network

Dr. Joseph Cafazzo is the Lead for the Centre for Global eHealth Innovation, a state-of-the-art research facility devoted to the evaluation and design of healthcare technologies. He is the Executive Director of Healthcare Human Factors in the University Health Network. Dr. Cafazzo and his team apply human factors engineering principles to problems of healthcare delivery and patient safety. He has been active in the user-centered design of technology related to clinical workflow and new modes of patient care. Dr. Cafazzo is an Associate Professor in the Faculty of Medicine at the University of Toronto.

Interview Summary

The interview focused on how Healthcare Human Factors is attempting to change the culture in the design and use of medical technologies by using a Human Factors and design led approach to research and product development. Dr. Cafazzo explained that Healthcare Human Factors was set up within the University Health Network in response to growing concerns about the success rate for medical devices and information technology products in health care. Many of these products were operating as designed but they were not meeting expectations. Some products were too complex to use, some were impacting on productivity and efficiencies in the health care system. The most serious concern was the human cost of non-empathetically designed products that contribute to adverse patient outcomes.

To address these issues, Healthcare Human Factors established a multi-disciplinary research team. Everyone on the team is engaged in research in how products are used in the clinical environment and in the development of new and improved products for hospitals and private sector clients. Most of the private companies partnering with the research centre are international companies who recognize the value of investing in human factors and design research to improve the success of medical technology products. So far, Canadian companies have been more risk-averse and slower to take advantage of the research resources of Healthcare Human Factors.

Specific Examples

o. Long-Term & Short Term

- Health Care Human Factors works with public and private sector clients including other hospitals.
- We view it as a partnership because we are a not-for-profit ... we have a relationship with these private sector companies who want to bring their product to market and make it the best product that they possibly can ... we want to change the culture of the partners that we have ... so we've actually helped them establish their own design groups, their own Human Factors programs. And it has to go beyond just another requirement for their regulatory process.
- The majority of the private sector clients are international companies based outside of Canada.
- I would love to say that there's a lot of Canadian companies approaching us but unfortunately what I'm observing in the Canadian market is very small start-ups or even larger companies that just don't have the time or the money to spend on this. ... But I am sympathetic to the fact that the use of Human Factors and our design process is a bit all encompassing, and so in some instances we wish we could work with more Canadian companies but most of our clients are multinationals based out of Europe and the U.S.
- The Canadian market is too risk-averse. It almost appears that in many instances we have to have a customer in hand and we have to be sure that there is a return on investment before we are ever going to invest in something.

1. Disruptive

- Healthcare Human Factors was established at a time when *embedding Human Factors practitioners in healthcare was a novel idea*.
- ... it was very concerning that a lot of technology was not living up to expectations. A lot of people view technology as being positive, as helping the health care system, helping in the delivery of care, but in many instances it can be a hindrance and actually be harmful. There clearly was a disconnect between many of the designers, engineers, people conceiving of these healthcare technologies and the people using them. We saw a huge gap.
- It really was to change the culture of industry, that design is important and it's not just a part of the technology development process. That design is so critical in terms of safety, in terms of adoption ... so we were seeing products that were failing ... and it's because of the lack of empathy in the design of these products. So we wanted to change the culture and bring the end-user closer to the product development.
- We had a unique role to play because we were first and foremost hospital employees looking at this from the inside, from the people using it, the people who buy this technology.
- And it had nothing to do with the functionality per se, it had nothing to do with the
 quality of the manufacturer. [T]hese products were working as designed but they
 were failing. So it is that grey area that distinguishes something from being
 functional and something being truly effective in delivering care.

• There were products that clearly weren't using 1/10th of their functionality because they were too complex. There were products [that], I would say without a doubt, were unsafe and led to poor patient outcomes, or adverse events as we call them. Certainly there were products that were sitting in corners of the hospital unused. We paid in some instances hundreds of thousands of dollars for that technology and it was largely unused because it didn't fit into the workflow ... again there was a real gap between the concept and the innovation around that technology and actually having people use it.

2. Embedded

- Healthcare Human Factors is physically embedded in Toronto General Hospital, within the University Health Network, one of the largest academic health science centres in the world. This is critical to the work its team has access to clinical labs after hours and also to subject matter experts in any area.
- At the time HHF was launched, *embedding Human Factors practitioners in healthcare was a novel idea*.
- [This lab is] embedded right in the hospital, but we can't simulate everything here. So in many cases when we need to have a higher fidelity simulation for instance radiation therapy we made a decision when we were doing work in that area that we would actually use our radiation therapy units after hours to do our testing, and our operating rooms, [and] our cath labs. Again in those instances it's easier to just use our facilities than to use our simulation area. But it goes beyond that. The level of commitment we don't do the design Human Factors work as just another vertical in our design portfolio this is all we do... we have subject matter experts in any area, more than 15,000 Health Practitioners in our hospital alone, access to tens of thousands of patients. So it's more than just simply simulating these scenarios, it's really about the level of commitment and our knowledge around the technology.
- The physical embeddedness also adds value for the team members including the designers.
- The designer of today has to be part social-scientist, part technologist and has to get some inspiration from somewhere. I can't think of a better way than spending time in that clinical environment.
- And it is in the best interest of the company, of this product, ultimately the people who use this technology, that it is embedded in their entire design process. That it doesn't come at the end, which unfortunately is what we see.

3. Intensely Focused

- One aspect of the Group's work focuses on ethnographic research, studying workflows and human behaviours and making observations about the usability of products based on how they are actually used.
- I think there is a recognition that the whole process of user-centred design is extremely valuable end-to-end and it's not something that should be done at the later stages.
- ... the way we attempt to use the end-user in the design process ... yes, you need their input but that doesn't mean assembling them around a table and asking them:

- what do you want in your product? I think those interactions are important, but really for us user-centred design is about observing what they do, not what they say they do.
- So a recognition, especially in Human Factors, that there is a lot of paradoxical thinking in terms of how people perceive how they work and what they do—and perceive the effectiveness of product[s]—and actually seeing them using the products. So we spend a lot of time observing, watching, and perhaps a little less time listening.

4. Owned

 Healthcare Human Factors works for private sector companies on a fee-for-service basis, but Dr. Cafazzo and members of his research team are fully committed to the outcomes and they are passionate about improving medical technologies on behalf of their clients and, most importantly, on behalf of patients around the world.

5. Tested

- As part of its activities, Healthcare Human Factors conducts rigorous testing and adaptation of medical technologies before they are introduced into real world health care environments.
- The level of scrutiny that the U.S. Food and Drug Administration (FDA) is taking on in the design of technology now warrants the level of effort that this team is putting in on behalf of its partners.

6. Technology & Materials

- The multi-disciplinary team uses design to make complex technologies easier, faster and safer to use by both health care workers and patients.
- For example: one client at the lab applied for FDA approval, but there were use issues found in the lab that were preventing the company from getting into the U.S. market.
- I think the greatest thing was that we made a design change that was subtracting from the design ... we basically removed a feature from the product and they got approved. I think that's one of the simplest and most profound examples of what we do. [It's] not always obvious, but just removing the complexity solved the problem.
- You can't put dollars and cents around this, but these technologies can do as much harm as they do good. Thankfully over time with standards and the regulatory requirements that have been improving ... I'm hoping that Human Factors and these design processes will eventually minimize the errors related to human behaviour in our performance and injuries related to the user interfaces.
- One focus of Healthcare Human Factors and the work of Dr. Cafazzo is on patient self-care, designing and building user-centred tools that patients can use in the home to keep them out of hospital and to avoid readmissions.

7. Process

• What we are seeing in the last few years is that the Human Factors process within the design process is critical. Sometimes, it's the one thing that is blocking approvals.

8. Holistic

- It really is a mix of Industrial Designers, Human Factors Engineers, Cognitive Psychologists, Computer Interaction people from the Computer Science role, Biomedical Engineers.
- I'd like to think every member of the team is a designer in some way because they do influence the design of the product. I can tell you that even when we are simply doing an evaluation, the issues we find are things that need to be addressed in design.

9. Diversity

- I like the diversity that we've achieved largely because I think we're avoiding Groupthink.
- All the members of the team affect the design of the products in their own way. Sometimes it is in identifying problems that need to be solved through a design process and sometimes it is a direct mitigation of a problem through a new design.
- I always thought that you really needed a strong background in healthcare before you had the experience in design or in engineering, or what have you, or in Human Factors ... But I don't think that in the end it really matters because every individual over time builds up this very well-rounded skill-set and it's largely as a result of the fact that they work within a clinical environment, which is invaluable.
- I love the fact that our new Industrial Designer, just hired a few weeks ago, spent 3 days over at Princess Margaret Hospital watching people being treated with radiation therapy. I think the first week he was here and it was being described to him, and it was clear as mud for him, until he saw it. Everybody was so proud of his first sketches, his first concepts, because he had the orientation of the gantry correctly. [H]e clearly now understood the process.

MEC



Company Profile

Mountain Equipment Co-op — MEC is a consumers' cooperative that sells outdoor gear and clothing to its members. The Co-op is Canada's largest supplier of technical outdoor equipment.

MEC was founded in Vancouver in 1971 and initially focused on mountaineers and climbers' clothing and equipment. Today the product portfolio includes equipment and clothing as well as repair services and clinics for activities, such as hiking, climbing, canoeing, skiing, running, biking, and yoga, that are intended to keep up with the demands of an increasingly urban population predominantly in Canada. To reflect its widening outdoor audience, the co-op has changed its logo and replaced the iconic mountain with a green square that contains the text MEC in 2013.

MEC operates seventeen stores across Canada and sells online. In 2013, the co-op accounted for a total of 4.1 million members in Canada and internationally. The co-op's head office and design studio are located in Vancouver. The manufacturing facilities are largely located in Asia with additional manufacturing facilities remaining in Vancouver.

MEC is accredited as *bluesign* member, which refers to a third party environmental, health and safety standard for textiles industry.

CEO/Interviewee Background

David Labistour, President and CEO

David Labistour has been Chief Executive Officer since January 2008 and was Senior Manager of Buying and Design of Mountain Equipment Co-operative prior to that. Mr. Labistour headed MEC's buying and design teams since 2003. His achievements include enhancing technical apparel and gear within the key outdoor categories of climbing, paddling and snowsports. He also spearheaded a product sustainability initiative aimed at reducing the ecological footprint of MEC-brand products. Mr. Labistour's professional experience spans over 25 years working for companies such as Adidas, Woolworths and Aritzia. Prior to immigrating to Canada from South Africa in 1999, Mr. Labistour held senior merchandise positions with Woolworths, one of South Africa's most successful retailers. He served as consultant to the President at Vancouver-based Aritzia where he developed the fashion retailer's product development and planning structures and processes.¹

Interview Summary

David's interview was very focused. We had provided him with a series of questions that were based on the general interview questions but then targeted specifically at MEC and the importance of design across the company and in their rebranding effort. David strongly and frequently returned to the related ideas of *systems thinking* in terms of how MEC benefits from and uses design. The idea of systems really involved three different aspects. The first was the idea of embeddedness and that design is not a separate thing but is part of all the various business processes. The second aspect discussed as part of the overall design systems was that it was holistic — the entire system was

Adapted from http://investing.businessweek.com/research/stocks/private/person.asp?personId=39829406

designed and was also part of design. The final aspect David discussed around systems was that of thinking about designing the processes themselves.

Specific Examples

o. Long-Term & Short Term

- MEC focuses on the needs of tomorrow so that they can have the products ready and in their stores when they are needed.
- The rebranding from Mountain Equipment Co-op to MEC will take over 2 years and involve an investment of millions.
- I think we have to look at a larger picture. What we know is that we compete for people's discretionary time and money. And there are many players in the space, be it the North Face, movie theatres, iPhone, game console ... they are all competing for people's discretionary time and money. And what we have to do is understand what unique value we bring to people's lives that would make them consider us.
- We're a retail co-op, which means we aren't driven by profit and we're not driven by quarterly results, but we're not a not-for-profit. The difference is if we make a profit that we don't need to retain to fund the organization, we give it back to the members. So we don't keep it, we don't give it to different shareholders. We don't operate like a non-for-profit, we're a competitive retailer who has to exist in a very competitive space that more and more, is being occupied by large professional global players and consumers that are fickle.
- David also pointed out that all organizations face the problem of relevance and that many short-term focused companies can also do a great job with design.
- So what differentiates us is that we're not putting the profit into shareholders pockets, so we can think long-term, plan [out] 5 and 10 years, take a much longer net-present value view of [thinking] of investments, and our customer is our owner and our shareholder. So we are not beholden to different masters.

1. Disruptive

I think for us, design talks about starting with an empathy for the problem and really in a retail business that just means very simply trying to understand the wants and needs of your consumers, and really dig down to what those might be and put them first. Then you work back from there. Where we are quite unique, and the structure of our business is different to manu, is that our owners and our shareholders are our customers, so we can have a single focus on our members [which helps the "systems" thinking, but many globally excellent organizations are not co-ops]. It's very aligned and having that empathy for the consumer is very easy to do. But for us the challenge lies in understanding their needs of tomorrow in a marketplace that's changing so quickly. [V]ery often the consumer doesn't know what tomorrow looks like, so I think for any retail business the challenge is really trying to anticipate the drivers of change and what customer engagement will look like tomorrow and continually ideate and prototype to find solutions. I'm probably more than just a design thinker, but design is a very important part of that systems thinking. But one does have to ideate and prototype and look for solutions and move very quickly all the time.

- One of your questions was why is [branding important] at MEC and when we did it we did a lot of research on this. We asked people our own questions, but very often we listened to them on social media. [W]hat they told us and what they were talking about on social media did not always jibe. But what was consistent — and this is one of the few consistent things — is that everyone told us fondly M.E.C. or MEC – depending on where they lived ... anybody east of Calgary was MEC and anyone west of Calgary was M.E.C. Very few people talked about Mountain Equipment Co-op. So we did know from the research that that was where we were going to go. Our assumption was that when we got the condensed MEC brand and logo that it would have a mountain in it, and virtually every rendering that was done had a mountain in it - with one exception. There was this little green box. And we were in a paradigm of a mountain. When we took the logos and we put them on product, on an app, on the website, on social media and in-store, that little green box jumped up way more than anything else. This is design thinking. This thing is working even though it wasn't what we had in our mind. When we look at the new system of communication — and communication today is not an ad in a newspaper anymore, it's social media. It's very much driven by very quick hits; a lot of fast quick hits on mobile devices. And that logo jumped up way more than anything else. So it ended up being a very contentious choice but I believe it was the right one.
- [W]ith all the changes happening we have to be really adaptable and we have to be very flexible. Think of the systems; what design thinking does allow you to do is [to] solve problems and be flexible [in] how you solve those problems. The good thing about design is it doesn't only have one tool in the toolbox you can find many different ways to solve a problem. I think that systems thinking and design thinking are the only ways of really unpacking the complexity that we're dealing with these days.

2. Embedded

- It [Design] is embedded in our business It's what we do.
- Design is not a discrete part of MEC it is embedded across the organization.
- MEC sees design as a critical component to everything they do.
- [The systems and supply chain design] is not purely design, but it's design thinking, not design in itself it's very much design thinking from a business point of view. We have written algorithms in fact we started before the holiday season last year, we started writing algorithms into our distribution models to move ecommerce product not from my distribution centre but from our stores. It added costs and it had a cost of labour in the beginning but through rapid prototyping and through just making it better all the time we've now got to a point where we're shipping more than 50% of our ecommerce product from our stores not from our distribution centre. That's all trial, error, assess, fix and on you go. That's very much how design approaches problems.
- We have apparel designers, hardware designers who are industrial designers we have colour designers, fabric designers … but in all of this I think what is really important for me is that I don't see designers as a discreet part of the team.

 Designers work alongside Engineers and Systems people and a whole group

of different skills. And it's the cross-functional systems team that really allows a solid delivery.

3. Intensely Focused

- MEC looks to active outdoor lifestyles. They expect their technical developers to understand these experiences and the materials and components needed to create their products and instil a *vibrancy of the brand*.
- I'll take you through our product commerce now ... quality is the first checkpoint ... always ... and is rarely the first stopping point. If we can't get the quality we're looking for then we don't want to make the product. The second one is performance. And you want a product that really works for its intended use. If you're going backcountry skiing in icy conditions or if you want to run in the city, you want a product that really works for what you're buying it for. So after quality, performance is our second most sacred promise to the consumer. The third one is value. And really we do try ... our purpose is to inspire and enable everyone to lead active outdoor lifestyles. So we do with the MEC brand, try and get great quality product into the hands of the consumer at a really good value. The next one is we want to ensure that the people that make our products are treated with dignity and are well looked after, so we do have an Ethical Sourcing Program. Then we do try to reduce the footprint of what we do through the materials we use. There's a big one in this that I haven't mentioned yet and it's probably the most over-arching one of all: if the product does not fit well and look good and is not aesthetically pleasing people will not buy it — they wouldn't pick it up. So while those things are the promises that we offer, I think a unique bundle to us, we understand first and foremost that the product has to look gorgeous. It has to be something that people are proud to wear. It has to be something that makes them look good.

4. Owned

- MEC's advice to other companies:
 - Define the value
 - · Adopt to change
 - Solve problems
 - Approach things by making this part of the culture of the organization.
 The design approach has to be embedded in the entire organization not just the procedures.
 - Know who you are and what you need to do.
 - When you are successful, this creates a virtuous cycle that grows and builds on itself.
- Personally, I came from the product side of things before I became CEO and so I was very involved there. But now, [it's] creating the culture of the organization, leading the culture of the organization and leading the strategy and really owning the vision and values of the organization. Because I have to empower my people to think and deliver for themselves. If I get involved in [that], then I take away their satisfaction of doing their jobs. But I hold them accountable.

5. Tested

- MEC develops new products through prototyping and by having a *culture of design*. Design is inherent in all their products from the beginning.
- Once we have a prototype then we bring that prototype back. If it's a technical product we will send that prototype into the field with a Field Tester to be used in the real environment to get the feedback as to how it performs. That then comes back and often there may be 2 or 3 iterations and from there it gets locked down and gets manufactured by the factories.

6. Technology & Materials

- MEC looks to the store and staff to provide an efficient shopping experience. They intentionally engineer the efficiency into the design of all elements of their stores.
- It's our Product Management Team really who go out and understand the consumer — where the consumer is going and what the consumer's needs are. Where we may look at things a little bit differently is we look at activities first. So if you are a climber, what is the full assortment of climbing stuff you need? If you're a mountain biker what's the full assortment of mountain biking stuff you need? The same with running. Whatever it might be. Then of course there's just the urban outdoor part, which is probably more similar to other retailers. But the Product Managers define and curate what that assortment looks like. They then tell the designing team what it is that they need for that assortment. They will give the design team a product place, a product purpose or what they need it to do, and the kind of units they're going to see, and the kind of price-point they're looking for. And it's up to the Designers to solve that problem and bring that product forward to the Product Managers. Once the Product Managers and the designers have come to an agreement on the outline of that product, the draft of that product — which is designed in software but a lot of background work has gone into that — so once they've got the concept right, they then take it to Prototyping.

7. Process

• Sustainability is embedded in MEC's systems and products and processes.

8. Holistic

- MEC takes a systems approach to everything they do understanding that the pieces
 are all interrelated and connected.
- MEC promises its customers:
 - Quality Fit Look
 - Performance
 - Value
 - · Ethical Sourcing
 - · A Reduced Footprint
- In terms of their assortment and availability *MEC opened the tent up*.
- MEC curates the shopping experience through design graphics, interior, architecture, digital, signage, advertising, publications.

- To me, design, sustainability, finance, human resources ... I don't think you can look at design as a discreet and separate part of what we do because it's embedded in the business, it's part of what we do. And we cannot remove design from the final customer experience and expect our business to be better. In fact, it's not going to fly. So the question to me is not why you'd invest in design, it is: What is the appropriate investment in all of these discreet and separate parts of the whole and how do we make the whole as effective as possible?
- [O]ur stores ... the signage is the same, the service when you walk in is the same. So you create an experience in many different ways. That's why that whole systemthing is so important, because you create the experience from the faces of the people and the interaction you have with the people you meet, the signage in stores and the product in stores.
- [S]o I go back to that whole system-thing again and designers are a very, very important part of it but it doesn't work if it's discreet in itself.

9. Diverse

 So we changed our vision to inspire and enable everyone to lead active outdoor lifestyles. And with that, "everyone" becomes an inclusion of different cultures, different genders, urban and the backcountry. It means we opened the tent up and we became a far more inclusive younger organization and with that came a lot more success and relevance to a younger market.

Other

• MEC's stores sell their own and other brands' products. 30% of MECs stock keeping units (SKUs) are for their own brand but they account for 50% of total sales.

Teknion



Company Profile

Teknion is an owner-operated company and leading international designer, manufacturer and marketer of mid- to high-end office systems and related furniture products.

Back in the early 1980s Teknion offered only a single product line, the Teknion Office System or T/O/S. Today the company portfolio includes several diversified but integrated product lines of systems furniture, mobile furniture, architectural wall systems, seating, storage and filing, freestanding case goods, and accessories that are intended to meet the customers' individual workplace needs. Teknion's customer base predominately consists of large and mid-size national and multi-national corporations and government institutions worldwide.

Teknion operations from design to manufacturing and distribution are vertically integrated in order to address multinational needs on both a global and local basis. Its corporate headquarters is located in Toronto. Seventy per cent of Teknion's products are manufactured in Canada while the other thirty per cent are manufactured in the United States, the United Kingdom, Israel and Malaysia. Teknion operates an extensive worldwide sales and service structure through a network of authorized dealers.

In 2003 the company's corporate strategy shifted towards a focus on sustainable development driven by a desire to change the thinking about design and manufacturing. Teknion continues to receive recognition by winning prestigious awards predominately for new product design and innovation.

CEO/Interviewee Background

David Feldberg, President and CEO

David Feldberg has been President and Chief Executive Officer of Teknion Corporation since 1994. Mr. Feldberg began his professional career at a prominent Toronto law firm after graduating from Osgoode Hall Law School. In 1984, he joined the Global Group of Companies, a family owned business, and was instrumental in its rapid growth internationally. In 1993, he assumed responsibility for Teknion, an affiliate of Global, and he has overseen its major expansion and growth. He remains Vice Chairman of the Global Group of Companies.

Mr. Feldberg is also the founder and controlling shareholder of Stratus Vineyards located in the heart of Niagara wine country in the historic town of Niagara-on-the-Lake, Ontario, Canada. The winery was established in 2000 and opened to the public in 2005. The winery was the first building in Canada to earn LEED® certification from the Canada Green Building Council and it was the world's first LEED®-certified winemaking facility, referring to production areas, cellar, hospitality center and offices.

Interview Summary

The operations and strategies of Teknion reflect the shift towards a creative and knowledge-based economy and the aesthetizisation of everyday life. Teknion produces on a project basis in order to meet the individual needs of the customer in terms of flexible workspaces, open floor plans that foster collaboration among workers and a growing emphasis on wellness and ergonomics in the workplace.

Moreover, interior design by itself has become a key element for corporations and organizations worldwide to represent their culture and brand in the marketplace. Initially using design was a philosophy for Teknion but it quickly became a competitive advantage and enabled the company to globally compete with much larger, more established U.S. competitors such as Steelcase, Herman Miller, and Knoll. The company's organization is lean, flexible and vertically integrated to be efficient and able to quickly respond to customer needs and general changes in the workplace and in demographics.

Specific Examples

o. Long-Term & Short Term

- Not being bound by quarterly results enables Teknion to take short-term risks and think long term.
 - We're very flexible, lean, owner-operated, so we can have a long-term view of life without a quarter-to-quarter distraction like some of our competitors have.
- Investing during recessionary times.

 In recessionary times it would be easy to forget that you've got to keep investing ...

 I always thought that if you didn't keep investing in design, that when you came out of a recession you'd be further behind ... It's probably more important to invest in the lean times than it is in the good times. So we've maintained that type of investment all the way through and continue to enhance it. We think it's kept us in the game and allowed us to grow and be successful

1. Disruptive

- The focus on design enabled a small Canadian manufacturer to grow into a global player.
 [T]o become a leader in our market without being encumbered by history.
- Integration of design into process has enhanced global competitiveness. We feel that we can be as good as anyone, there's no reason why the design here or a company here can't be competitive on a world scale. I think design is a way to help you compete on a worldwide level. We're not trying to be the lowest cost provider in each market or try to have the most inventory. But having good quality designs and a good image for design consistently across everything that you do creates a market for your company and for your products.
- There is an emphasis on being innovative.

 We're always coming up with new ideas and new products, new categories.

 We keep moving the ball.
- [There is a] commitment to good design, aesthetics and function.

2. Embedded

- The industrial design team (14 people, 13 in Ontario, 1 in Quebec) works closely with engineers, marketing and finance staff in a *concurrent process* involving all disciplines at every stage.
- Design is a process.

Having a good design philosophy and well-designed products is consistent with everything that we do, whether it's our showrooms or literature, or our internal or external communications. There has to be a consistency and integrity. It is not just a pretty product.

3. Intensely Focused

- Customer orientation means leveraging existing knowledge and expertise and continuously learning about the contemporary world.

 We believe that we're a knowledge-based type of company, trying to understand the world that we live in, in a pretty broad way. We talk to our customers a lot. We spend a lot of time listening and trying to understand what our customers are going through.
- By being flexible and innovative through design solutions.
 Our goal is to bring some intelligence to the equation, to help our clients meet their needs ... we are helping them to more forward and solve problems in today's workplace.
- Partnering with customers delivers individual solutions.
 I think we can be even more important to business going forward to be true partners with customers, figuring out the best ways to help them grow their business, to develop the culture they want, [to] develop the right services and products.
- The offer is not only tangible products but increasingly a contribution to brand building through design.

 Customers understand more now than ever that we can play a big role in helping them solve their problems and create an image for their company. We can really impact the culture of our customers. Our customers understand that and are utilizing that more, engaging us in that discussion more than in the past.

4. Owned

Close contact with CEO.

I'm quite involved, I like it. I'm not designing ... My job is to provide the support and the tools to allow it to happen ... I want to give us all the opportunities — with internal and external support — to be as good as we can be ... I'm involved in a lot of the key gates along the way ... but more the overall strategies, where we're going, how do we continue to elevate our company in the design world.

5. Tested

There is an emphasis on quality.
 [P]rice doesn't have to be the lowest, it is always in tandem with offering the best product.

6. Technology & Materials

• Innovation with fabrics and finishes is important.

The industry is really a fashion industry. When you look at fabrics, finishes and textiles, you really have to be on top of what's going on in the world.

7. Process

- Collaboration with external designers but still within a concurrent process.

 In 1996 we brought in Ernst & Young to help us develop a more robust process.

 We thought we could optimize what we were doing more effectively. So we came up with a concurrent process where, up front, all of the disciplines manufacturing, finance, marketing, design, engineering were in the game and understood ... we had different teams and gates along the way, but everyone understood the mission up front and was involved at the table throughout the critical process. That was very important. Everyone is engaged, including manufacturing.
- There is a commitment to environmental responsibility throughout the product life cycle.

 Over the past 10–12 years, we have continuously been adding elements to our
 - Over the past 10–12 years, we have continuously been adding elements to our design process. We adopted Design for the Environment, or DfE, principles in-house in 2003. With DfE our designers are considering material selection up front, right through to end-of-life, focusing on how to avoid waste. It has become embedded in everything that we do.
- Design is integrated into all operations (product development, communications and organizational development).
 [Design is] part of our DNA.
- The company is globally integrated.
 One of the other advantages that we have is that we can provide those services on a global basis. We deal with large corporate customers that have businesses all around the world ... [it] is important ... because in many cases many of those customers are growing as much or more outside of North America than they are inside North America.

8. Holistic

- Intelligent design goes beyond product and service in a systems approach and helps to create holistic solutions.

 [B]ringing good principles of design to any problem can really move the world forward in a big way. It's not just about the workplace, but how we bring water to parts of the planet or innovations that we can bring to make this world a better place. I think that design plays a really important role in that whole equation. And again, it's not just a product or a service, it's looking to find holistic solutions to problems of the world.
- There is also a commitment to Corporate Social Responsibility. Being a good corporate citizen.
- Interior Designers and Architects are an important target group as they specify office systems furniture to corporate clients.

 Two key influences in our business are designers and architects. Designers and architects specify our furniture ... we get their input along the way, which lets us know that we are on the right track. So it's a bit of [a] check and balance system.

9. Diversity

- There is an emphasis on attracting and retaining best design talent.
- Having a consistent team builds knowledge and expertise.
 We have a tremendous wealth of knowledge and expertise, not only in the central group but in each of these dedicated facilities ... it's filing and storage or electrical wiring, harnessing and wiring, cabling, or ergonomic accessories, veneer custom-type solutions, so there really is tremendous knowledge and expertise in each of those areas which helps us overall.
- International collaborations also drive innovation in design.

 We are fortunate to work with B&B Italia, a world leader in design ... The beauty of that relationship is that we are bringing those great designs here in a way that I think will allow them to be commercially successful. We are tapping into an unbelievable group of designers and have access to designers that we otherwise might not have access to because they only work with a couple of companies.

Umbra



Company Profile

Umbra is an owner operated company and leading international designer and manufacturer of modern, original, and casual housewares. The Canadian company creates innovative and affordable products and accessories for the home decor and gifting market.

Umbra was founded in 1979. Umbra's head office and design studio are located in Toronto, whereas the manufacturing facilities are located predominantly in China, but also in the U.S.—Canada border region of Buffalo and Fort Erie. From early on the company pursued an export strategy and has a customer base in North America, Europe and increasingly Asia. Products are distributed and sold through a worldwide network of mass merchandisers, specialty retailers and high-end boutiques such as museum stores, and also online. In 2007 Umbra opened its first retail concept store in downtown Toronto.

From its first product, a window shade, Umbra's product portfolio has successively expanded and now included wall décor, hooks and shelving, closet organization, drapery, bath accessories, kitchen items, frames and albums, jewelry storage, cans, office and study accessories and lately also furniture.

The Garbo, a swing-top trash can designed by Karim Rashid in 1995, was the first Umbra product to achieve mass-market success. It has become a signature product and won many awards. The early prototype was acquired for the design collection at the Museum of Modern Art (MoMA) in New York. Umbra has achieved ISO 14000 status for its ethical and environmental standards in its manufacturing facilities in China.

CEO/Interviewee Background

Les Mandelbaum, President and Co-Founder

Les Mandelbaum — Les Mandelbaum was born in Toronto, Canada in 1951. He attended Antioch College in Ohio, majoring in music and sociology. Eventually he moved to Boston to pursue a career in music, a hobby he continues to enjoy today. In 1976 Mr. Mandelbaum returned to Toronto and started Trans-Canada Hardware (TCH), a company that supplied parts for the construction of heavy-duty custom "road" cases and speaker cabinet protection used by rock musicians on road tours. In 1979 Mr. Mandelbaum and his childhood friend Paul Rowan turned the solution to a rather simple dilemma into an innovative and imaginative product and unexpectedly created one of North America's most successful home accessories and housewares design and manufacturing companies. Unable to find an acceptable alternative to the mundane selection of window shades then available, Mr. Rowan created his own on printed paper and approached Mr. Mandelbaum with the new product. The two discovered that there was enough positive response from the design community at their very first display at the National Housewares Association Show (now the International Housewares Association Show) back in 1981, and from Canadian retailers, to create a new company. "Umbra", derived from the Latin word for shade or shadow, was born.²

Adapted from http://www.schulich.yorku.ca/SSB-Extra/connect2008.nsf/docs/Biography+-++Les+Mandelbaum

Paul Rowan, Vice President Inspiration and Co-Founder

Paul Rowan — Mr. Rowan has managed the Umbra design team for 30 years translating developing design trends into practical and useful products. Born and raised in Toronto, Canada, he graduated from George Brown College in 1974 with a degree in Graphic Design. Mr. Rowan is a design pioneer in the housewares industry with numerous awards including his MESH can at the San Francisco MOMA.

We are always trying to explore new materials and technology. When the needs of people are researched and successfully realized, this becomes what we call good design, says Rowan. Using this philosophy, he has created numerous successful designs, as well as managed diverse internal and external design teams. In the last few years, he has turned his attention to fostering design education in Canada and around the world. The design challenges he has sponsored in Canada and the USA have produced over \$60 million in retail sales. Both students and design institutions share in the royalties of these products.³

Interview Summary

In separate and joint interviews, Mr. Mandelbaum and Mr. Rowan discussed the history of Umbra and how they use and focus on design. They provided many great examples of the various factors that create a business success based on design. They really focused on how they have embedded design within the entire organization and how design is their absolute critical success factor. But, they temper that result with understanding that they are effectively in a commodity business and that design can be the way to differentiate their products.

Specific Examples

o. Long-Term & Short Term

- Although Umbra sells product in museum stores and other high-end, high-design retail outlets, the goal is to *democratize design* and create commodity products but with design.
- Umbra generally has 25% turnover in its product line (1000 SKUs and 1000 private label products). This is 500 new products per year.
- [Mandelbaum] [W]e're in a very competitive business in a very insecure world. We've been through a couple of recessions and I wanted to keep it inside. We've worked very hard to reinvest in the company and make sure that we didn't have any debt exposure outside shareholders. The only people who own the company are insiders. There is no debt and this building we own. The warehouses in the states we own, the store downtown we own. We're buffered somewhat. We can take chances and are comfortable; outsiders may not share that vision. That's by design as well.
- [Mandelbaum] You can't build a brand and develop a product on quarterly results. It makes you do things that are [for] short-term profit, not necessarily long term. It doesn't work for this kind of business model. It's ok for other business models.

³ Adapted from http://www.umbra.com/designer_detailed.store?id=62

1. Disruptive

- Umbra's basic business model is to sell household products at the same "commodity" price as generic items but to offer better design.
- Design is Umbra's global competitive advantage.
- Good design has become the norm.
- [Mandelbaum] [T]here's no sense [in] becoming a commodity manufacturer because how do you compete? And even if you compete you have to figure out some way to do it really cheaper or you just want to work cheaper ... it's kind of a race to the bottom. But design can give you that extra edge, extra profitability. You're not just competing on the lowest common denominator. The other issue is culture. Competitively that's something Western cultures can still offer. We don't have the cheapest labour, cheapest infrastructure, that sort of thing ... so we're losing all of the basic manufacturing.
- [Mandelbaum] The advantage of having unique products is that you can sell all over the world. You bring differentiation to your competitors. Our number one corporate goal is to build a global brand in the home area. In multi-category I don't think it's been done at all. It's been done for one or two, but for as many [products] as we're attempting, it hasn't been done. What we're attempting is global.
- [Rowan] My focus has been to continuously improve the quality of the design department. One of the ways we do that is to foster our relationship with design schools across Canada and around the world. It's important that we have an international outlook to meld with our Canadian style.
- [Rowan] [W]e realized pretty quickly that Canada is too small a market to support a niche product. Adding the U.S. to our marketing efforts gave us the sales volume we needed to be viable. Being export-minded changed everything for us because it raised the bar on the design and quality of our product. We had to compete with international design. We had to compete on quality. When we started shipping to the Japanese, quality expectations ratcheted up even more. The reverse was happening in America. Many American manufacturers didn't bother to market internationally because they have a domestic market of 250 million. This omission cost the big three car companies when the Japanese, the Germans and others flooded the U.S. with a global design-style automobile. We are not the only Canadian design company that has benefited from the necessity of creating an international market.
- [Rowan] The funny thing is, when we first started design wasn't our focus. Our product design was driven by our own personal needs. Later on we realized that the thing that really differentiated us from others was our focus on design.
- [Rowan] Now businesses are waking up to the fact that they can use design as a competitive tool. But it's not a competitive tool if it's not embraced in a holistic way. They have a dotted line to design, but it doesn't mean that the work is going to be great. As I said, the entrepreneurs that are willing to support design have to be the agents for design within those businesses.

2. Embedded

- Umbra has a "design studio" and not a "design department". Everyone is engaged in design. The design studio is physically located at the centre of the head office building.
- [Rowan] I would say now, more than ever, there is evidence of the importance of design to our economy. When you look at the success of the most valuable brand in the world today, Apple, it's obvious that without design that company would be just another computer manufacturer. Design drives everything they do. Their product design, packaging, stores, and advertising. In the beginning only early adopters used Apple products and they almost failed because there were so few of them. Now this massive company has proved that the world does embrace design.
- [Paul] Now people have come to expect quality and design from everything they purchase. You can buy a great vehicle today for under \$20,000. Maybe it's a Kia—designed by a German and manufactured in Korea with high-quality materials—the ultimate in material optimization in vehicle design. Consumers enjoy the physicality of getting into a well-designed car. They see design everywhere. Of course they've always seen it in architecture and now they see it at home in their Dyson vacuum cleaner.
- [Paul] Design is at the center of our business model. It can be the driver for every innovation in every different department, it doesn't matter what you do. Services, the way someone greets a customer at the door, the environment that we invite our customers into, our booth at the tradeshow.

3. Intensely Focused

- Design is their brand and is what brings them value.
- They must be *relentless* about focusing on the details. The margins are so tight.
- [Mandelbaum] Applying industrial thinking with aesthetics to everyday objects allowed a little company with no financing out of Toronto to make a global impact. An example of that impact is, I think we're the only trash can in the permanent collection in the Museum of Modern Art. A local Toronto designer/company. How can you do that except through design and innovation?
- [Mandelbaum] You have to be relentless with details. It's all in the details ... People ask me what my job is here and I say I'm the #1 person who picks paper clips up off the floor, and notices trash in the bathrooms, and thinks about big global strategies.

4. Owned

• [Mandelbaum] There isn't a product that goes out to the marketplace that I don't approve. There isn't a name of a product I don't approve. I interview everybody. I care about the salt that goes out in the parking lot. I'm very annoying in that way. But I'm also thinking about big stuff. The middle stuff, lots of people think about it; the packaging, accounting, shipment ... but I find things that get missed are the smallest details that matter to consumers, and the really big things. I find that really good leaders are detailed and annoying when it comes to that.

- Success comes from:
 - Understanding the technology (materials, manufacturing) at an international level
 - Knowing the market (retailers are Umbra's customers) and your place in it
 - Quality of designers and diversity of designers
- [Mandelbaum] [T]he competitive edge is innovation and design. Early on, when Paul came up with the first product ... it was a window shade. This was a product supplied all over the world adequately by companies, but not in an interesting way. Certainly not in a way that spoke to the new culture, I guess. We wanted our own places, our own environment that was different than the way our parents lived and our attitude was different. We wanted modern and casual. The manufacturers at that point were not delivering that type of product. So without thinking about it, we were creating a business opportunity through design. But at the time, we were thinking oh this need isn't being addressed and there's an opportunity for us to get into big business with minimal investment. And then we realized we could apply this to other commodity products ... that people would pay a little bit more for something with personality, some innovation, a different aesthetic.

5. Tested

- Pretty much all design is done in Toronto. Manufacturing is at company-owned facilities in China and in Ontario. The highest quality standards are maintained in the process.
- [Mandelbaum] You have to be relentless with details. It's all about the details.

6. Technology & Materials

- They focus on understanding materials and the manufacturing process. The design process cannot add any more than 10% (ideally they want to add nothing) to the cost of a competitive commodity product.
- [Mandelbaum] [I]nnovation in materials [is] as important as innovation in aesthetics and design. And it's a combination of science and technology and design that the West is very good at, and [this] gives [us] that edge.
- [Mandelbaum] Plastics was a great opportunity. The fact that you could apply malleable shapes without any cost ... certainly in industrial materials that are available there have been great advancements, but nowhere greater than in polymers and plastics ... And the strength and weight of plastic is driven by one of the biggest sectors which is automotive, so our company and many of our competitors look to automotive suppliers and materials and apply them to home accessories.
- [Mandelbaum] [I]n the Steve Jobs book, it talks about how he pushed for new glass for the iPad, and pushed for better materials. Obviously he had the vision and the strength to do that.
- [Rowan] [T]echnology: Our people are in the field researching materials and manufacturing methods. Often technology is the driver for innovative product, so we immerse ourselves in technology. We go to every technologically-based trade show. We look at the material shows. We attend every consumer product show trade show in the world, so we know virtually every single consumer

product on the market. This kind of total immersion is what it takes to continuously innovate.

7. Process

- Manufacturing quality is built in by design. A manufacturing problem is a design problem and not a problem at the plant.
- [Rowan] Market Awareness: This leads into the second driver which is: knowing the market = we have unbelievable relationships with our customers. I really give credit to Les and his sales team for having a long-term view of our relationships with people. Because successful design is nothing without having a way of deploying it to these people. They're the ones putting the product on their shelves. They are our face to the consumer. So we have an incredible relationship with market leaders and it's not that we follow the market, we're really aware of what's happening in the market so we can find our niche. We know how to be competitive, how to differentiate ourselves and what we're not going to do. So I really encourage designers to really do a lot of research ... not just in the museum design stores, but what's happening in Walmart? Consumers are finding it necessary to shop at Walmart because of the low prices, how could we add value in those areas? Why not? Why shouldn't good design be available to everybody? And what are the opportunities when you go to see something at a mass merchant? I encourage designers not only to see the high end, but the low end, too. That way they have a complete market understanding.

8. Holistic

- Design encompasses the entire process from ideation to development to manufacturing to delivery to the consumer's use.
- [Rowan] It's up to management to get everyone inside to embrace the fact that design is really going to make a difference to the company. That philosophy embraces more than design in the product: it's about how we operate, how we treat people, our environment and even how we engage with our customers—always taking the high-road in terms of our integrity. These are things that have to be wrapped up in the idea of "whole design".
- Saleability of a product requires six key factors:
 - Manufacturing
 - Sustainability
 - Innovation
 - Quality Functionality
 - · Brand and Brand Image
 - · A "whole brain" approach to product development
- [Rowan] I think for me, you always assume that industrial designers will be well educated in the function and the form of the product, and that's their silo. Well, that's not enough. I think you should be holistic about the way you design products.

9. Diverse

- [Rowan] Canadian style now is defined as a very international style. Canada's diversity helps to create internationally successful designs.
- Searching the world for top talent getting the right people with the right skills and mindset is critical to success. The company recruits from the Greater Toronto Area, across Ontario and Canada, in the U.S and around the world.
- [Rowan] Moe is one of our Japanese industrial designers. She grew up in Tokyo. She went to design school in Scandinavia. Then she picked Toronto as her career destination. Why? Because Toronto is known as a great design center and a fabulous place to live. Sun Park is from Korea. He won the President's Medal from OCAD and also won the Audi/Umbra design competition. He's been working here for 2 years and creates beautiful products. Our newest designer has moved from France to work at Umbra.
- Being in Toronto helps Umbra with designer and other worker attraction. Toronto's amenities as well as its design focus are important.
- [Rowan] We expect our designers to really make a difference to really change the way we think about business and design. Being well educated is the cost of entry of course, but we pay attention to the diversity of our studio. They have helped create an international flavour to our products. Finally I would say, we want them to make a personal design statement. They get a design brief and from there we want them to come up with their own personal solutions how they would use that product at home share it with friends and family. I challenge them, I say 'Pretend you're showing this design to your rich uncle so you can borrow \$50,000 to get it off the ground. Is this the design that you would use?' Often they turn around and walk out of the office. This is the challenge. Every design should be the one you want to launch your own career with. Not just something to put in the pipeline.

Other

• The value created by Umbra is in Business-to-business (B2B) not Business-to-consumer (B2C). Umbra is known by industry leaders in the retail space.