



SHAPING CANADA'S FUTURE

BY DESIGN

ARCHITECTURE

INDUSTRIAL DESIGN

COMMUNICATIONS DESIGN

INTERIOR DESIGN

LANDSCAPE ARCHITECTURE

EXECUTIVE SUMMARY



SHAPING CANADA'S FUTURE

BY DESIGN

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The Design Sector Steering Committee

Sponsored by:

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EXECUTIVE SUMMARY

The National Design Alliance (NDA) is a cross-Canada consortium of design promotion organizations and national design professional associations for the industrial design, interior design, landscape architecture, graphic design and fashion design sub-sectors, in total representing 11 design sector organizations and approximately 5,000 individual members of the design disciplines who are members of their national professional associations. Membership in the design promotion organizations also includes business users of design services and suppliers to the design sector.

The term “design promotion organizations” denotes the primary activity of these multidisciplinary bodies; design professional associations are also active in promoting the services of their respective design disciplines.

A voluntary organization, the NDA’s mission is:

- to strengthen Canada’s design sector and its related infrastructure, including design organizations, their programs and linkages;
- to encourage the effective use of design by Canadian business and the public sector;
- to increase the Canadian design sector’s visibility at home and in world markets and the reputation of Canadian-designed products and services;
- to raise awareness and understanding of the design sector and its contribution to economic, social and cultural development.

NDA member organizations include:

Association of Canadian Industrial Designers
Canadian Society of Landscape Architects
Design British Columbia
Design in Business Nova Scotia
Design Exchange
Designlink
(formerly the Design Division — Canadian Apparel Federation)
Society of Graphic Designers of Canada
Group for Design in Business
Institute of Design Montréal
Interior Designers of Canada
Liaison Design
Forum Design Montréal

The NDA’s member organizations are active in the areas of design promotion and advocacy, trade development, the provision of services to the design sector and to business, applied design research, and professional development of the design disciplines.

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The Royal Architectural Institute of Canada (RAIC) is a voluntary national organization founded in 1907, whose 3,300 members are individual architects representing all regions of the country. The RAIC’s mission is to advance the cause of Architecture and its practice in Canada as well as to provide the national framework for the development and sharing of architectural excellence.

The RAIC’s unique role is to act as a national forum, bringing together leading work in the field of architecture and architectural practice for critique and debate, recognition of excellence, and documentation as a basis for shared learning by the broader architectural community. The Institute’s programs express a commitment to the professional growth of RAIC members and to ensuring a vibrant place for architecture in Canadian society. Addressing issues of design, building technology, and practice, activities are developed in five areas: publications, symposia & exhibitions, research, awards and practice.

The RAIC partners with the provincial architectural associations and ten Schools of Architecture on the National Practice Program, established in 1995, whose principal objectives are (1) to create a unified, national voice for Canadian architects, and (2) to provide valuable, tangible programs of continuing education directed at architects and interns.

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P R E F A C E

A whole is more than the sum of its parts...

One of the less tangible but no less important outcomes of this national study is the synergy that has developed among the industrial designers, communications designers, interior designers, landscape architects and architects that worked together on the project, few of whom had met prior to its initiation.

This report is all about building bridges: among the disciplines; internationally; with other professions implicated in the design process; with educational institutions; with design managers in industry; with the ultimate end-users of design; with government and the general public. The words “team”, “alliance” and “partnership” echoed frequently in meetings held throughout the study process.

It is also about finding our own model to effect change. The emerging pattern of national design associations that work in collaboration with affiliated regional design groups, and of private sector-driven institutions that work in partnership with governments in the development of strategies for design promotion, reveal an evolving Canadian model for development of the design sector that is in many ways unique and worth cultivating.

Ultimately, this report is about action. The global performance of Canadian products, services, communications and environments can be strengthened by good design. Design expertise can be enhanced by a forward-looking human resources strategy for the sector.

New ways of conceptualizing solutions is the essence of design — the insights and the energy that came from this multidisciplinary design team created a collective spark that will ignite change, fueled in the months to come by strategic implementation of this report’s recommendations — a strategy for the future, BY DESIGN.

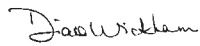
ACKNOWLEDGEMENTS

This report reflects the cumulative efforts of many people too numerous to thank individually. Without the generous support of Human Resources Development Canada and the unflagging energy and enthusiasm of department staff responsible for the project, the study would not have been undertaken and could not have been successfully completed.

A chorus of thanks are also due to the forty-some design professionals and educators who, in their role as members of the Design Sector Study Steering Committee, have contributed literally hundreds of hours over a period spanning more than two years in meetings, in researching material and in reviewing the many draft chapters and reports that have emerged in the process. Their efforts accrue to the sector as a whole.

Thanks are also owed to Price Waterhouse Management Consultants project team for a report that clearly sets out the challenges and opportunities ahead, an assignment made difficult by the virtual lack of existing sector data on which to base their research. Their task was facilitated by the hundreds of firms, organizations and individuals, within Canada and internationally, who provided generously of their time in contributing to the report through interviews, participation in discussion groups and workshops, and survey responses.

The result is the first comprehensive study of the design sector in Canada to be undertaken at a national level. We urge you to read the report, comment on it and, above all, act on it!


National Design Alliance


Design in Business Nova Scotia


Institute of Design Montréal


Association of Canadian Industrial Designers


Design Exchange


Interior Designers of Canada


Canadian Society of Landscape Architects


Designlink


Liaison Design


Design British Columbia


Society of Graphic Designers of Canada


Royal Architectural Institute of Canada


Group for Design in Business


Forum Design Montréal

CONTENTS

VISION STATEMENT

The Vision Statement is situated ten years into the future, at a time when several initiatives have become well-established while others are yet in their developmental stages. This chapter focuses on where design will be in the year 2006.	9
THE FUTURE OF DESIGN IN CANADA.....	9
FAST-FORWARD TO THE YEAR 2006.....	10
DESIGN IN 2006: 14 BASIC TENETS.....	11
Design Utilization in 2006 — Tenets 1-4.....	11
Design Education in 2006 — Tenets 5-11.....	12
Policy and Legislation in 2006 — Tenets 12-14.....	13

SUMMARY REPORT

This chapter provides highlights of the detailed findings contained in the main document, focusing on the opportunities and means available to the design sector for providing its clients with added value.....	15
CURRENT CONTEXT.....	15
KEY CONSIDERATIONS.....	16
RECOMMENDED ACTIONS.....	22
For Stimulating Design Utilization.....	22
For Design Education and Continuous Learning.....	23
For Policy and Legislation.....	26
For Managing and Developing Design Firms.....	27
IMPLEMENTING CHANGE.....	29
APPENDIX A — WORKING GROUPS.....	31

Footnotes and Photo Acknowledgements appear on page 30.

*Design is a huge deal not because it
makes things beautiful or garners awards,
but because in our rapidly changing, customization-oriented,
service-added, software-added, intangibles-oriented
business environment, design is a critical focus
for knowing what a product is, what a customer is,
and what an organization is.*

Tom Peters, "The Design Challenge"



VISION STATEMENT

THE FUTURE OF DESIGN IN CANADA

The recommendations contained in this report provide direction for renewed prosperity and growth in Canada's design sector. However, such a realignment will come neither automatically nor easily as a number of interdependent prerequisites must be met to achieve this end.

Internally, the design community must foster the growth of sector-specific skills to satisfy the needs of its evolving immediate clientele, as well as those of the ultimate users of its designs.

Externally, it must acquire the means to communicate the power of design to those outside the design community.

In keeping with these goals, the design sector's Vision Statement is situated ten years into the future, at a time when several initiatives have, it is hoped, become well-established, while others are yet in their developmental stages.

While a decade may seem long, a concerted effort — beginning today — is required of all those who value design and creativity in order to ensure that the stated objectives of this vision are met in the next ten years.



FAST-FORWARD TO THE YEAR 2006

Canada's designers played a major role in the process by building a strong and vibrant design sector, recognized both at home and abroad for its innovative and efficient expertise.

In the last decade, Canada's business community has succeeded in harnessing ideas and knowledge to effectively reach and open new markets for Canadian goods and services.

The result has been a surge in high-skilled jobs and a newfound level of business confidence. A broader appreciation and demand for design excellence

throughout the country has provided the catalyst for this economic transformation: Canada has become a design-conscious society.

Canada's designers played a major role in the process by building a strong and vibrant design sector, recognized both at home and abroad for its innovative and efficient expertise.

Ultimately, the celebration of creativity and design excellence has become part of Canada's culture. Five key factors have been responsible for this change:

- **Strategic Positioning:**

Designers understand the corporate culture in which their clients operate and comprehend the factors essential to attaining their goals. As a result, the role of design is an integral part of their clients' strategic decision-making process.

- **Educational Involvement:**

In conjunction with the educational sector, designers have been instrumental in developing more responsive and relevant design education programs. Designers collaborate with faculty and business on applied design research projects. Designers have assisted school boards in the process of incorporating principles of design appreciation in their curricula. Hands-on demonstrations are made possible through resource-designers and designers-in-residence programs.

- **Promotional Exposure:**

Designers play an active role in promoting design. This is accomplished primarily by writing articles for newspapers and magazines, as well as through their participation in community development and government lobbying activities.

- **Professional Dedication:**

Designers support on-going professional development. As a result, more design firms are better managed; technology is strategically deployed in the development of design business; more designers are working in international markets.

- **Sectoral Commitment:**

Designers are committed to creating and building stronger professional organizations. This esprit-de-corps has enabled associations to up-date and dispense member-oriented information, services and research results.

Working together, the many practitioners and educators in the design community of the year 2006 have built a successful design sector through their concerted actions in the following spheres of activity:

- *design utilization;*
- *design education and continuous learning; and*
- *policy and legislation.*

In each of these spheres, a number of basic tenets have oriented the evolution of the sector, providing the necessary guidelines for *developing and managing design firms* in the year 2006 and beyond.



DESIGN IN 2006: 14 BASIC TENETS

Design Utilization in 2006 — Tenets 1-4

- 1 Design is a key criterion in corporate purchasing and strategic decision-making.

The central role of design in transforming concepts and technologies into marketable products is well understood, not only by manufacturers but also by Canada's large service sector, including the retail and information-technology businesses of the year 2006.

In the past decade, this design-based, holistic approach to the creation, marketing, communication and retailing of products and brands has provided a significant competitive edge for Canadian firms.

- 2 Design excellence has played a key role in building domestic market share and new export markets for Canadian firms.

Recent Canadian-based research has clearly established the relatively low cost and high return on investment attributable to effective design. This evidence has convinced Canada's business sector of 2006 to continuously hone its competitive advantage through more astute innovation and design planning.

- 3 Canadian designers enjoy worldwide demand for their innovative solutions and their sensitivity to local cultures and environments.

The Canadian design sector of 2006 has actively endorsed and promoted a "Canadian design sensibility", defined as the ability to understand and respond sensitively to local cultural, environmental and economic needs around the globe. As a result of this inter-continental adaptability, Canadian designers play central roles in international consortia involved in the planning of new cities, environmental treatment facilities and multi-use buildings.

- 4 Financing for design and innovation activities is readily available.

Throughout the past decade, designers have convincingly demonstrated to the financial community the increased returns which can accrue from innovation-based investment strategies. As a result, financial and venture capital institutions have developed new instruments for capitalizing knowledge-based growth, facilitating the market introduction of innovative products and services by entrepreneurial businesses and designers.





Design Education in 2006 — Tenets 5-11

- 5** Design schools have significantly modified their curricula to reflect new demands for business management and collaborative teaching input.

While traditional design studio work still holds a preponderate role in design school curricula, there has been an increasing focus on cross-disciplinary teaching, multidisciplinary team work, and the acquisition of project and business management skills. The design schools of 2006 work closely with the faculties of engineering, commerce and administration, as well as other academic departments to create co-operative opportunities for students.

- 6** Business schools include design management courses in their undergraduate commerce and administration curricula.

A substantial number of management schools have integrated courses in strategic design planning and the management of innovation and design processes into their core curricula, including collaborative ventures with design and engineering departments. Additionally, executive-level courses in the strategic use of design have proven to be highly-marketable to the business community as well as to practising designers, and have become central to the executive education curricula of many universities in the year 2006.

- 7** Graduate courses in design and Canadian-based applied design research are well-established at a number of Canadian universities.

The expanded role of design in major organizations and in key managerial functions has spawned new graduate and post-graduate design research programs in 2006. Universities and other institutes now provide new program options which contribute to the advancement of the design sector knowledge base.

- 8** Effective bridges have been built between the educators and practitioners of design disciplines.

More frequent and meaningful consultation between educators and practitioners has fostered co-operative programs, internships and a sounder understanding of one another's needs, culminating in more relevant curricula, integrated training methods and field experience in design firms for students.

- 9** The professional design associations are the active hubs of timely activities geared to the evolving needs of their membership.

The increased prosperity and interest of their members has enabled professional design associations to develop effective professional development and technological training programs, as well as to sponsor trade and research projects promoting the value-added benefits of design in their respective sectors.

Additionally, by 2006 these design associations have become effective providers of information on the running of small businesses, enabling designers to maintain high standards of management practice.

As a result, a greater proportion of design firms have successfully established their business credentials in the year 2006.

- 10** Design organizations have established effective networking and promotion programs.

The multidisciplinary design promotion organizations of the year 2006 have forged strong links with one another and with other relevant para-sectoral agencies, both nationally and internationally.

This inter-continental network has become vital for the dissemination of information on the many design promotion and education activities.



11 Courses on design and creative problem solving have been entrenched in the curricula of numerous primary and secondary schools.

Many school boards across the country have recognized the practical and multidisciplinary benefits of design-oriented learning. Working with universities, design organizations and other professional groups

over the past decade, these school boards have now developed the educational research base and teaching aids required to effectively dispense introductory design-based course material nationwide.

With strong links forged among Canada's business and design groups, governments now include design organizations on a regular basis as collaborators in their program and policy development activities.



Policy and Legislation in 2006 — Tenets 12-14

12 Design is a fundamental component of research and development.

Design is now recognized as a cornerstone of business development and research. R&D tax credits, research grants and government policies, similar to the support available to science and engineering initiatives, provide breakthrough product development incentives for both designers and producers of goods and services across the country.

13 Government procurement programs lead by example.

Acknowledging the relatively low cost and high return of effective design, by 2006 various levels of government have implemented design and innovation-oriented procurement criteria.

As a result, Canadian suppliers strive to produce increasingly creative and exportable solutions, while giving public agencies the opportunity to purchase Canadian-made goods and services which demonstrate cost-effective, leading-edge, performance standards.

14 International trade promotion embodies innovative Canadian design.

Spearheaded by the initiatives of the sector's professional and multidisciplinary design associations, Canada's trade promotion activities now reflect the country's design capabilities and culture.

With strong links forged among Canada's business and design groups, governments now include design organizations on a regular basis as collaborators in their program and policy development activities.

Moreover, this collaborative synergy extends to a wide range of promotional initiatives which will continue to position Canada's knowledge-based goods and services in a variety of media and venues, both at home and abroad, throughout the second millennium.



In conclusion, by the year 2006...

The foregoing fourteen tenets will have served the development and management of design firms, contributing to the formation of an internationally successful Canadian design sector which has indeed become a "full partner" in the business management process and a valuable part of the country's cultural fabric.

*Canada exists in a global economy.
More than many other countries, we depend
on export products and globalization.
Design, now, is nothing less than table stakes.
It is not even a competitive weapon.
It is the cost of entry into the global market.*

John Tyson, Vice President Corporate Design, BNR (1994)



SUMMARY REPORT

CURRENT CONTEXT

The performance of the design sector is intrinsically linked to the level and nature of a country's economic activity.

It is a symbiotic relationship: business activities present opportunities for designers; design enables the achievement of those activities.

To date the Canadian design sector has not realized its full potential as a catalyst for creating wealth. Both in Canada and abroad, an abundance of opportunities exist for designers to exercise their talents, while contributing to Canada's economic growth. Some designers have already begun to capitalize on these opportunities; others struggle to maintain their current economic position. However, ensuring that the Canadian design sector is prepared to benefit fully from existing and potential opportunities will require a concerted strategy to resolve a wide range of human resource issues.

It was this realization which impelled the National Design Alliance (NDA) to request Human Resources Development Canada (HRDC) to sponsor a sectoral human resource study of Canada's design sector.

The following Summary Report provides highlights of the detailed findings contained in the main document, focusing on the opportunities and means available to the design sector for providing its clients with added value. The report also discusses non-design skills required by design practitioners to ensure their professional and corporate viability. Finally, it presents an overview of the key human resource issues to be addressed and actions to be taken.



KEY CONSIDERATIONS

✓ Design has proven itself to be one of society's most valuable resources.

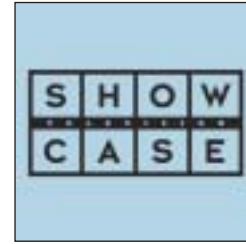
It has the power to reinvent an organization, a habitat and even a country by:

- *enhancing the market position* of a product or service;
- *improving the productivity* of an organization;
- *reducing the cost* of doing business;
- *restoring the environment*: urban or rural, commercial or residential;
- *establishing the image* of a corporation, city, or country; and
- *consolidating past and present*, history and culture.



✓ Canadian design has left its mark worldwide.

- *Bombardier Inc.'s Ski-Doo* has revolutionized transportation in Canada's North while both the *Ski-Doo* and *Sea-Doo* have revitalized recreation and leisure around the world.
- The *Actar 911* training dummy, designed by *Studio Innova*, has earned international acclaim for facilitating the teaching of CPR. Its revolutionary design is both safer to use and more cost-efficient to manufacture.
- Across North America, golfers tee-off on professional golf courses designed by *Thomas McBroom*.
- *The Arcop Group*, a Montreal firm founded in the early 50's, have set up offices in India and Pakistan where the economy is booming. Tourists and travellers from all over the world are now enjoying their stay in the Middle East in numerous hotels and resorts designed by *Arcop's* Canadian and affiliated offices.
- From Central Station in Montreal to the Louvre in Paris, *CAMDI International Design*, a Montreal design firm, creates food-courts where budget-conscious diners are treated with respect. Designing tasteful surroundings for fast-food eaters has been a successful concept for *CAMDI* which has food-court credits in Montreal, Toronto, Calgary, Edmonton and Paris and which has recently won commissions for food-court concepts in Kuwait and Brazil.
- *Grobman Inc.* of Nova Scotia, which designs and manufactures specialty knives now sold internationally, owes much of its success to its attentiveness to customers' ideas for product development.
- Store designer Michel Dubuc, chief architect of *Les Architectes Dupuis Dubuc et Associés* in Montreal, is no stranger to *Sunglass Hut's* mandates. The 600-unit eyewear company hired Dubuc to develop several prototypes in the United States and abroad.
- *Northern Telecom's* products, created by *Bell-Northern Research*, are renowned for their superior quality and innovative design. The revolutionary *Contempra* telephone was exhibited at New York's *Museum of Modern Art*.
- *Forrec Ltd.*, designer of *Canada's Wonderland* and the theme park at the *West Edmonton Mall*, is in demand to develop theme parks in the U.S. and Asia.
- In 1994, the *City of Winnipeg* was nominated by the *Globe and Mail's "Report on Business"* as one of the top five locations in Canada for conducting business. This assessment is partly attributable to the successful promotional re-packaging of the city by *Circle Design Inc.* to attract new business.



- In B.C., *MacMillan Bloedel* is using outsourced graphic design firms to market its wide range of lumber and pulp and paper products around the world. For example, *Karo Design Resources* designed the MB Paper while *Dome Advertising* developed the high tech packaging for the company's engineered wood products.
- *Zeidler Roberts Partners* have acquired an international reputation for the design of their imaginative entertainment complexes.
- Montreal newspaper *Le Devoir* and Lucie Lacava, a Montreal communications designer, jointly won an international prize from the *Society of Newspaper Design (U.S.)* for the re-design of the newspaper template in 1993.

- *Yabu Pushelburg* has designed landmark interiors worldwide, from the corporate design department at *Bell-Northern Research* and the news centre at the *South China Post News Centre*, to department stores in Asia and hotels in Europe.
- A package design developed by *Spencer Francey Peters* for a *Xanaro Technologies* software program was recognized by *Time Magazine* as the year's most outstanding package design in 1985.

Despite such great examples, design is underutilised by Canadian business. This means that there are many unrecognized opportunities for designers in the Canadian marketplace.

In fact, a multitude of other examples of the impact of design excellence exists nation-wide and has aided in establishing Canada's strong global design reputation.



✓ Design is underutilised by Canadian business.

This means that there are many unrecognized opportunities for designers in the Canadian marketplace. New markets are opening up due to changing demographics and corporate and government priorities. Expertise developed in designing for specific contexts is also exportable. For example, the needs of a fragmented population have inspired the design of specialized telecommunications and transportation devices such as the snowmobile and short-take-off-and-landing (STOL) aircraft, as well as mass-transit systems. Our extreme climate gave rise to the design of the energy-efficient R2000 housing.

Canadian designers are also developing expertise in:

- *product design* for leisure, household, communications, environmental and health-care applications;
- *system design* for new media and wayfinding activities; as well as
- *facility design* for multi-use environments such as malls, leisure and tourism installations.

These designers are now poised to capitalize on the growing worldwide demand in areas such as telecommunications, communications, entertainment, mining, plastics, retail, tourism, health care and environmental products and services.





✓ **The Canadian design sector can help its clients succeed.**

But, designers must first demonstrate the benefits and value of their services to their clients. This means correlating design effectiveness with management goals such as increased market share, customer satisfaction, productivity and profitability. In short, they must show that an investment in good design will result in tangible corporate results.



✓ **Positioning design as a corporate management priority will ensure widespread utilization of its services.**

There is a general lack of awareness of design in the Canadian business community at least partly due to the absence of design from most public and business school curricula. Therefore, designers must be proactive in promoting the advantages of design to business. To facilitate this, the sector needs to conduct research into the impact of design and to publish the results. The absence of significant documentation on the benefits of design is due to the lack of research. Because public policy support for design and design research is weak, the sector must take the lead in establishing its credentials with business.

Along with case studies and the use of other research into the benefits of design to business, designers can better position themselves with business by emphasizing three perspectives:

• **The Marketing Perspective:**

Understanding users' needs is a key factor in establishing the role of design in business. Moreover, the involvement of both intermediary clients and end-users in the design-development process is indispensable to successful design.

The emerging practice of "usability-testing" can enable designers to demonstrate the economic value of their input. As an added advantage, the procedure

Clients must be convinced that substantial improvements in business performance are possible if design is made a core management function. Conversely, this turn-around in corporate perspective can provide opportunities for designers to be "partners in the business" of managing innovation.

requires designers to team up with experts versed in such specialized complementary fields as ergonomics, psychology and new materials research to develop solutions for un-met customer needs.

In short, designers must ensure the psychological as well as the physical fit of their product, space or service to the ultimate user.

• **The Conceptual Perspective:**

Designers can assist clients in achieving strategic breakthroughs by helping redefine business perceptions regarding products and services.

Effective design is a holistic approach which focuses on the strategic application of concepts and innovation. As such, it requires designers to work closely with senior management in synchronizing the design development process with the firm's corporate culture and strategic plan. In so doing, it incorporates the concepts of user-centred, concurrent and virtual design, while requiring designers to work in multidisciplinary teams.

• **The Production Perspective:**

Designers can also provide value to their clients by rationalizing the quintessential corporate resources of time, money and people.

Efficient design wisely allocates scarce resources in response to users' needs. This is achieved by providing both qualitative and quantitative benefits



in terms of high performance products and services, produced more quickly and more economically. Here the focus is on production, as design draws on business process re-engineering in the design-development process.

In today's rapidly evolving production environments, technology is an indispensable key to delivering efficient designs.

Non-design commercial and administrative skills are required for designers to initiate and implement a business-oriented design approach. These skills must become an integral part of the educational and professional development of designers.

- ✓ It takes a balanced mix of design and administrative skills to succeed in today's complex business environment.

Canadian designers have repeatedly demonstrated that they possess the design skills for exceptionally creative work. But non-design commercial and administrative skills are also required for designers to initiate and

implement a business-oriented design approach. These skills must become an integral part of the educational and professional development of designers — in fact, a second nature to the design function.

- ✓ Business management skills are critical to the design sector for the dispensing of design services and the development of design firms.

Sound strategic business planning, marketing and decision-making skills, as well as effective resource management practices, are required to establish and manage a successful design firm. Yet rarely is management perceived by designers as a central issue of commercial success, or even survival. The ad hoc approach of many design firm owners to these activities impedes the productivity and growth of their businesses. In part, the inattention to management issues stems from the fact that essentially, the educational system for designers has ignored the worth of these skills.

This same shortfall in managerial expertise often makes it difficult for many designers to fully appreciate the management issues affecting their clients' corporate activities. In short, designers need to master basic managerial skills and internalize a number of prerequisite management principles — in their own business interests as well as those of their clients.

Major areas for consideration include:

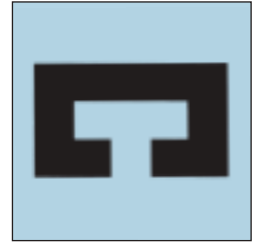
- **Awareness of the Business Environment:**

Designers need to be cognizant of their environment — how it is changing and how external factors impact the scope of their activities.

Today's designers must operate in a highly-complex, ever-changing, increasingly global business environment. Trade barriers are falling. Markets are evolving. Competition is increasing. The challenge is more pressing for designers to remain abreast of emerging technologies, changing demographics, societal preferences and market opportunities. Choices are multiplying — as are decisions to be made.

- **End-User Focus:**

Designers must be focused on the end-user's needs, making product "intelligibility" a priority: that is, designing goods, spaces and communication tools which are easily understood by their users. Simply stated, such designs should enable people to feel comfortable with a product or within a space, exemplifying the principle that "form-follows-emotion".



- **Trans-Disciplinary Flexibility:**

Designers must transcend disciplinary boundaries to work in integrated, multidisciplinary teams. User-centred and concurrent design projects require that the design-development process be performed by a team, in concerted endeavour. Designers need to value the complementary expertise each member brings to the team and the manner in which each team member can contribute to a well-integrated design-development process.

In such a context, well-honed negotiation skills and an understanding of the value of compromise take on paramount importance. (Teamwork tends to be a challenge for designers who generally have been educated to view design as a solitary process.)

Furthermore, designers need to communicate the value of design to non-designers in easily understood terms.

- **Organizational Adaptability:**

In the years to come, designers will be called upon to work in less formally structured, non-traditional arrangements, such as “virtual organizations”. To function effectively, designers will need to be able to adapt to differing types of corporate cultures and structures, and work with various team configurations.

- **Strategic Planning:**

Designers need to be able to think strategically and to view the situation from the client’s perspective. Adopting this managerial mind-set should enable them to appreciate their client’s short and long-term objectives, competitive position and pressures, and the factors critical to achieving their strategic goals.

A well-defined framework for analysis can provide designers with an effective tool for developing relevant and rewarding design solutions. The ability to listen effectively, to interpret objectively and to communicate ideas clearly are essential also for success. Here, as elsewhere, mutual understanding and reciprocal confidence form the basis of strong relationships.

- **Market-Driven Priorities:**

From a promotional standpoint, strategic selling skills are critical to demonstrating the value of design. As the focus of strategic selling is the client, the key once again is to correctly identify client needs — both organizational and personal. Positioning the role of design may involve several individuals, as a company may have any number of influential individuals impacting the corporate purchasing or decision-making process.





✔ Technology is a key facilitator for designers in the emerging business environment.

If the link between designers and their clients has been recently strengthened through communications technology, the future augers well with the advent of multi-media networks.

Telecommunications already provides access to seamless geographic markets, fostering the formation of collaborative ventures among designers and other specialized members of virtual project management teams. Interfacing with current and potential clients via enhanced network installations has generated a new breed of non-traditional work arrangements and project agreements.

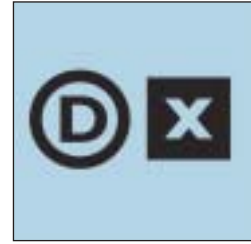
Additionally, new technologies present great potential for creating and providing innovative products and services, at lower cost. Opportunities abound and will continue to grow for designers in all technology-related disciplines, and more specifically in the evolving realms of entertainment, telecommunications, and web-site interface software, as well as in virtual reality installations for diverse consumer and industrial market applications.

Finally, technology stands to revolutionize the education and professional development of designers by facilitating access to these formative activities.

The range and rate of anticipated technological change imposes on designers the responsibility of remaining abreast of new technological capabilities. Remaining in the forefront of technology will constitute an omnipresent challenge for designers who must find the resources to continually up-date their knowledge base and explore new technological advances. In this respect, professional development opportunities can play a key role in guiding the design sector through an unrelenting technology-driven evolution.

Technology is a key facilitator for designers in the emerging business environment.

The range and rate of anticipated technological change imposes on designers the responsibility of remaining abreast of new technological capabilities.



RECOMMENDED ACTIONS

In order to optimize available opportunities within its projected vision for the year 2006, the Canadian design sector must address a number of human resource challenges as part of a well-orchestrated sectoral strategy.

Four critical areas for improvement have been identified:

- Design Utilization;
- Design Education and Continuous Learning;
- Policy and Legislation; and
- Managing and Developing Design Firms.

Overall, twelve major objectives have been identified as essential to the design sector's evolution and anticipated future contribution to organizational strategic planning and corporate decision-making. The design sector is currently in a favourable position to address these issues.

From British Columbia to Atlantic Canada, several new design promotion organizations have emerged. Their activities complement those of existing professional design bodies, serving as an integrating force in the sector, from coast to coast.

Moreover, the formation of the National Design Alliance (NDA) has provided a trans-Canada link to support promotional and professional design organizations. At an inter-disciplinary level, the Royal Architectural Institute of Canada (RAIC) and the NDA have begun to explore mechanisms for cooperation.

Now, for the first time, a national network of design organizations exists that can provide effective leadership for change.



Recommendations for Stimulating Design Utilization

The utilization of design is a market-driven, external phenomenon which obeys the forces of supply and demand. Consequently, demand for the services and products of the design sector is dependent upon the realization of the following objective:

Objective I: Develop and sustain a design-literate market.

Ample evidence exists to prove that design excellence has positively influenced the performance of a variety of organizations and the quality of life of the population in general. Yet Canadian organizations have been reluc-

tant in recognizing the role of design as a corporate asset and a key factor for competitive differentiation.

As a result, the challenge facing designers is to convince Canadian business to treat design as a core element of their business strategy. The ability to effectively demonstrate to clients the economic value of design, with managerial insight and empathy for their clients' commercial interests, will enable designers to pro-actively capitalize on emerging opportunities rather than simply struggle to survive.



In view of the above, the following measures are proposed:

➔ **Action: Orchestrate a national design promotion campaign.**

A sectoral “campaign” is proposed to create awareness and understanding of the role of design in business. National in scope to ensure consistency across Canada, it should be adaptable to allow regions and municipalities to focus on specific market niches.

The “case study” approach is recommended, featuring success stories highlighting the contribution of design to the improved performance of specific clients and the accruing benefits to their user groups.

Target audiences for case-study demonstrations of the value of design should be reached via the following intermediaries:

- trade and consumer media;
- mainstream book stores;

- government agencies;
- trade and consumer shows and exhibitions;
- touring exhibits (domestic and international); and
- business schools and universities.

Collaborative ventures with existing trade organizations, teaching institutions, museums and other public establishments would help to position the design sector’s keynote accomplishments in the eyes of both business and the public at large.

➔ **Action: Enlist “Champions of Design” spokespersons.**

The design sector needs experienced spokespersons who can demonstrate the benefits of design. The credibility of Canadian design will increase as a result.



Recommendations for Design Education and Continuous Learning

In view of improving both the quality and quantity of design education, the following objectives have been identified, impacting the design and business communities, as well as the public at large. To achieve these objectives, the following measures have been proposed:

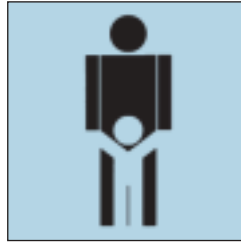
Objective 2: Enhance business management skills in designers.

➔ **Action: Include design management in design school and professional development curricula.**

If design management skills need to be understood by the business community, so are these skills required by current and future members of the design community.

In fact, the role of designers as competent external advisors to client organizations or as in-house managers of the design function is contingent upon the successful application of design management principles in the practice of their profession.

Educational institutions, on the other hand, seem to have underestimated — and in some cases ignored — the importance of business management, project management and market development skills. For this reason, these skills must be included in post-secondary design education curricula and in design-oriented professional development programs.



Objective 3: Foster design appreciation by business.

➔ **Action:** Include design management in business school and executive development curricula.

If business is unfamiliar with the design function and its potential benefits, the condition can be attributed in part to the lack of attention to design in Canadian business schools.

Responding to this situation, the design sector in Ontario has taken steps through the Design Exchange to introduce design management concepts into various university commerce and administration curricula.

Here again, design-focused case studies can provide high profile exposure for the design sector and its impact on business by:

- complementing other academic teaching methods and materials;
- providing input for business case competitions;
- inspiring inter-faculty joint projects between business and design students.

Objective 4: Cultivate design sensitivity in the upcoming generation.

➔ **Action:** Integrate design education in public school programming.

Sustaining a design-literate market goes beyond addressing the level of awareness of design among the current pool of clients. A solution is required that will also impact future potential consumers of design. The exposure of our youth to design represents an investment in awareness and appreciation of the value of design. Essentially, this initiative would prepare the market of tomorrow by cultivating a more sensitive audience to the benefits of design excellence.

Objective 5: Forge links to facilitate educational change.

➔ **Action:** Strengthen links between design education and practice.

A vibrant design community needs an integrated yet flexible system of lifelong learning.

Successful models exist both at home and abroad for establishing effective communications between design practitioners and educational institutions. Examples include various program advisory committees at the community-college level, accreditation boards in the built-environment sub-sector, and initiatives undertaken by the Faculties of Architecture at the Universities of Manitoba and British Columbia. More such collaborative alliances are required, transcending existing infrastructures to create new partnerships in design education.

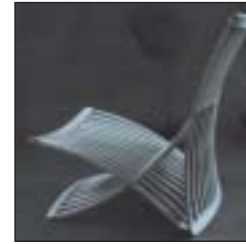
The ultimate goal is a more rigorous and fulfilling design education process which will enable Canadian designers to develop their individual competence while contributing to a growing data bank of consolidated Canadian design expertise — in both the theory and practice of design.

Objective 6: Consolidate the foundation of design education.

➔ **Action:** Refine and communicate the objectives of design education.

While numerous design programs exist in Canada, sector representatives participating in the study expressed concern regarding the relevance of many of these to the actual needs of the marketplace.

The range and variety in curricula calls into question the quality of the programs and their graduates. There is considerable debate and confusion about the roles of the various teaching institutions involved in the education of designers: universities, art schools, community colleges and Cegeps.¹



However, before post-secondary education institutions can re-configure design programs, they require a clear and conclusive definition of the prerequisites to practice, including complementary, non-design management skills.

Moreover, requirements for design technologists, educated at community colleges, should be differentiated from those for design professionals, educated at universities with a minimum 4-year program.

Programs meeting prescribed standards should be eligible for accreditation.² Accreditation standards should take into account the effectiveness of practical learning and of established program links with design practitioners.

Objective 7: Promote a multidisciplinary approach to the design-development process.

➔ **Action: Increase the extent of multidisciplinary learning in design programs.**

There is a growing need for designers to work in multidisciplinary teams, along with designers from other disciplines, as well as with specialists from other fields such as business, engineering, sociology, anthropology and psychology. Yet design education has tended to be mono-disciplinary, cultivating few links with other design faculties or non-design faculties.

Consequently, it is often difficult for practising designers to collaborate with co-workers from other design disciplines or academic backgrounds, as their entire education program has primarily favoured communication with their immediate peers. Both structural and academic programming changes are required to redress this situation.

Within the same institution, design disciplines should have formal structural ties and preferably be grouped within one faculty. Academic curricula should foster teamwork through practical, project-oriented activities which stress “working with” other design disciplines

rather than merely “learning about” them. Also, links between design and other faculties need to be made to provide interdisciplinary educational opportunities.

Objective 8: Facilitate the transition of design students to the workforce.

➔ **Action: Develop/strengthen internship programs for new graduates.**

The transition from school to work is daunting to most new graduates, with employers often expecting immediate productivity — in a “sink or swim” context.

A standardized training approach could redress this situation. By enabling employers to consolidate the learning of new graduates, it would allow the latter to quickly acquire the broad base of knowledge and skills they require to operate and progress in the corporate milieu.

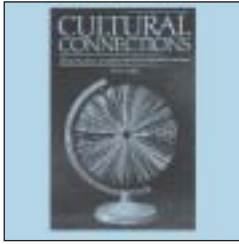
In the case of architecture, the role of mentor should be either introduced or reinforced (as required in each province), comprising part of the profession’s experience-reporting prerequisite.

Objective 9: Encourage continuous learning and research.

➔ **Action: Improve access to professional development.**

A primary means of professional development for designers consists of the hands-on research and experimentation demanded in the day-to-day practice of their profession.

However, this pragmatic approach often falls short of providing designers with timely, structured input regarding external changes which impact their work — particularly technological change. Barriers to professional development include both the actual and opportunity costs of time away from work, especially if travel to distant urban centres is involved.



Access to professional information and development could be improved in two ways:

- *multidisciplinary design-oriented initiatives* could be coordinated among design and other professional associations to achieve greater cost-effectiveness, while offering a broader spectrum of learning opportunities;
- *innovative communications technology* — including video conferencing, the Internet and design information web-sites — can bring the world to remote areas, rendering irrelevant such issues as location, travel cost and time.

➔ **Action: Document and publish the results of design research and achievement.**

Design research must be undertaken to ensure the continued collective development of the design profession and to optimize its standards of practice.

Designers must be encouraged to document the impact of their design solutions. Furthermore, the design sector needs credible, refereed journals to disseminate these research results, case histories and conference proceedings.

➔ **Action: Develop graduate university programs in design.**

Few opportunities exist in Canada for design education at the Master's and Doctoral level.

Implementation of graduate study programs would foster continuing research and the structured development of a body of Canadian design knowledge. It would also help to forge international links with other design-oriented teaching institutions and professional organizations.

Recommendations for Policy and Legislation

In view of encouraging the more widespread, long-term use of design, the design sector requires the tangible support of government agencies and departments through pertinent policy-making to attain two major goals: to create a design-supportive legislative environment and to devise a professional regulatory framework for design disciplines.

To achieve these objectives, the following measures have been proposed:

Objective 10: Create a design-supportive legislative environment.

➔ **Action: Develop consistent, relevant and progressive government policies and mechanisms to enhance design development.**

In order for government representatives to fully appreciate the value of effective design, communications in this area must be improved at and among all levels of government, possibly through the creation of a sector-specific intergovernmental network of design policy advisors.

Specific areas in which concerted government action should be undertaken include:

- **Design Research and Development Funding:**
Except in Quebec, R & D tax credits do not explicitly recognize design expenditures, nor do government agencies acknowledge design research for funding purposes.

- **Design Protection:**
Copyright legislation has not kept pace with technological advances which affect the production and distribution of designs. Moreover design protection can be difficult, expensive and onerous to obtain.



➔ **Action:** Make Canadian design an important criterion of government-sponsored competitions and commissions for the procurement of products and services.

With the exception of architecture, design per se is not an evaluation criterion in government procurement policies. Moreover, procurement policies fail to acknowledge the design-development process.

Consequently, consistent design-sensitive policy guidelines are required. Moreover, the results of competitions should be publicized to promote both Canadian designers and the organizations subscribing to the use of design expertise.

Objective 11: Devise a professional regulatory framework for design disciplines.

➔ **Action:** Evaluate the costs and benefits of professional regulation.

While all design disciplines are regulated to some extent, architecture is the only design profession to be governed by a licensing regime. While some designers

are covered by “title acts” — such as communications and industrial designers in Ontario — this is not the case in other provinces.

The primary benefits of professional regulation are the establishment, enforcement and public recognition of standards of practice. As such, professional regulation can provide the means for a design sector to develop and reinforce its identity. The design disciplines should also examine the need for protection of the public interest.

Additional benefits can accrue to regulated professions through more broad-based agreements. For example, an inter-provincial reciprocity agreement for landscape architects, similar to that currently in effect for architects, could enhance the mobility and scope of practice of landscape architects.

In some disciplines, professional certification rather than licensing may be conducive to achieving the desired status. The administrative costs and benefits associated with maintaining a professional regulatory regime should be carefully analyzed, as the operating costs of such self-governing bodies can be high.



Recommendations for Managing and Developing Design Firms

Design firms are typically small businesses, untrained in business management, operating in a “hands-on” environment which can perpetuate ineffective management practices.

This sector’s future growth depends on changing this firm culture, as reflected in the following sectoral goal and the recommended measures:

Objective 12: Increase the administrative acumen of design firms.

➔ **Action:** Establish practical business management and strategic planning guidelines for design firms.

Formal design education programs must include management training to adequately form future designers, and the design sector must help to determine the knowledge base, quality standards and learning expectations of future design graduates. Furthermore, the sector must collaborate with educational institutions and professional design associations to ensure that corporate human resource requirements are met by design-based educational curricula.



➔ **Action:** Provide domestic and international market development training for design firms.

As market development is a preoccupation of all organizations in a market-driven economy, it stands to reason that design firms require continual training in this area to remain abreast of the evolving global marketplace.

Consequently, there is a need for representatives of the design sector to identify multidisciplinary market development courses, seminars and training programs which apply or may be adapted to the design sector.

➔ **Action:** Develop administrative models and management tools for design firms.

Financial management and reporting systems, time and priority management systems, strategic planning models, and succession planning tools are but a few of the readily-available business management aids which can be adopted by or adapted to the design sector. As many of these have already been developed for related disciplines or sectors — such as architecture, engineering and the construction industry — they may be readily reconfigured to meet the needs of specific design disciplines.

Professional and promotional design organizations could be instrumental in:

- *establishing a diagnostic program* to identify key management areas for improvement;
- *organizing counselling sessions*; and
- *dispensing self-help information* regarding the implementation of various management techniques and systems.



IMPLEMENTING CHANGE

The Steering Committee for this study recognizes that many of the issues raised and conclusions reached will not come as news to designers.

The sector has been the focus of several previous studies of lesser scope at the national and provincial levels. Unfortunately, few of the recommendations contained in these earlier studies have been implemented. While there are various reasons for the resulting inaction, a key factor has traditionally been the lack of strong national sector leadership to efficiently rally the sector as a whole in support of change.

Today, the National Design Alliance (NDA) provides a cross-country link for both promotional and professional design organizations and is currently collaborating with the Royal Architectural Institute of Canada (RAIC) to explore mechanisms for long-term cooperative endeavours.

Prior to developing a national human resource strategy for the sector, these study findings and recommendations must be broadly communicated throughout the sector and its various sub-sectors. In conjunction with the study's findings and the objectives of a strategy, a thorough assessment of existing design sector activities and programs must be made and evaluated for their relevance to the study recommendations. Furthermore, the partnerships necessary for developing and implementing an effective strategy must be established.

With the study now completed, the specific objectives of this subsequent phase in the process will focus on:

- extending awareness of the study findings;
- mobilizing the sector organizations as partners in the development of an effective sector-wide implementation strategy;
- motivating sub-sector stakeholders to initiate sub-sectoral strategies;
- creating an inventory of existing programs and resources within the sector to be used to conduct a detailed assessment of study recommendations; and
- identifying resources and action priorities for collaborative implementation by sectoral groups, including professional, promotional, entrepreneurial and educational organizations.

The NDA and the RAIC have already laid the groundwork for a plan to undertake these next steps. They recognize that all designers have a role to play in the development of the sector. Anyone interested in participating in any of these initiatives is urged to contact the NDA or the RAIC for information on follow-up activities.

Prior to developing a national human resource strategy for the sector, these study findings and recommendations must be broadly communicated throughout the sector and its various sub-sectors.



Footnotes

- 1 This issue is more apparent in communications design, interior design and industrial design. In the disciplines of architecture and landscape architecture, a clear distinction exists between community college and university programs, and requirements regulating practice.
- 2 Accreditation standards exist already for educational programs in the built environment sub-sector.

Photo Acknowledgements

The Design Sector Steering Committee wishes to thank those who provided the photographic material used in this report. Best efforts have been made to balance this material by design discipline and region, within the limitations imposed by photo availability.

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