

# IBM ILOG Introduction

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**Jeremy Sirour** - [jeremy.sirour@fr.ibm.com](mailto:jeremy.sirour@fr.ibm.com)  
IT Architect, ILOG Specialist  
Business Solution Center  
La Gaude, France

**Manuel Genard** - [genard@fr.ibm.com](mailto:genard@fr.ibm.com)  
IT Architect, BAO Technical Leader  
Business Solution Center  
La Gaude, France

# Agenda

Introduction

Business Rule Management System

Break

Optimization & Supply Chain Management

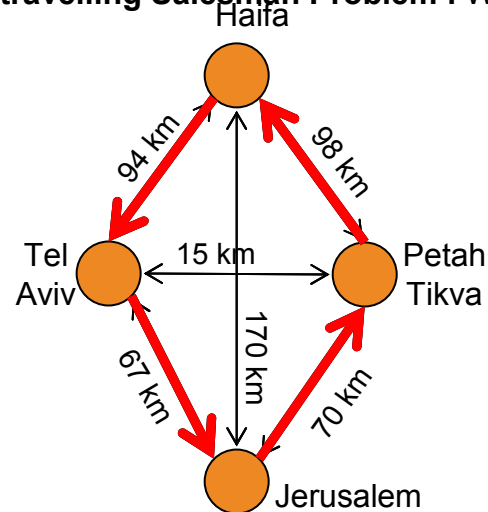
Visualization

# It all started with Operational Research...

**operational research**, is an interdisciplinary branch of applied mathematics and formal science that uses advanced analytical methods such as mathematical modeling, statistical analysis, and mathematical optimization **to arrive at optimal or near-optimal solutions to complex decision-making problems**. It is often concerned with determining the **maximum** (of profit, performance, or yield) or **minimum** (of loss, risk, or cost) of some real-world objective.

## example

**travelling Salesman Problem** : What is the shortest road to visit each cities ?



4 cities : 3 possibilities

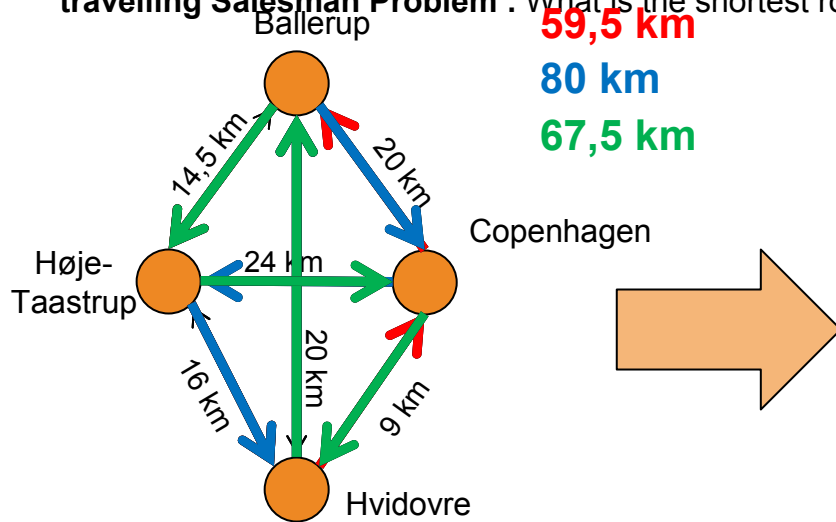
Number of cities	Number of possibilities	Time to solve
5	12	12 $\mu$ s
10	181 440	0,18 ms
15	43 589 145 600	12 hours
20	$60 \times 10^{15}$	1928 years
25	$310 \times 10^{21}$	9,8 billion years

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example

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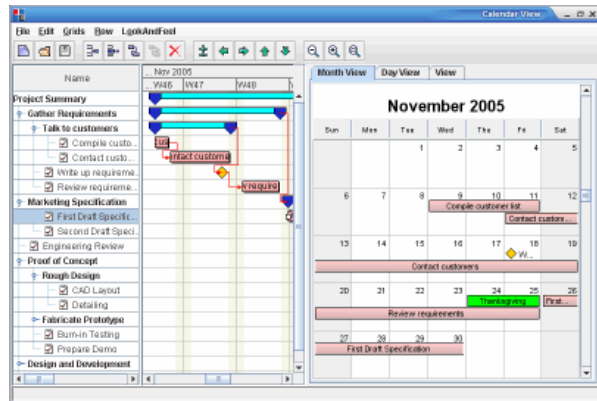
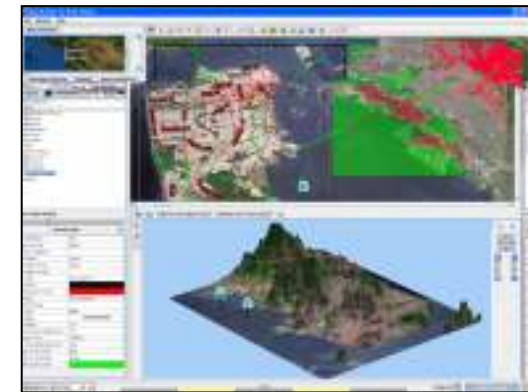
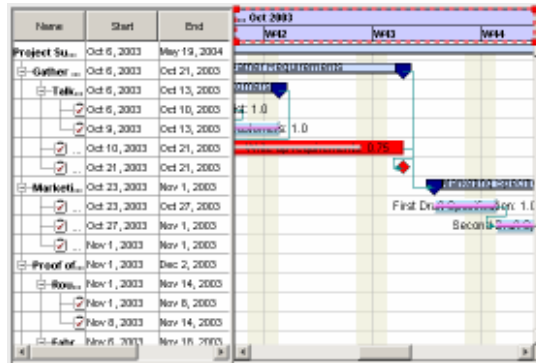
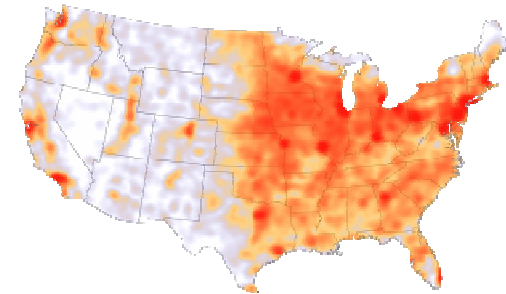




# ILOG Visualization

Helping clients visualizing their decisions

... or these ?

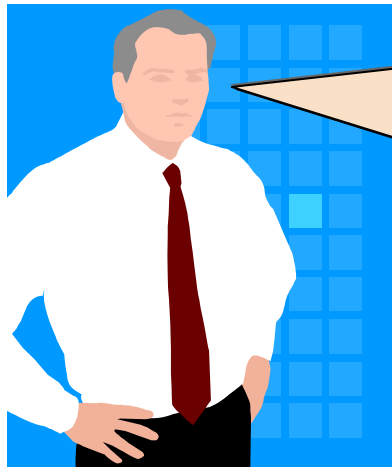


## Innovative Visualization Tools

*Transform insight into action, enhancing collaboration for smarter role-based business decisions*

# ILOG Supply Chain Management

Helping Supply Chain clients making the best decisions



ILOG Optimization and ILOG Visualization are great together but these tools are generic.

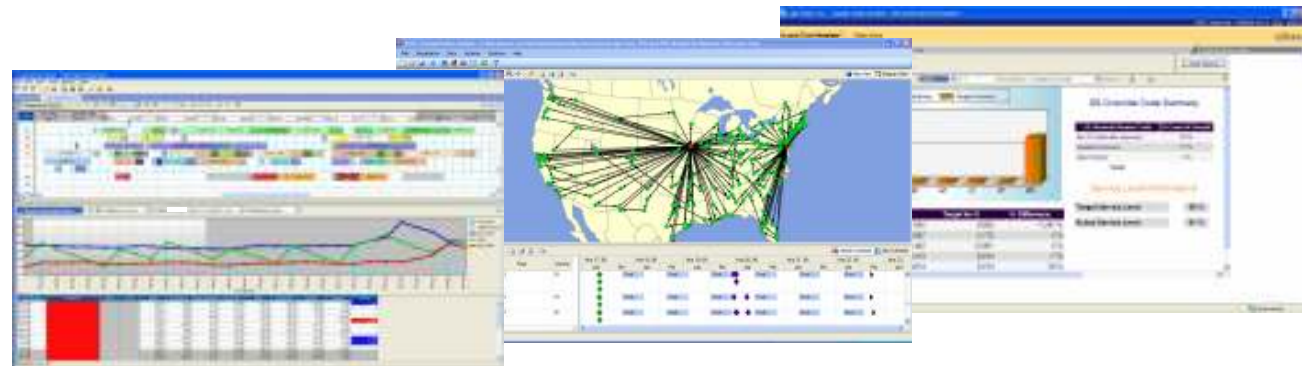
I am responsible for the supply chain management in my company, do you have pre packaged solutions that would lower cost of consulting, development and integration ?

I have needs for :

- ✓ Network Design and Planning
- ✓ Inventory Optimization
- ✓ Transportation Planning
- ✓ Production Planning
- ✓ Detailed Scheduling

## Efficient Supply Chain Management

*Optimize supply chains, design & planning tools for improved efficiency and productivity*

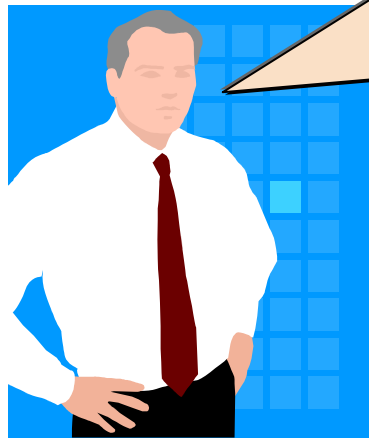


# ILOG Business Rules Management System

Helping clients managing business decisions

## Powerful Business Rule Management System

*Adapt and respond dynamically, automating process-based decisions with business rule management*



⇒ “We want to create a special promotion for our best customers, starting next month, can you do that ?”

⇒ “My customer is wondering why we propose a high insurance rate. Can the system tell us why ?”

⇒ “Well... we must setup a team for this development. We also need to test the entire system to ensure no regression. This will take a minimum of 6 months”

⇒ “Well it’s pretty hard to read traces... I will check the code myself to know which rules we are applying.”



# ILOG Business Rules Management System

Helping clients managing business decisions

## Powerful Business Rule Management System

*Adapt and respond dynamically, automating process-based decisions with business rule management*



I need a system that would :

- ⇒ Eliminate decision silos
- ⇒ Make decision logic accessible to Business **and** IT
- ⇒ Allow business users to manage rules
- ⇒ Implement fine-grained, context-specific decision automation
- ⇒ Reduce maintenance time/cost

# ILOG : 4 Lines of Business

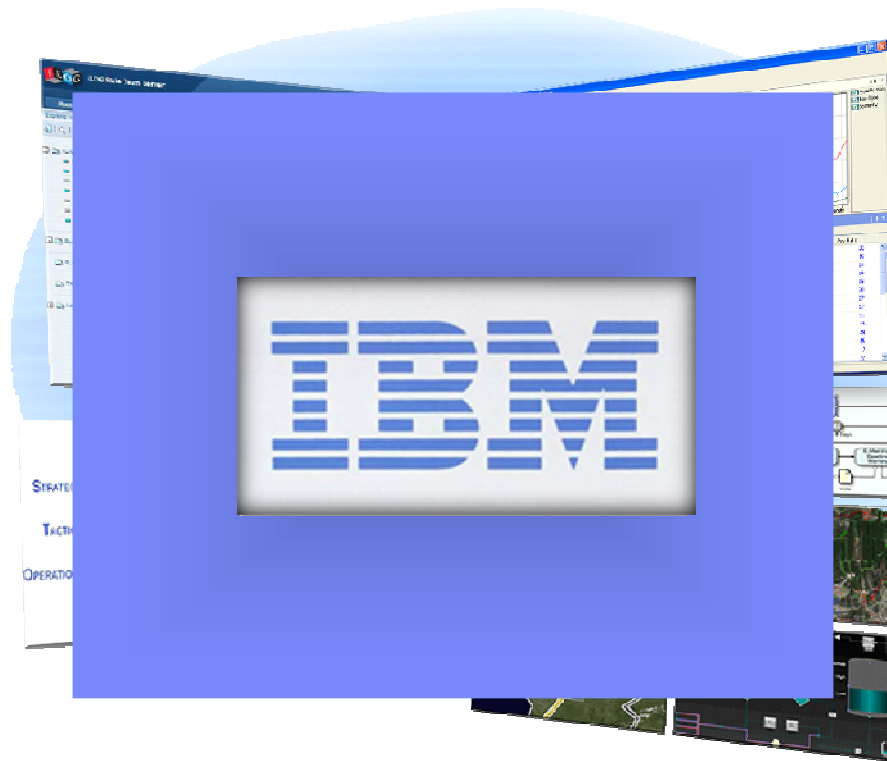
Helping clients making smarter decisions

## Powerful Business Rule Management System

*Adapt and respond dynamically, automating process-based decisions with business rule management*

## Efficient Supply Chain Management

*Optimize supply chains, design & planning tools for improved efficiency and productivity*



## Advanced Suite of Optimization Tools

*Produce the best possible action plans & schedules, enhancing abilities to explore alternatives, understand trade-offs, and respond to changes in business operations*

## Innovative Visualization Tools

*Transform insight into action, enhancing collaboration for smarter role-based business decisions*

# Agenda

- Introduction to Business Rule Management System (BRMS)
- IBM WebSphere ILOG Jrules Solution
- Architecture
- Components

