

Microsoft® Research

Faculty Summit 2010

Guarujá, Brasil | May 12 – 14 | In collaboration with FAPESP

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Collaborating in Disaster Relief Efforts

Marcos Borges

Associate Professor

Universidade Federal do Rio de Janeiro

Context

- **A LACCIR Sponsored Project**
 - **Started August 2009**



- **Cooperation between UChile and UFRJ**



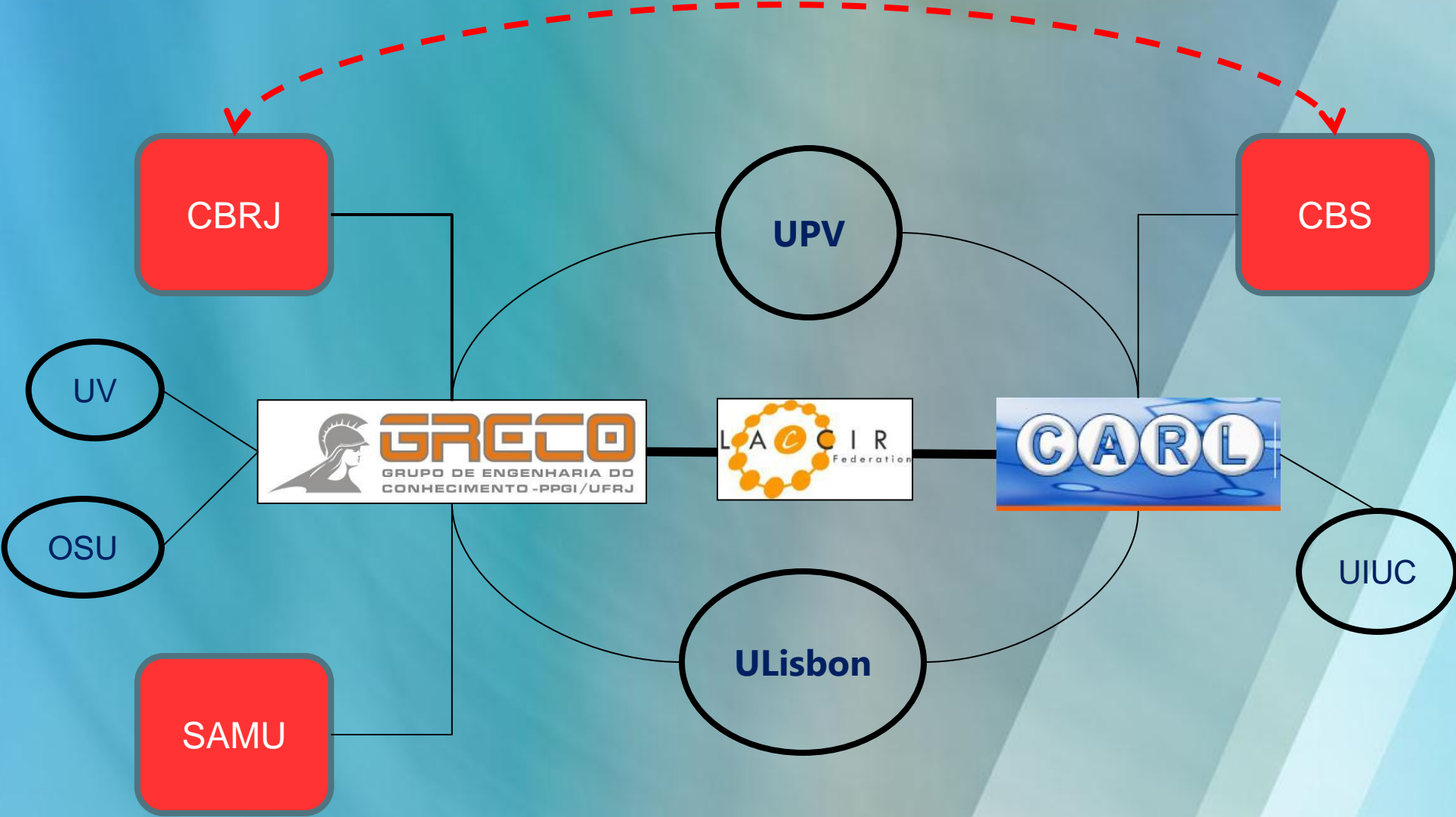
Prof. Jose A. Pino
Prof. Sergio Ochoa
Ph.D. + M.Sc. Students

Prof. Marcos Borges
Prof. Adriana Vivacqua
M.Sc. Students

- **Seed to other projects**

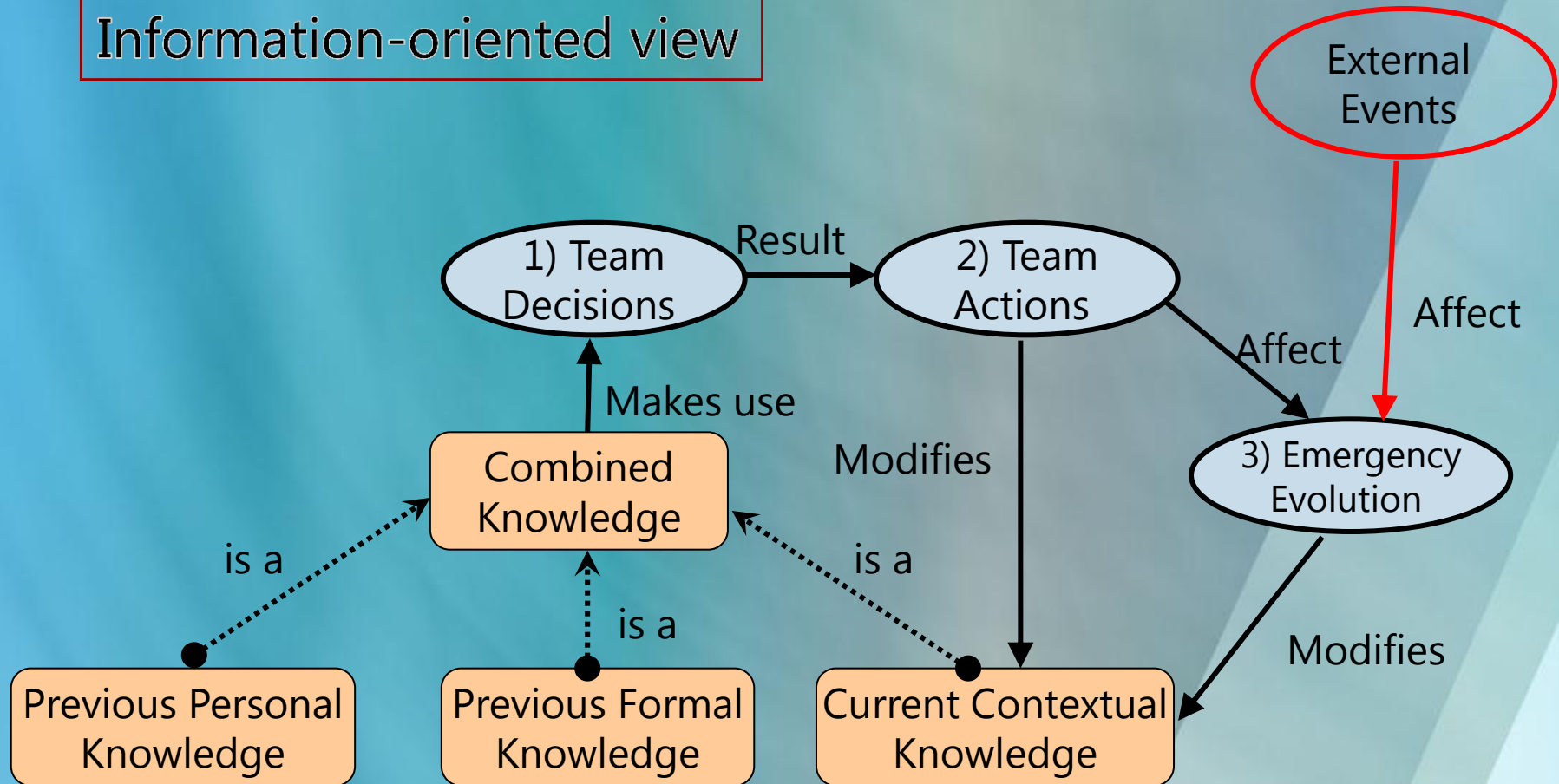


Knowledge Exchange Network



Information Model

Information-oriented view



The initial Problem

- A Real Example – Responding to an Fire Emergency



1
Getting to the event



2
Assessing the situation



3
Acting

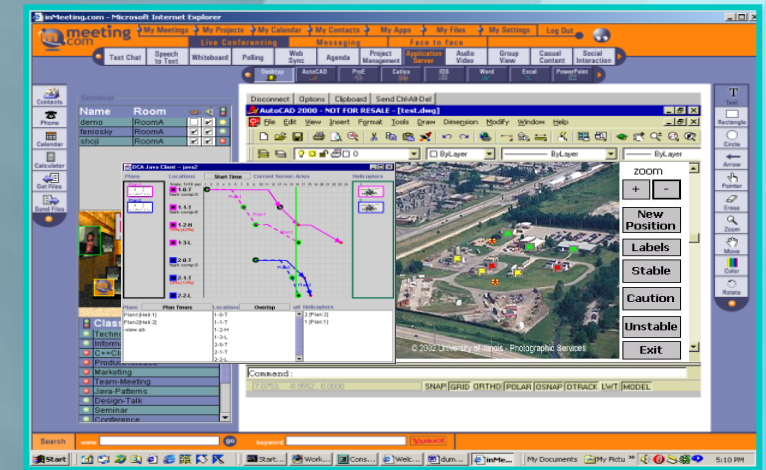
Timeline

The Project Initial Goal

Feed as quick as possible the Emergency Teams with relevant information to make the response operation more effective

- **As quick as possible**
- **Relevant (and accurate) information**
- **Effective response operation**
- **Mobile Computing**
- **Information Model**
- **Minimize losses and effort**

Providing Rich Information to First Responders



- Location
- Situation Awareness
- Orders
- Requests

Results so far

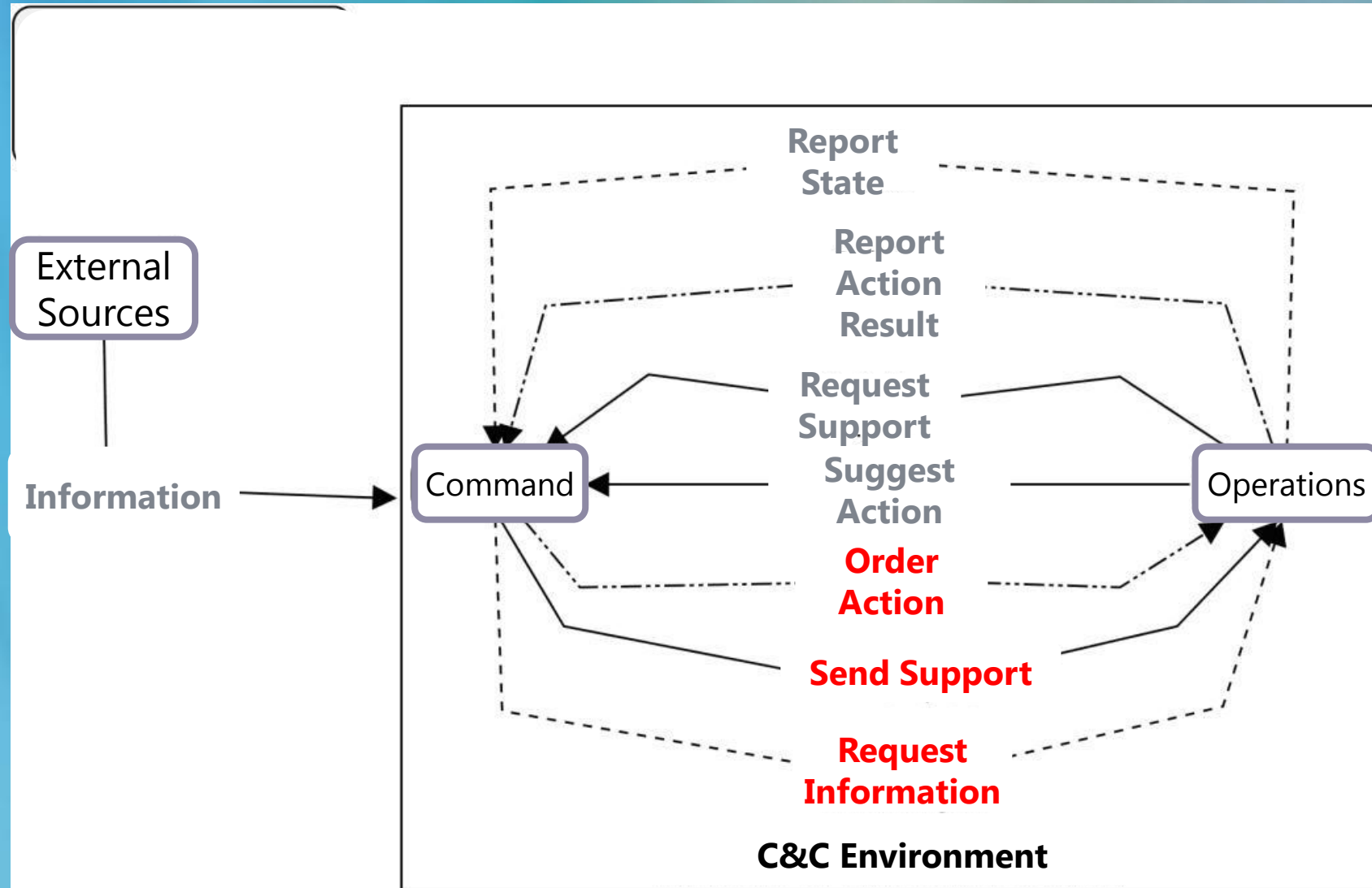
- Publications
 - See <http://anakena.dcc.uchile.cl/~mibarra/disaster/index.html>
- M.Sc. Students (3)
 - Two are Firefighters
- Proof of Concept and Prototypes
- Initial Experimentation
- Other Projects
- Lab for Emergency Response Studies

Collaborating using Mobile Devices

C&C



Communication Model (C&C and Operations)



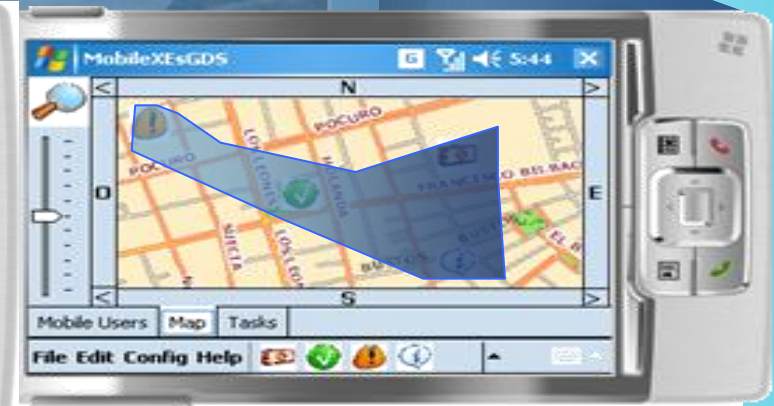
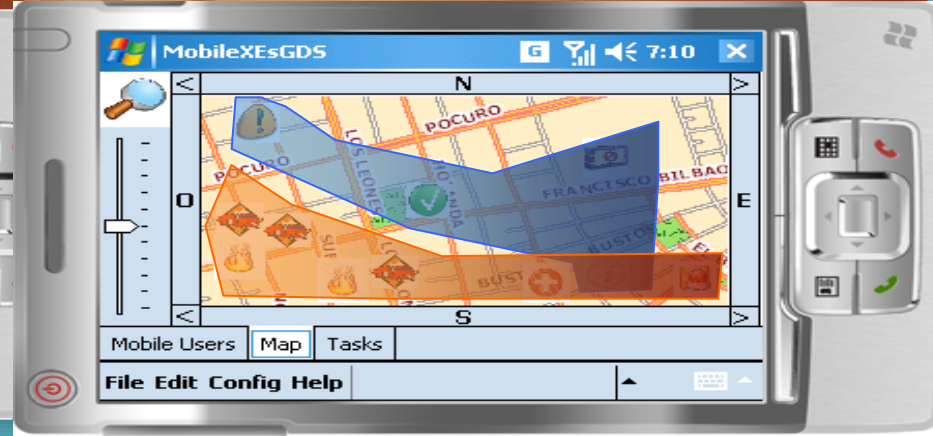
Application Example



Command Post



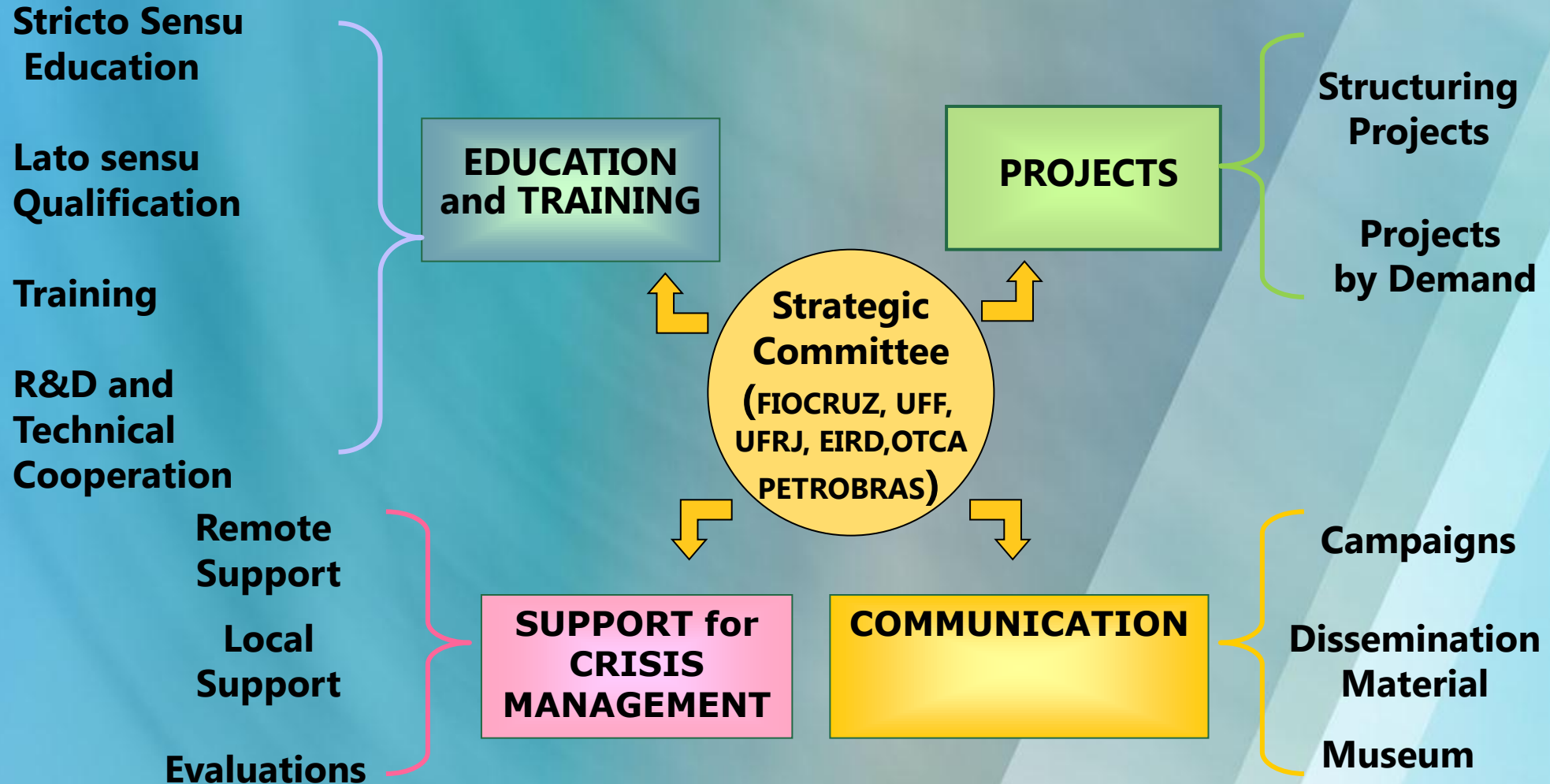
Civil Engineers



Firefighters

CEPED - RGC

CENTRE FOR STUDIES AND RESEARCH ON DISASTERS REFERENCE IN KNOWLEDGE MANAGEMENT



Conclusions

- Successful Project
 - Results (Publications, Prototypes, Experiments)
 - Visibility
 - Other Research Initiatives
- Area of Growing Interest and Importance
 - Emergency Response
 - Disasters
 - Modeling
 - Mobile Computing
- Further Development

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