

groupe de recherche

if research group

[www.grif.umontreal.ca](http://www.grif.umontreal.ca)



established in 1976

**architecture** and project management at grif



research  
graduate studies  
consulting  
networking



architecture and the building industry  
 project management for construction projects  
 procurement and organizational design  
 post-disaster reconstruction



Since 1976 grif has studied the process-related aspects of construction projects. In this approach, the project is seen as a system interacting with a complex environment. Our most important research subjects include clarifying the role and characteristics of architecture in the building industry, project management for construction projects, information management for the building industry, procurement, organizational design and post-disaster reconstruction in developing countries.

**Organizational design and procurement**

Forming part of a long-term program of research, this work focuses on the consequences of the building owner's strategic procurement decisions on the subsequent organization and management of the building process, in terms of the participants' roles and relationships. This research includes a study of certain aspects of performance-based building, particularly for its impact on the information and communication needs of involved parties. The impact of procurement and ensuing organizational design on the scope for innovation and industrialization are particular concerns.

**Above:** User interface of the Question-and-answer system. **Below:** Post-disaster housing units in Honduras: changes from the original unit through appropriation by the occupants



**Information and communication within the building sector**

This study focused initially on the problems associated with the use of research results in practice against the backdrop of the requirements for applying innovation. The research developed into the interdisciplinary design of a system for providing convivial access to information on the Internet for the construction sector. The research - now entering the test phase - involves the development of a Question-Answer (Q.-A.) system supported by an automated web crawl system for selecting pertinent web sources. The system uses natural language (English or French) for requests for information and for providing answers accompanied by hot links to sources (the system fundamentally differs in this way from classical search systems which only provide links requiring further reading). Particular attention has been paid to the ergonomic design of a convivial interface.

**Technologies and project management for post-disaster reconstruction**

This work explores the processes of project management for post-disaster reconstruction initiatives. The research recognizes that strategic planning - that goes beyond project-specific decisions - coupled with organizational design (i.e. the design of the temporary multi-organization in charge of developing the project) are fundamental for attaining the objectives of sustainable housing reconstruction. The research is supported by case studies in Turkey, Colombia, Honduras, El Salvador and South Africa. The research findings challenge the traditional approaches to the management of post-disaster housing by demonstrating that the success of the projects does not depend uniquely on community participation (as has been widely accepted since the 1980s); the findings also demonstrate the need for accepting that project outcomes must anticipate the long-term growth of sustainable housing units.

- grif has recently obtained research grants from:**
- Laboratoires Universitaires Bell, 2000
  - Natural Sciences and Engineering Research Council of Canada, 2001
  - Social Sciences and Humanities Research Council of Canada, 2002
  - International Development Research Center, 2002 and 2006
  - Ministère de la recherche, de la sciences et de la technologie, 2002
  - Ministère du développement économique, de l'innovation et de l'exportation, 2007.

**grif maintains strong links with UdeM's programs in:**  
professional master in architecture  
master in project management (built environment)  
phd in the built environment



grif has privileged links with academic programs offered at the Faculté de l'aménagement of the Université de Montréal. The research at grif supports the Professional Masters in Architecture with its orientation in project management of architectural projects. Our research is also closely related with the Masters and the D.E.S.S (Diplôme des études supérieures) in Project Management (MGPA). Students of the PhD en aménagement (Doctorate in the built environment) interested in the research subjects studied at grif are invited to establish links with our research group.

## successful studies, successful careers...

Some examples:



< Having trained in architecture in Buenos Aires, Argentina, **Daniel Martinez-Sgur** joined the program of Masters in Project Management (MGPA) at the Faculté de l'aménagement in 2002. He works now as a successful strategic project manager for the company SNC-LAVALIN / Nexacor, one of the largest construction companies in North America.

**Martin Houle** followed the Professional Masters in Architecture, orientation MGPA. He is the founder and editor of the high quality site [Kollectif.net](http://Kollectif.net) that brings information to the members of the building industry in Quebec. He works in the prestigious Montreal-based firm of architecture MSDL.>



< After finishing a program in urban studies and a Masters in Housing, **Cassidy Johnson** joined grif to complete her PhD. Cassidy is a full time professor at the prestigious Barlett School of the University College of London.



The Faculté de l'aménagement of Université de Montréal offers undergraduate and graduate programs in Architecture, Urban Studies, Industrial Design, Landscape architecture and Interior Design.

With an average of 30 students registered per year, The Masters in Project Management for the Built Environment (MGPA) is one of the graduate programs with fastest growth in the Faculté de l'aménagement.

**Montreal is a recognized center of project management:** More than 1 percent of the world members of the prestigious Project Management Institute -PMI- are from Montreal. The Montreal Chapter of the PMI is the most important chapter in Canada and was declared Chapter of the Year in 2005 by the International PMI. The project of Quartier international de Montréal (QIM) built in 2005, was the first Canadian project to have received the important award of Project of the Year awarded by the International PMI.

**grif offers knowledge transfer to:**  
 private companies of the building industry  
 public organizations linked with the built environment  
 non governmental organizations



## 1. General consulting services offered by grif within the institutional means of the Université de Montréal:

**Project Feasibility Report:** including economic and technical feasibility.

**Bid Document Review:** reviewing of tender documents and performance specifications before being issued.

**Constructability Review:** ensuring that the project is "buildable" at a reasonable cost, within a reasonable time. It involves the review of design drawings and specifications.

**Maintainability/Lifecycle Cost Review:** ensuring that the facility will be durable and can be efficiently maintained and operated.

**Project Procurement:** advising on the appropriate procurement strategy and the organizational design to be used.

**Scope Management and Value Analysis:** challenging a project from its first principles in order to identify cost savings.

**Time, Cost and Risk Management:** assuring time efficiency, cost efficiency and reducing the negative influence of harmful risks.

**Quality Management:** quality planning and control; including the monitoring of specific project results to determine if they comply with the performance specifications.

**Communication and Information Management:** identifying ways of increasing access to information for the companies of the building industry.

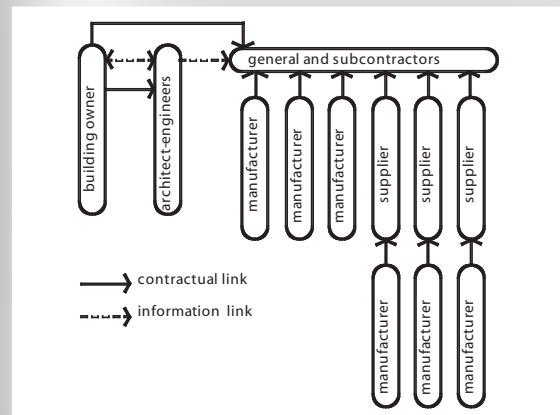
**Design Management:** advising on management of the initial contracts of the project.

**Construction Management:** advising on supply management, tendering, organizational design, security, etc.

## 2. Specific consulting services for Non Governmental Organizations: Advising on project initiation, development-oriented objectives and sustainability.

**Consulting services for post-disaster reconstruction:** including consulting on immediate sheltering, temporary housing, permanent reconstruction, community participation and sustainable development.

**Training in project management:** specific courses targeted to employees and officers of construction companies and NGOs.



grif organized in 1998 the International Symposium of Commission W92 of CIB on Procurement. In 2005, grif held an international meeting on asset management. In 2002, grif prepared the first International Conference i-Rec on information and research for reconstruction.

### Our recent invited lecturers include:

- Dr. Mark Napier (CSIR, South Africa)
- Dr. Peter Kellett (Univ. of Newcastle u. Tyne, UK)
- Dr. Dave Root (Univ. of Cape Town)
- Dr. Winston Shakantu (Univ. of Cape Town)
- Architect Sebastian Miguel
- Architect André Labelle (Decarel)
- Project Manager Pierre Alègre (Bombardier)
- Dr. Cassidy Johnson (Barlett School UCL)
- Project Manager Clément Demers
- Dr. C.J. Katsanis (Ryerson University)
- Project Manager Robert Couvrette
- Dr. Alicia Sliwinsky (Wilfrid Laurier University)

## Examples of previous consulting projects conducted by grif:

- **The thesaurus of construction and urban studies**, conducted in 1978 and 1979 for the Department of Trade and Commerce of the Government of Canada.
- **First multilingual construction thesaurus**, conducted in 1972 for the Groupe Latin, Centre scientifique et technologique du bâtiment and Department of Industry and Commerce (Government of Canada).
- **Study on the adequacy and production of low-income housing**, prepared in 1971 for the Central Mortgage and Housing Corporation of Canada.
- **Online question and answer service**, produced for Cibât in 2005.
- **Evaluation of low-cost housing projects for the municipality of Facatativa**, Colombia, 2007.



**grif keeps strong links with:**  
international universities and research groups  
scientific teams and specialized groups  
practitioners' associations



Information and research for reconstruction

grif supports i-Rec , an international network of specialist in reconstruction.



International Council for Research and Innovation in Building and Construction

Internationally, grif, in partnership with the IF Research Corporation (a non-profit organization registered in Canada in 1980), is a member of CIB.



CIB Working Commission 102

grif keeps links with various working commissions of CIB, including: CIB W102 (in information for the building industry), CIB W107 (in construction for developing countries) and TG63 (in post-disaster reconstruction).



Centre International du Bâtiment

grif is also a partner of Cibât, a non-profit organization registered in Québec in 1989.



University of Cairo

grif maintains academic relations with specialists in project management in various universities, including the University of Cairo, Egypt, the University of Cape Town in South Africa and the Development Planning Unit of The Barlett School of the University College London.



### Contact:

IF Research Group - grif  
Faculté de l'Aménagement,  
Université de Montréal  
C.P.6128, succursale centre ville  
Montréal, Québec  
H3C 3J7

Telephone: 1 (514) 343 2108  
Fax: 1 (514) 343 2455  
email: gonzalo.lizarralde@umontreal.ca

### Researchers and consultants:

**Prof. Colin Davidson**  
**Dr. Gonzalo Lizarralde**  
**Prof. Clément Demers**  
**Prof. Roger B. Richard**



Prof. Davidson was dean of the Faculté de l'aménagement of the Université de Montréal from 1975 to 1985. He teaches and conducts research in areas related to technological innovation and knowledge management. Prof. Davidson is an active member of CIB and president of Cibât – Montreal international building center. Prof. Davidson holds a master's degree from MIT.



Dr. Lizarralde is a specialist in management, implementation and evaluation of architectural projects. He has long experience of research and consulting for architecture and construction projects particularly in the field of low-cost housing. Dr. Lizarralde has taught at the University of Cape Town, McGill University, Université de Montréal and Universidad Javeriana and has lectured in universities in Europe, USA and Latin America. He has a PhD from the Université de Montréal and a post doctorate from the Department of Construction Economics and Management of the University of Cape Town.