



ePlanning Core

Paradigmas de Planeamento

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2008-2021

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Paradigmas de Planeamento

- Racional
- Pragmatico
- Hierarquico



Paradigmas de Planeamento

Grandes dilemas:

- Sequencial vs Interactivo
- Pragmatico vs Racional
- Hierarquico vs rede



Paradigmas de Planeamento

Como podem as TIC podem ajudar?

- Sequencial vs Interactivo
- Pragmatico vs Racional
- Hierarquico vs rede



Paradigmas de Planeamento

Como podem as TIC podem ajudar?

- Sequencial vs Interactivo - maior versatilidade das actuais ferramentas TIC para interacção em tempo real
- Pragmatico vs Racional - maior capacidade e amplitude das actuais ferramentas TIC para simulação de "what-if-scenarios" e "forecast models"
- Hierarquico vs rede - maior adequação das actuais ferramentas TIC para comunicação em rede



- **Empowerment Dimensions**

- economy, market "equalizing"
- inclusion, cohesion

Even simple tools can have significant impact"

What about sophisticated tools?



- **Empowerment Dimensions**
- **citizen empowerment tools**
Example: *urban digital tools*

Simulation models in decision-making

Example:

Trade-off models (Bertaud Model)

Support systems public participation in decision-making

Example:

Public Consultation in Environmental Impact Assessments



- **Empowerment Dimensions**

-- space allocation, housing for low-income

Urban Planning Process troubles:

Project
layout
variables

Infrastructure
Design
Standards

Financial
Variables



• Bertaud Model (World Bank)

Project layout variables:

$$\begin{array}{lcl} \text{Number of households} & & 10\,000 - \text{circulation space/ha(m}^2\text{)} - \text{open space/ha(m}^2\text{)} \\ \text{per hectare} & = & \text{plot size(m}^2\text{)} + \text{additional space per plot for community facilities} \end{array}$$

(link variable: gross residential density)

Design standards and unit costs:

$$\begin{array}{lcl} \text{Capital affordable per} & & \text{Cost of land and infrastructure per hectare} \\ \text{household} & = & \text{No. of households per hectare (density)} + \text{On-plot development costs} \\ & & \text{(superstructure)} \end{array}$$

(links: capital affordable per household, gross residential density [persons/hectare])

Financial variables:

$$\begin{array}{lcl} \text{Capital affordable per} & & \text{Monthly payment} \\ \text{household} & = & \text{Capital recovery factor} + \text{Down payment} \end{array}$$

(link variable: capital affordable per household)



- **let's not forget what power is**

- Decisions
- Means to enforce decisions
- Ability to sustain decisions
- Institutions for such purpose



Problems in EIA and Role of Information Technologies:

1. Transmitting and accumulating experience

- Metadata
- Multimedia Knowledge Base
- Expert Systems
- Rule-based models
- Case-based models, with FAQ ("Frequently Asked Questions")

2. Integrating multi-disciplinary and multi-organism processes

- Virtual office
- Multiple-domain Knowledge Representation
- Shared inference engine

3. Satisfying a wide range of audiences

- Hypermedia reports
- Multi-level information trails

4. Limitations of current "Fora" for dialog and interactive analysis

- "Blackboard" vs. "Star" process
- Network (WWW) based tools



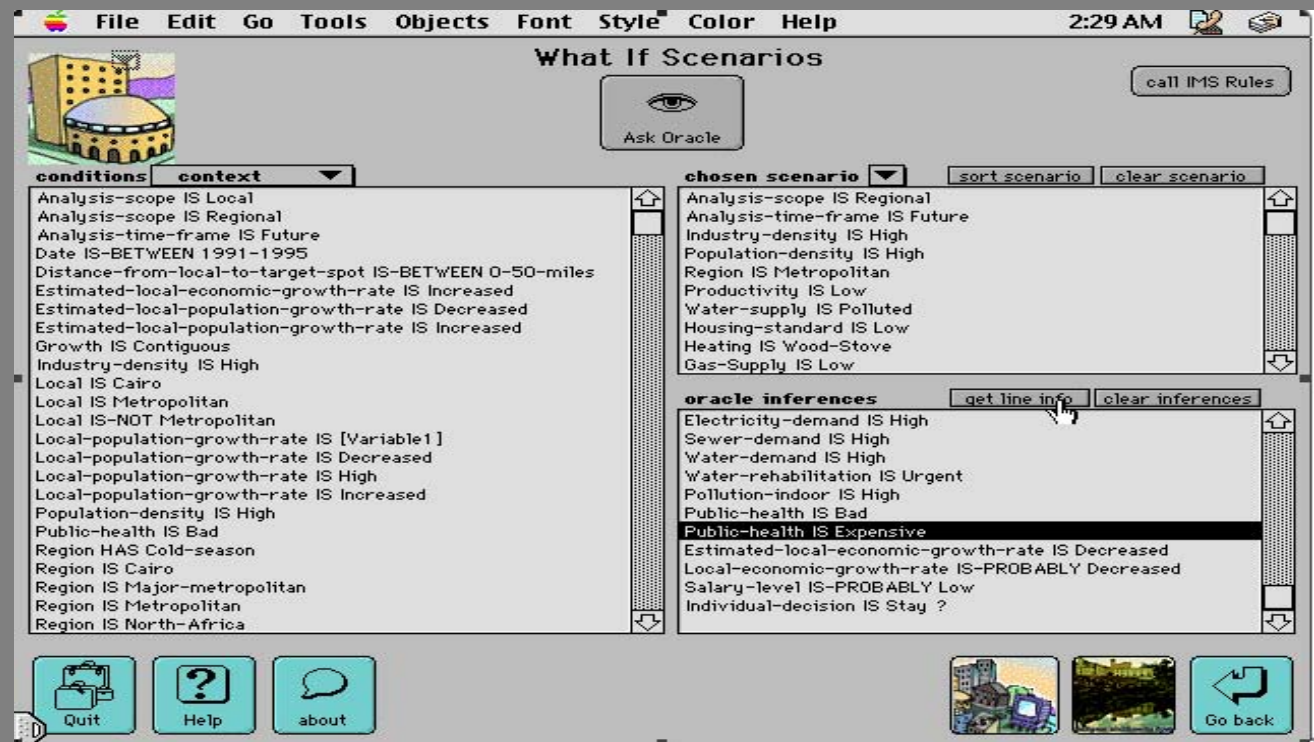
• Project IMS



www.citidep.net/ims/

Collaborative multimedia system for urban solid waste

- Project IMS (Intelligent Multimedia System)
- *Expert Multimedia Knowledge Base* in support of Public Participation in Environmental Impact Assessment





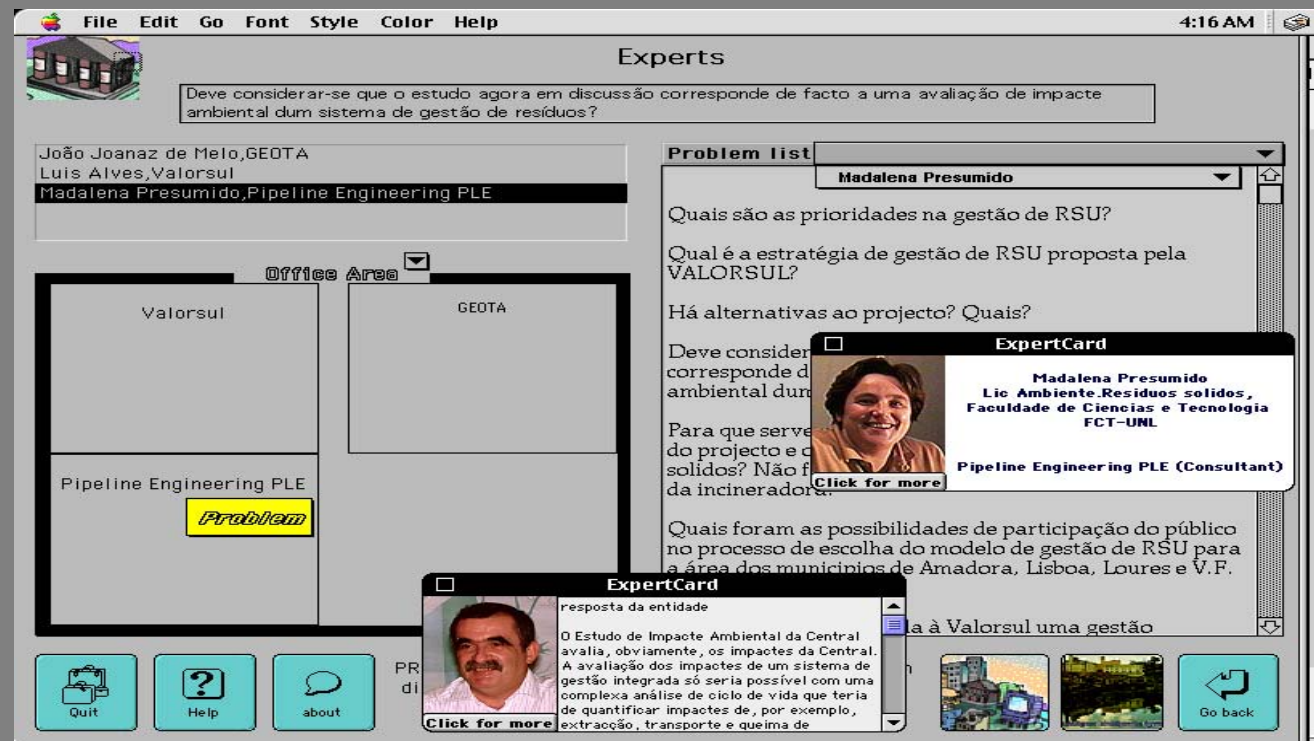
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Collaborative multimedia system for urban solid waste

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• Project IMS



Table 5.13.4.-1 - Knowledge Test grade results

	Environmental students Average grade	Psychology students Average grade	GRADE GAP Environmental - Psychology
Before using IMS	39.2	28.2	11
After using IMS	43.7	35.7	8
GRADE JUMP	4.5	7.5	

In (Ferraz de Abreu) , 2002 "New Information Technologies in Public Participation: A Challenge to Old Decision-making Institutional Frameworks"



www.e-planning.org

www.labtec-ts.net

www.citidep.net

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