

A Serious Game for Learning  
Enterprise Resource Planning Concepts

HEC MONTRÉAL  
ERP SIMULATION GAME

powered by ERPsim

# ERPsim Academic Version 2011-12

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*Director, ERPsim Lab*

Jean-Francois Michon

*Operation Manager, ERPsim Lab*

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Gilbert BABIN  
Robert PELLERIN  
Bret WAGNER

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ERP Simulation Game

Version : August 2011

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ERPsim  HEC MONTRÉAL  
<http://ersim.hec.ca>

# About PML

Dr Pierre-Majorique Léger is an associate professor in information technologies at HEC Montréal, Director of the ERPsim Lab and Co-Director of Tech<sup>3</sup>Lab.

He holds a Ph.D. in Industrial Engineering from École Polytechnique de Montréal and has done post-doctoral studies in Information Technologies at HEC Montréal and NYU Stern.

He is one of the primary inventors of ERPsim, a simulation game used to teach ERP concepts, which is now used in more than 150 universities worldwide, and many Fortune 1000 organizations such as SAP, ABB, Conoco Philips and Deloitte.

His current research focuses on NeuroIS.



# About Jean-Francois Michon

Jean-Francois currently holds the position of ERPsim Lab Operations Manager. He is responsible for supporting faculty members using ERPsim, developing our internal processes and our external activities, managing the support team and contributing to product development. Jean-Francois holds a Master's Degree in Administration (E-Commerce) from Université de Sherbrooke and a Bachelor's Degree in Administration (Information Technology) from HEC Montréal.



# About ERPsim Lab

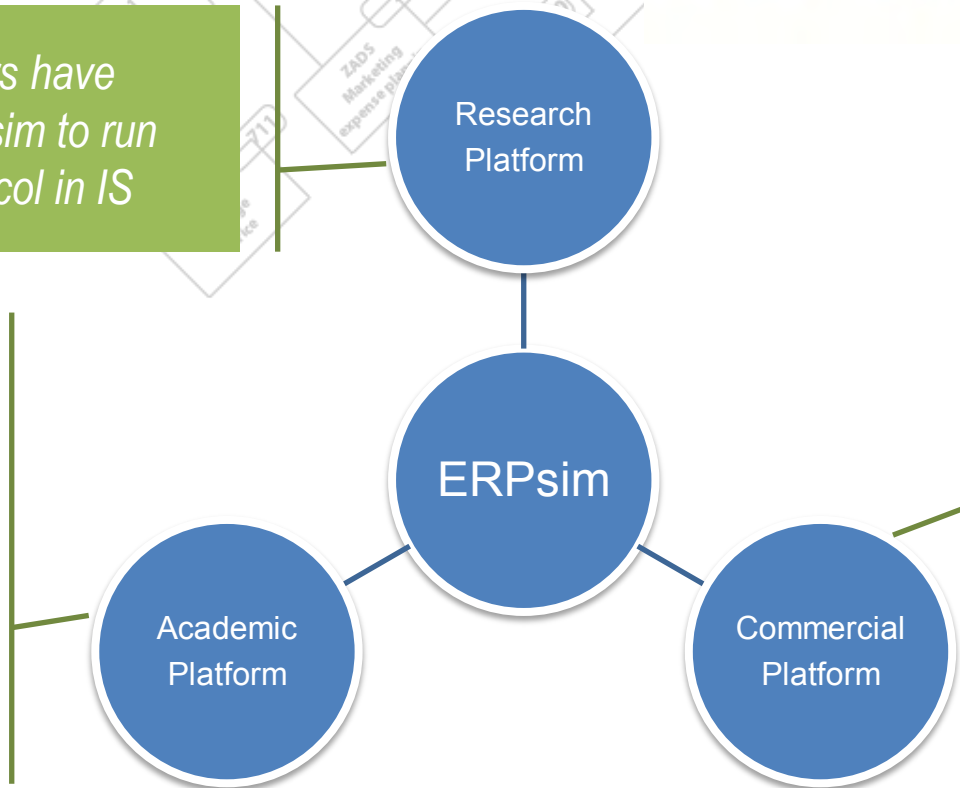
ERPsim Lab's mission is to conduct research, develop new products and bring innovation to the field of IT simulation games.

# ERPsim @lab

*Several researchers have started using ERPsim to run experimental protocol in IS*

*More than 160 universities worldwide are using ERPsim to teach ERP concepts to over 8000 students annually*

*Many large organisations such as Deloitte, SAP, Coca Cola and Crayola, are using ERPsim to train their end-users on ERP systems*



# ERPsim Lab: Our Team

- Research Team

- Prof. Pierre-Majorique LÉGER, Ph.D., Director ERPsim Lab (HEC Montréal)
- Prof. Gilbert BABIN, Ph.D. (HEC Montréal)
- Prof. Jacques ROBERT, Ph.D. (HEC Montréal)
- Prof. Robert PELLERIN, Ph.D. (École Polytechnique de Montréal)
- Prof. Bret WAGNER, Ph.D. (Western Michigan University)

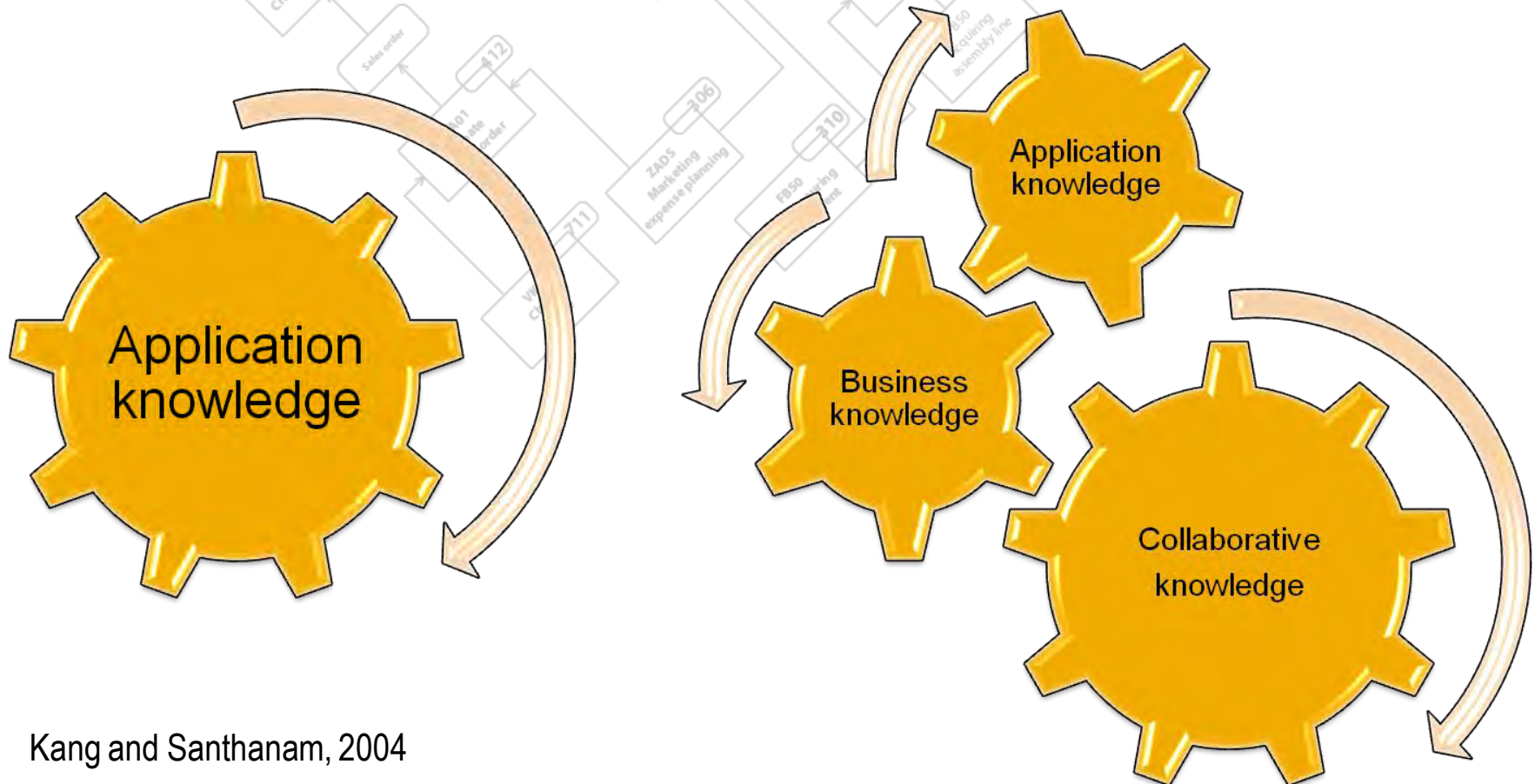
- 2011-2012 Technical Team

- Mr. Jean-François MICHON, M.Sc., Operations Manager
- Mr. Francois PARÉ, Executive Consultant
- Ms. Kym DAWSON, B.A., Communications Manager
- Ms. Stéphanie BOURGAULT-MONGEAU, B.Com., Project Manager
- Mr. Patrick SAPINSKI, Programmer
- Mr. Philippe HÉBERT, B.Com, Analyst
- Mr. Olivier DUBÉ, B.Com, Analyst
- Mr. El-Hassane NDIAYE, Analyst
- Mr. Arnaud PAQUET, Analyst
- Mr. Juan GUILLEN, Analyst
- Mr. Marc HÉBERT ST-PIERRE, Analyst
- Mr. Julien PERRET, M.Sc., Research Assistant
- Ms. Andréa MONGUILOD, MA, Research Assistant
- Mr. Carl ST-PIERRE, MA, Statistician

# Moving Toward a Competency Approach

From a standard approach...

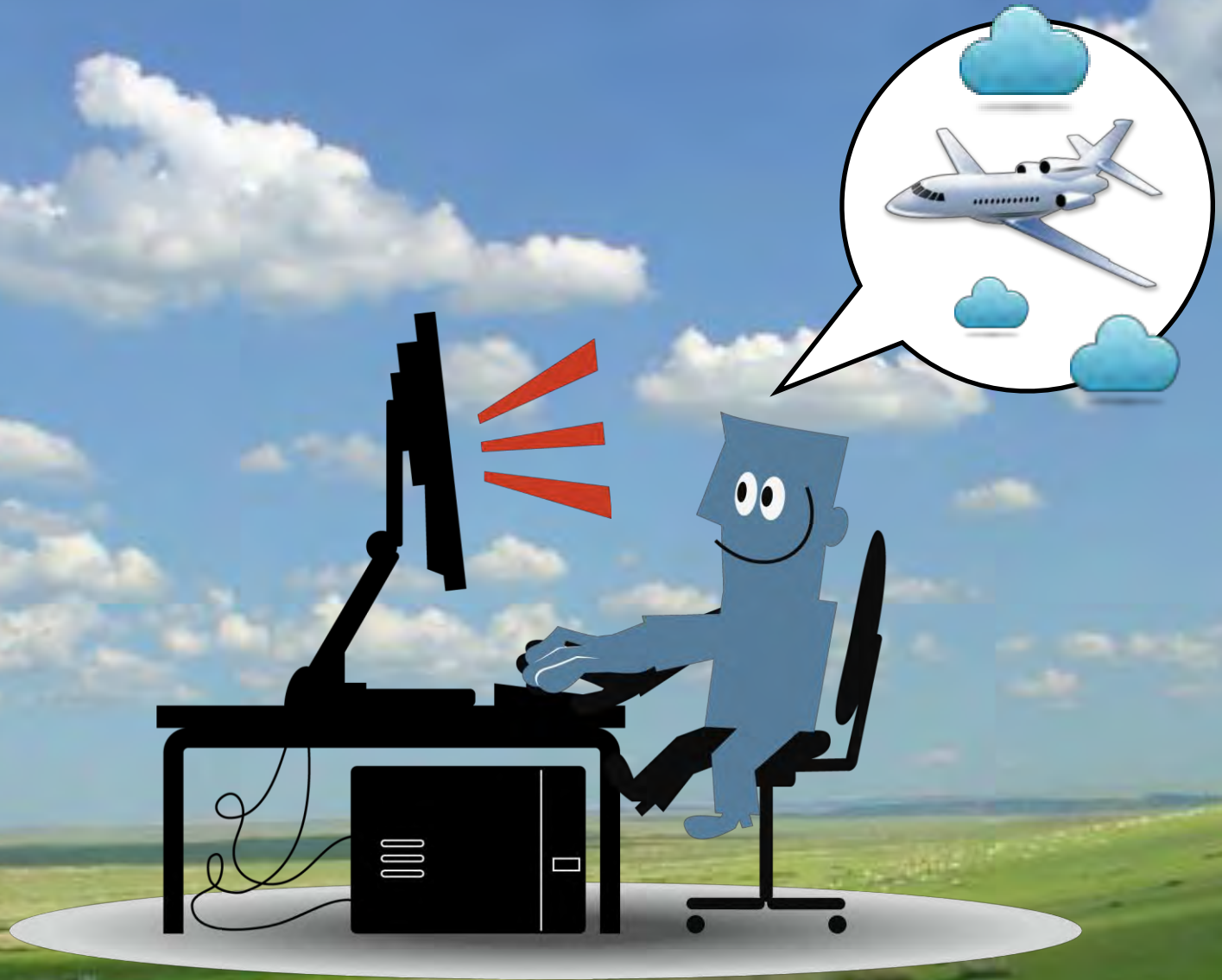
... to a competency approach



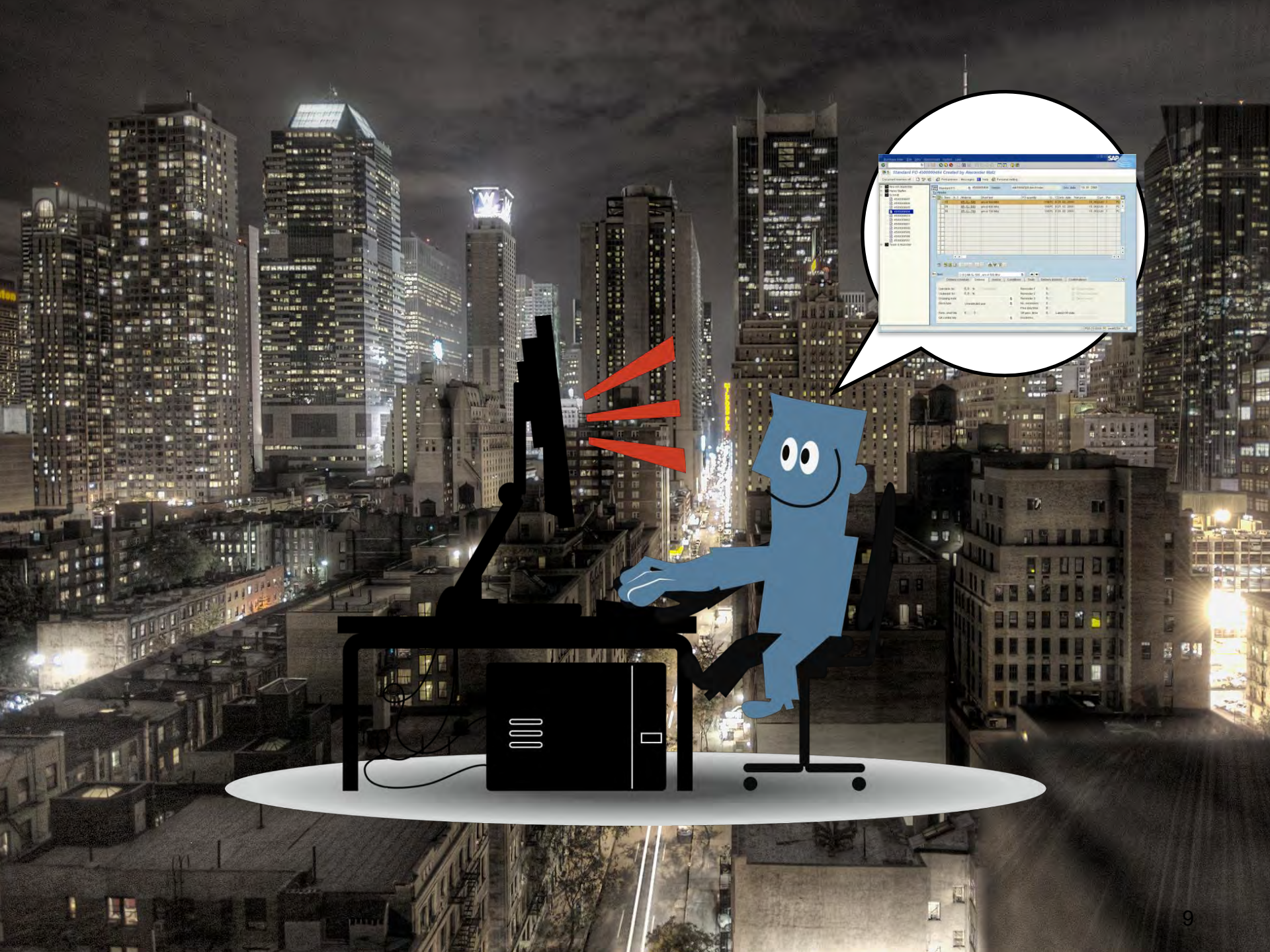
Kang and Santhanam, 2004

# Paradigm Shift in IT Education

- Paradigm Shift in Teaching
  - From instructors to coaches
  - From specialized technical knowledge to holistic business knowledge
- Paradigm Shift in Learning
  - From “point-and-click” to discovery of how SAP can help achieve business goals
  - From technical questions to business strategy issues







Name	Address	City	State	Zip	Phone	Fax	Mobile
John Doe	123 Main St	New York	NY	10001	212 555 1234		
Jane Smith	456 Park Ave	New York	NY	10022	212 555 5678		
Bob Johnson	789 Broadway	New York	NY	10018	212 555 9012		
Alice Brown	101 Wall St	New York	NY	10038	212 555 3456		
Charlie White	202 Nassau St	New York	NY	10038	212 555 7890		
Diana Green	303 Broadway	New York	NY	10013	212 555 2345		
Frank Black	404 Broadway	New York	NY	10013	212 555 6789		
Grace King	505 Broadway	New York	NY	10013	212 555 0123		
Henry Lee	606 Broadway	New York	NY	10013	212 555 4567		
Ivy Hill	707 Broadway	New York	NY	10013	212 555 8901		
Jack King	808 Broadway	New York	NY	10013	212 555 2345		
Karen White	909 Broadway	New York	NY	10013	212 555 6789		
Leo Hill	1010 Broadway	New York	NY	10013	212 555 0123		
Mia Hill	1111 Broadway	New York	NY	10013	212 555 4567		
Noah Hill	1212 Broadway	New York	NY	10013	212 555 8901		
Olivia Hill	1313 Broadway	New York	NY	10013	212 555 2345		
Peter Hill	1414 Broadway	New York	NY	10013	212 555 6789		
Quinn Hill	1515 Broadway	New York	NY	10013	212 555 0123		
Rachel Hill	1616 Broadway	New York	NY	10013	212 555 4567		
Sam Hill	1717 Broadway	New York	NY	10013	212 555 8901		
Tina Hill	1818 Broadway	New York	NY	10013	212 555 2345		
Uma Hill	1919 Broadway	New York	NY	10013	212 555 6789		
Victor Hill	2020 Broadway	New York	NY	10013	212 555 0123		
Wendy Hill	2121 Broadway	New York	NY	10013	212 555 4567		
Xavier Hill	2222 Broadway	New York	NY	10013	212 555 8901		
Yara Hill	2323 Broadway	New York	NY	10013	212 555 2345		
Zoe Hill	2424 Broadway	New York	NY	10013	212 555 6789		

# ERPsim

ERPsim

ERP System (SAP)

Participants



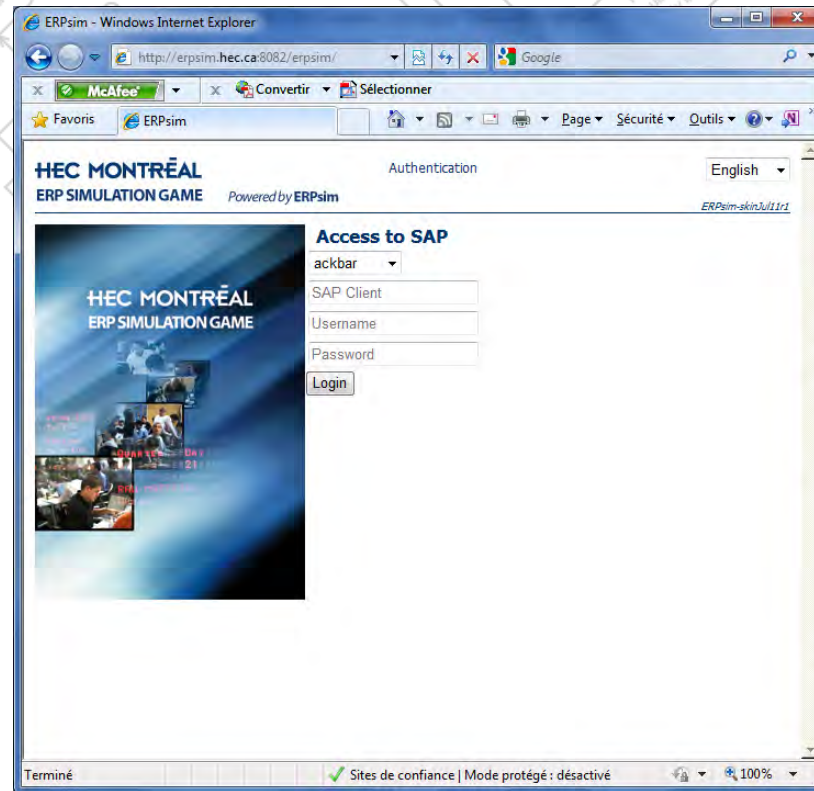
Matr.	Plant	ProdCenter	Partner	PC	Material	Unit of Measure	QTY	9-999 Stock Unit	Cost	Inventory	Alt.
100	0	200A01	200A01	Material	Labour	1	1	1,000.00	30.00	100.00	100.00
100	0	200A01	200A01	Material	Labour	1	1	1,000.00	30.00	100.00	100.00
100	0	200A01	200A01	Material	Labour	1	1	1,000.00	30.00	100.00	100.00
100	0	200A01	200A01	Material	Labour	1	1	1,000.00	30.00	100.00	100.00
100	0	200A01	200A01	Material	Labour	1	1	1,000.00	30.00	100.00	100.00
100	0	200A01	200A01	Material	Labour	1	1	1,000.00	30.00	100.00	100.00
100	0	200A01	200A01	Material	Labour	1	1	1,000.00	30.00	100.00	100.00
100	0	200A01	200A01	Material	Labour	1	1	1,000.00	30.00	100.00	100.00
100	0	200A01	200A01	Material	Labour	1	1	1,000.00	30.00	100.00	100.00
100	0	200A01	200A01	Material	Labour	1	1	1,000.00	30.00	100.00	100.00



- 1) Automation of administrative tasks
- 2) Simulation of a market
- 3) Simulation of passing of time

- 1) Business analytics
- 2) Business decisions

# ERPsim



# Pedagogical Objectives

- Demonstrate how ERP systems support business strategies
- Develop a hands-on understanding of underlying enterprise system concepts
- Experience the tangible benefits of enterprise integration firsthand
- Develop technical decision making skills using enterprise software

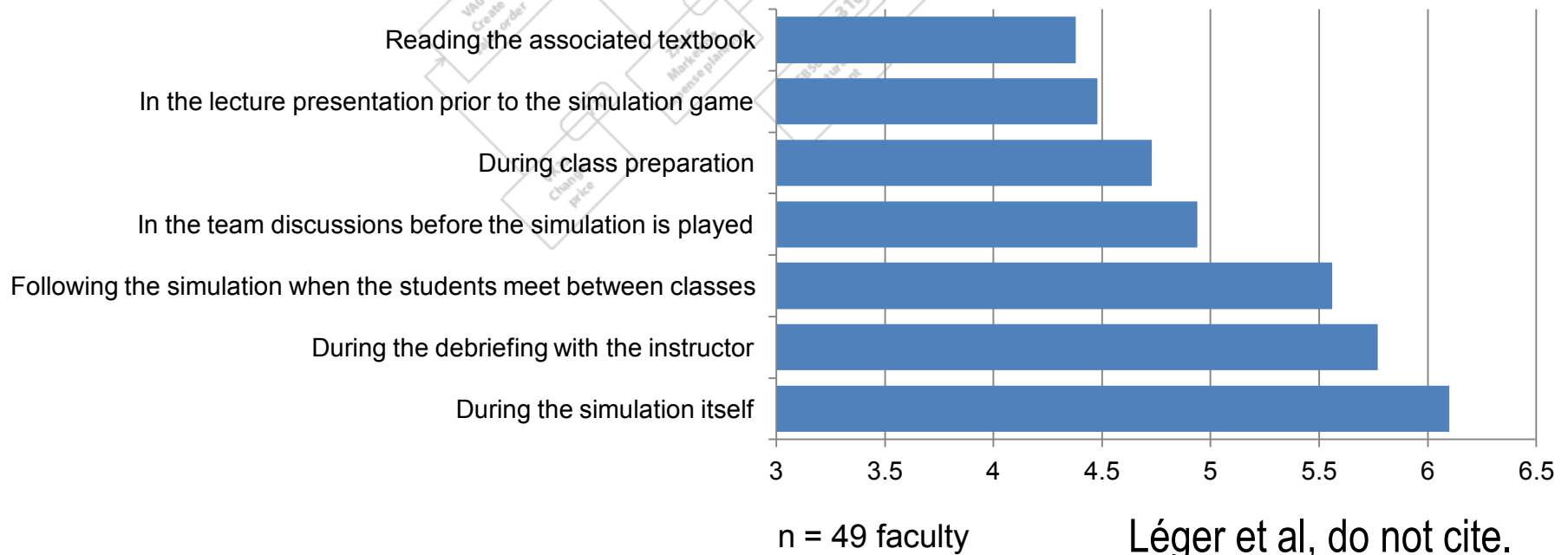


*MBA students experiencing ERPsim at HEC Montréal - 2007*


# Targeted Simulation Games

- **ERPsim for Introduction to MIS:** A fun and engaging introduction to ERP systems
- **ERPsim for Non-IT:** Demonstrates the power of integration to business and engineering students of all disciplines
- **ERPsim for Business Analysts:** A configuration experience for IT analysts designed to make links between what is experienced in the game and the business roles involved in ERP implementation
- **ERPsim for Executives:** A simulation designed to let executives experience the different challenges of ERP implementation

# When Learning Occurs in ERPsim



HOME ABOUT ERPSIM OUR SERIOUS GAMES FACULTY



**The Lab**

### GETTING STARTED WITH ERPSIM

Want to know how to bring ERPsim into your classroom? Here is your first step!

[Learn how to get started](#)

### WHAT WE DEVELOP

- Distribution Game
- Logistics Game
- Manufacturing Introduction Game
- Manufacturing Extended Game
- New Development / New Products

[Our Serious Games](#)

### CONTACT US

For more information on ERPsim, you can contact us at [erpsim@hec.ca](mailto:erpsim@hec.ca). No support question will be answered by e-mail, please use our [Faculty Service Desk](#)

**What's happening**

### NEWS

- CONTENT UPDATE: Distribution Game Videos**  
Thu, 09/22/2011 - 10:57  
We are pleased to announce that we released a new set of tutorial videos for the Distribution Game! This updated version, which cover a full three rounds game with the latest version of ERPsim, is now available on the [Learning Portal](#).
- Get Ready for Next Semester with ERPsim**  
Fri, 07/01/2011 - 00:00  
New game, new materials... get ready for academic year 2011-2012!
- New ERPsim game for 2011-2012**  
Wed, 06/01/2011 - 16:20  
More details coming soon!

### EVENTS

- SAP Academic Conferences Americas - 2012**  
March 22-24, 2012 (Thursday - Saturday)  
Westin Riverwalk Hotel, San Antonio, Texas
- UA North America Regional Workshops - ERP Simulation Game**  
January 3 - 6, 2012  
Sam Houston State University, Huntsville, Texas
- ERPsim academic version 2011-2012: New games, teachings notes and pedagogical material for students**

**SEARCH**

English | Français

**Learning Portal**

**Service Desk**

**Quick links**

**Faculty**

- Getting Started

**Corporate**

- Baton Simulations

**Social Media**

Follow us on these social media platforms to get all the latest news and access additional materials from ERPsim!

[LinkedIn ERPsim Group](#)

[YouTube Channel](#)

[Twitter](#)

# Available Games

## HEC MONTRÉAL ERP SIMULATION GAME Academic 2011-2012

*powered by ERPsim*



### HEC MONTRÉAL ERP SIMULATION GAME

*Distribution Game (Academic)*

*powered by ERPsim*



### HEC MONTRÉAL ERP SIMULATION GAME

*Manufacturing Game (Academic)*

*powered by ERPsim*



### HEC MONTRÉAL ERP SIMULATION GAME

*Logistics Game*

*powered by ERPsim*





INSTRUCTORS

**Teaching Notes**



3

**Videos**



**Scenarios (Configuration Files)**



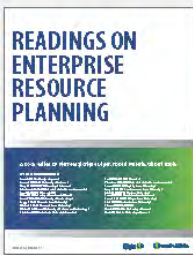
**ERPsim Release 07.1 (Software)**



**Working Papers**



PARTICIPANTS

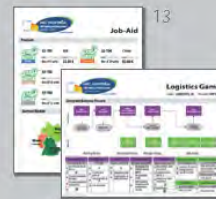


12

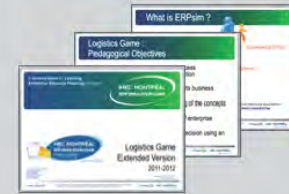
**Games**



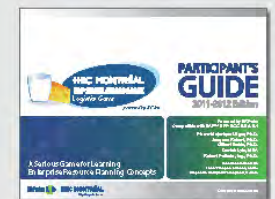
**Job Aids**



**Slides**



**Participant's Guide**



# New material in 2011-2012

- ERPsim Analytics Solution
  - The Lab's latest innovation is designed to let students experience the full potential of SAP analytics solutions, such as SAP Crystal Dashboard Design, while developing their decision making skills in the dynamic ERPsim environment.
- Readings on Enterprise Resource Planning
  - A textbook co-authored by over 20 SAP UA faculty members, written to provide a more holistic understanding of ERP. This e-book helps students make links between what they learn in the classroom and ERP in the real world.
- ERP Simulation Game: Changing the Way We Teach & Learn ERP Systems
  - Written by the inventors of ERPsim, this indispensable teaching tool containing a full set of notes about ERPsim and how to use it to keep your students fully engaged.

# Upcoming development for 2012-2013

- ERPsim Data Extractor
  - An improved way to analyze transactional, configuration, and scenario data using Microsoft ACCESS.
- ERPsim Faculty iPad Application
  - A tool that pre-emptively alerts you when teams need assistance, so that you can help keep them on track and fully engaged.
- Unified SAP Client
  - Coming soon in 2012 all ERPsim games will be configured on a single SAP client, allowing you maximum flexibility when teaching your class.

# HEC MONTRÉAL ERP SIMULATION GAME

powered by ERPsim

# Introduction to Logistics Game

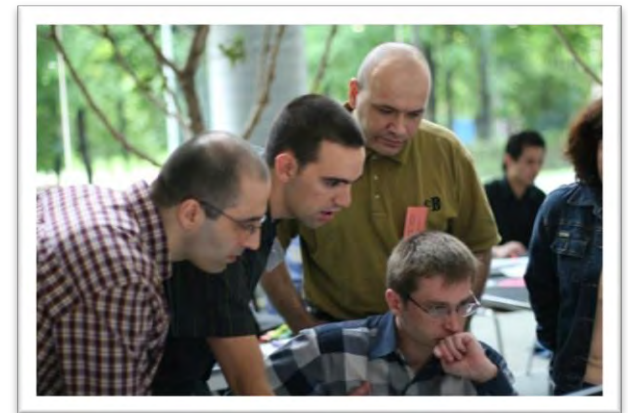


# HEC MONTRÉAL ERP SIMULATION GAME *Logistics Game*

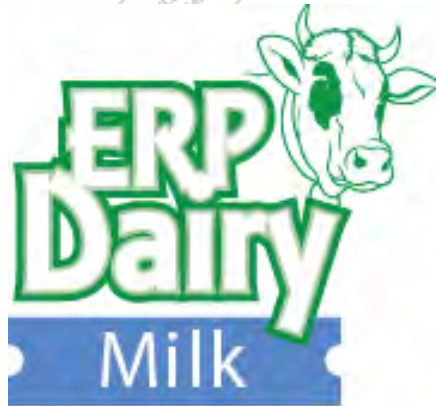
powered by ERPsim

# Logistics Game

- In groups of at most 4 participants, each team has to operate a company selling dairy products.
- Using standard reports, participants must make business decisions in order to ensure the profitability of their operations.

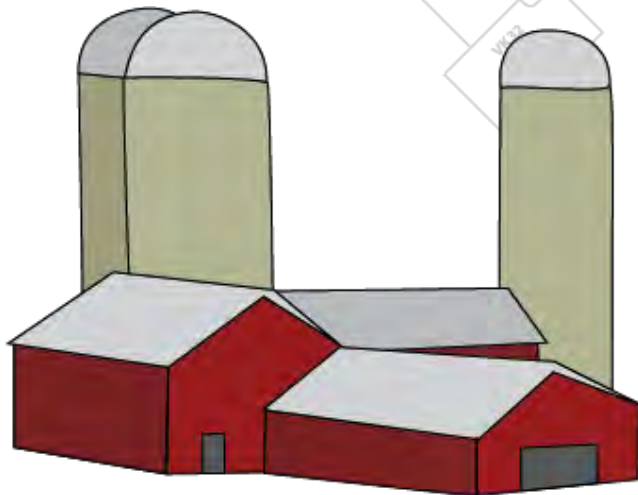


# Dairy Products



# Logistics Game Design

Your company owns a main warehouse which receives and stores products you have purchased from a dairy cooperative.



**Dairy Cooperative**



**Main Warehouse**

# Products Details

## Products



**\$\$-T01**

Milk

Unit

Box of 9 units

Cost

**22,95 €**



**\$\$-T04**

Cheese

Unit

Box of 20 units

Cost

**82,68 €**



**\$\$-T02**

Cream

Unit

Box of 28 units

Cost

**72,07 €**



**\$\$-T05**

Butter

Unit

Box of 20 units

Cost

**59,88 €**



**\$\$-T03**

Yoghurt

Unit

Box of 12 units

Cost

**25,85 €**



**\$\$-T06**

Ice Cream

Unit

Box of 8 units

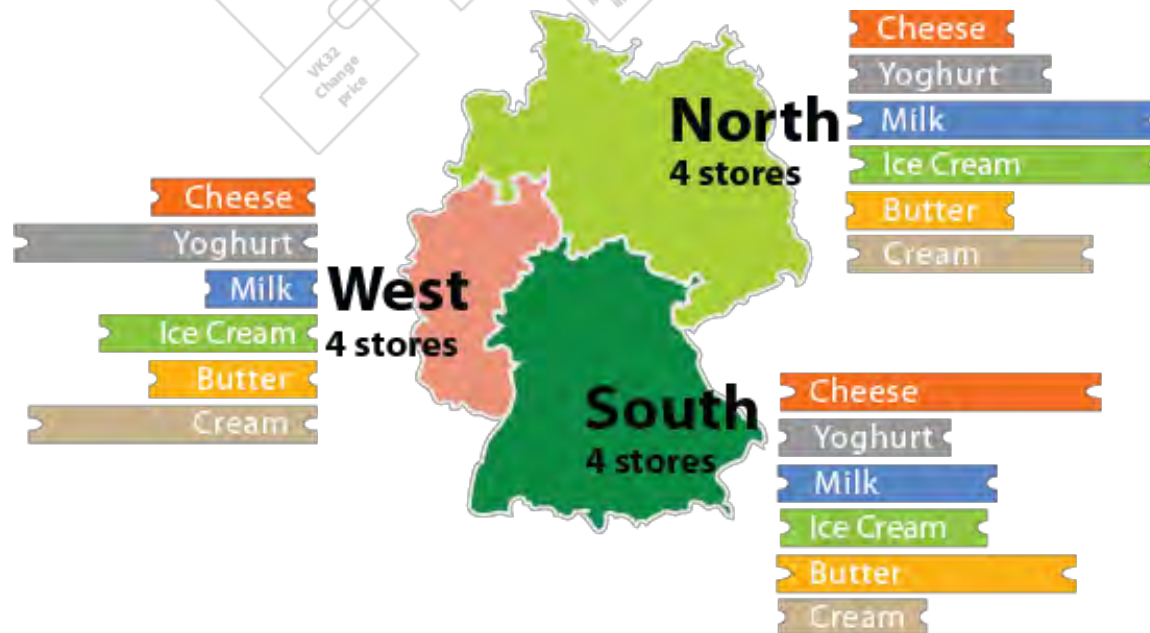
Cost

**43,15 €**



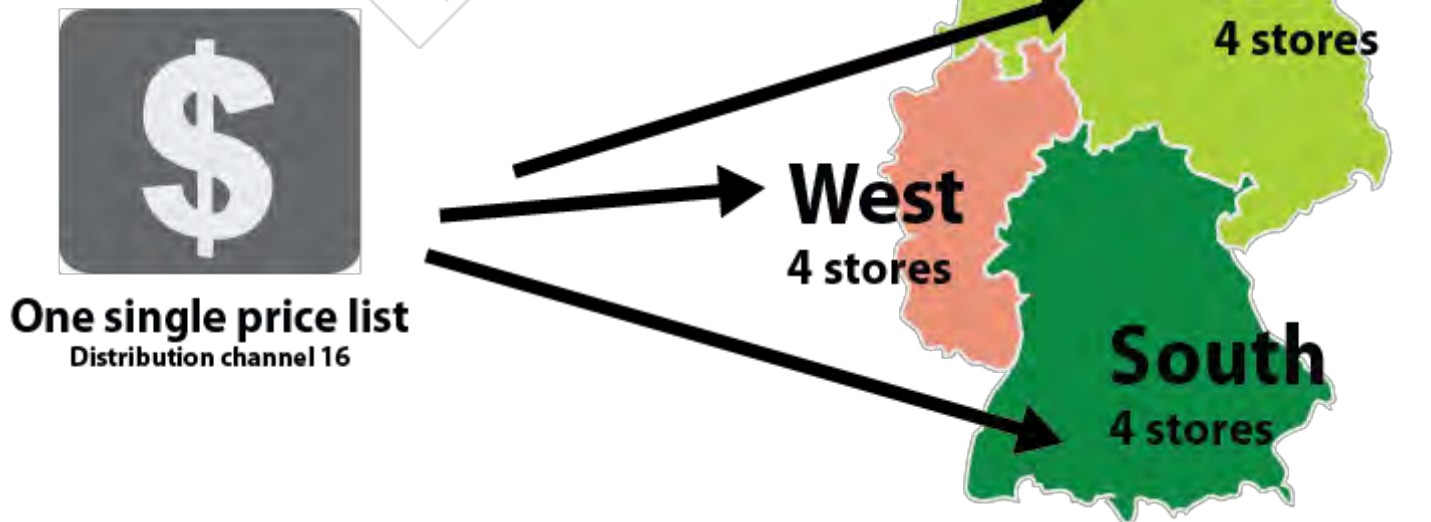
# Market Preferences

Each region has unique preferences related to the products it purchases from your company. Preferences change every game.



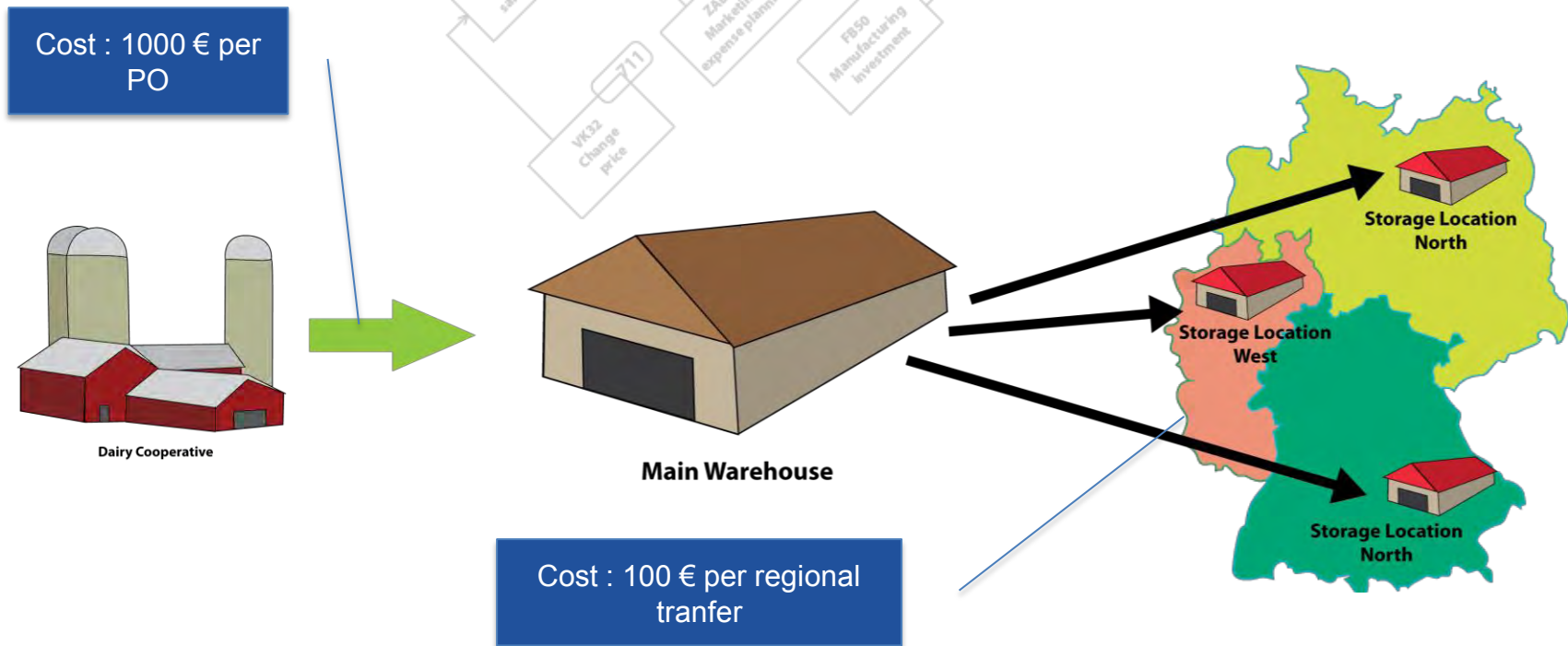
# One Price List in Distribution Channel 16

You will need to set-up prices for your products. The price for each product will be applied in all 3 regions.



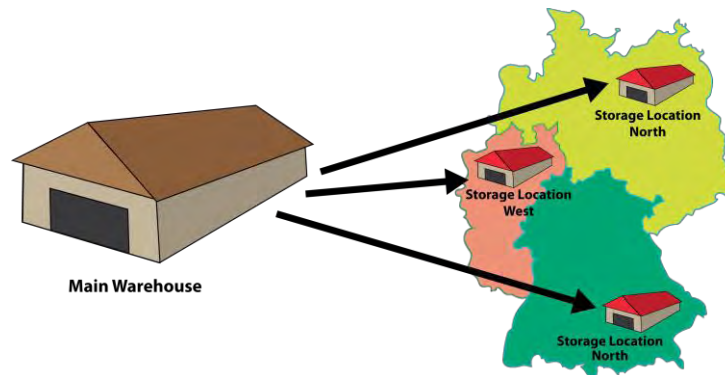
# Transportation Fees

You will have to manage transportation fees carefully in order to maximize your company's profits.



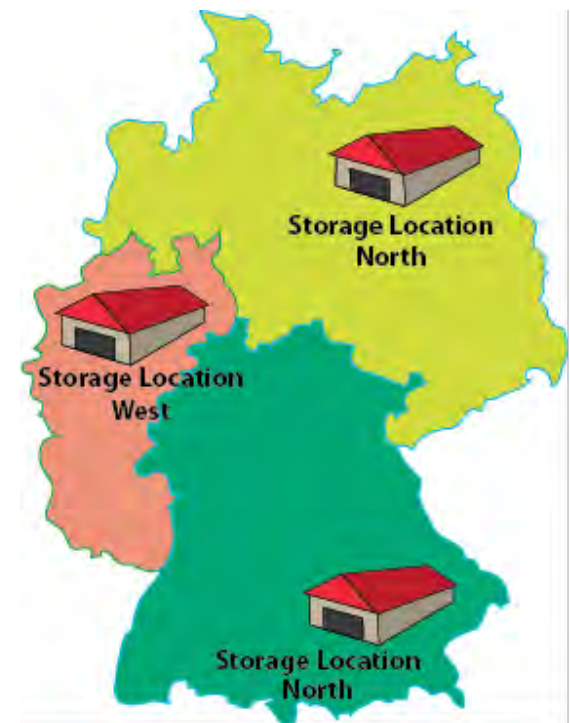
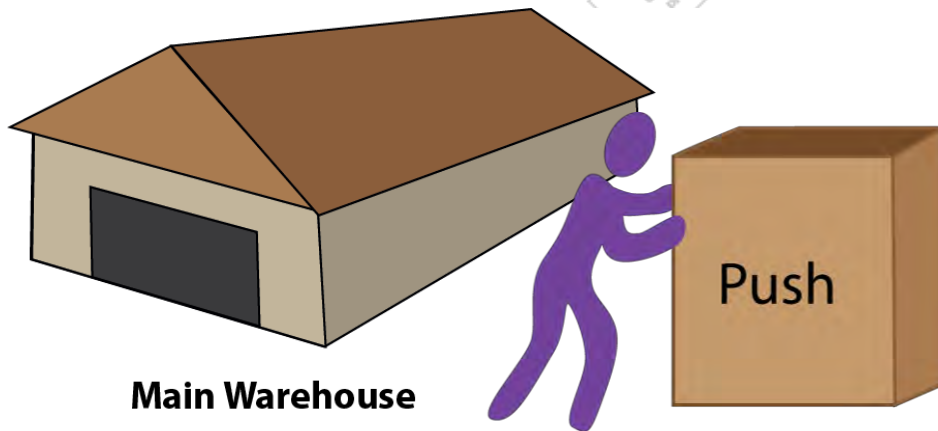
# Logistics Strategy

You must determine a logistics strategy in order to make your products available for sale through your regional storage location.



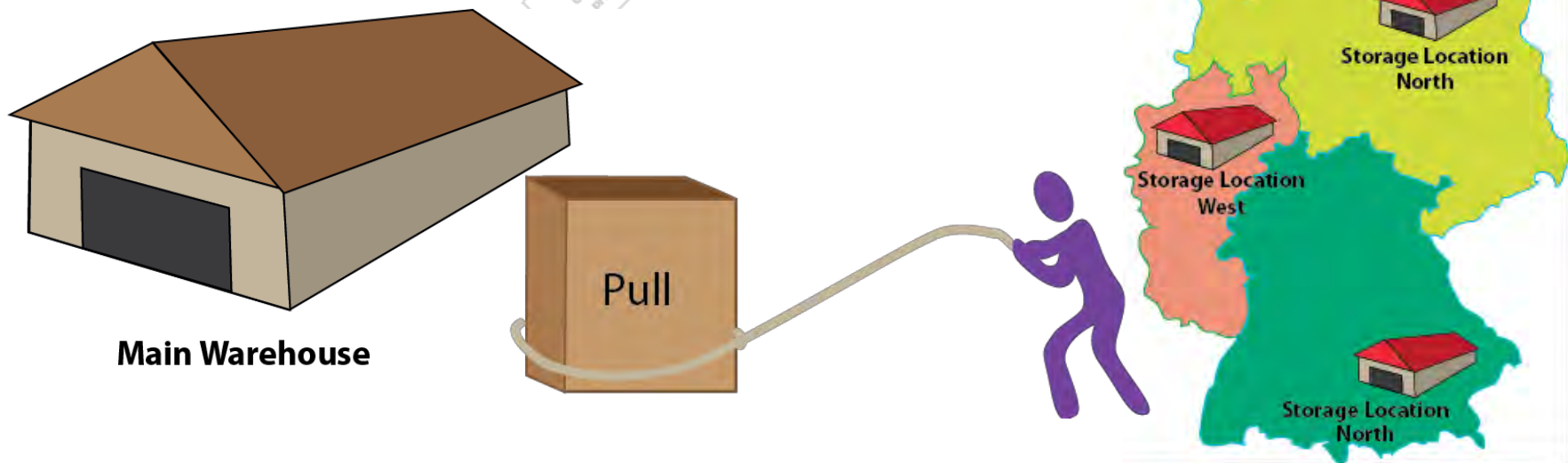
# A Push Logistics Strategy

A Push strategy specifies the quantity of each product to be delivered to each area, and the number of days between deliveries.



# A Pull Logistics Strategy

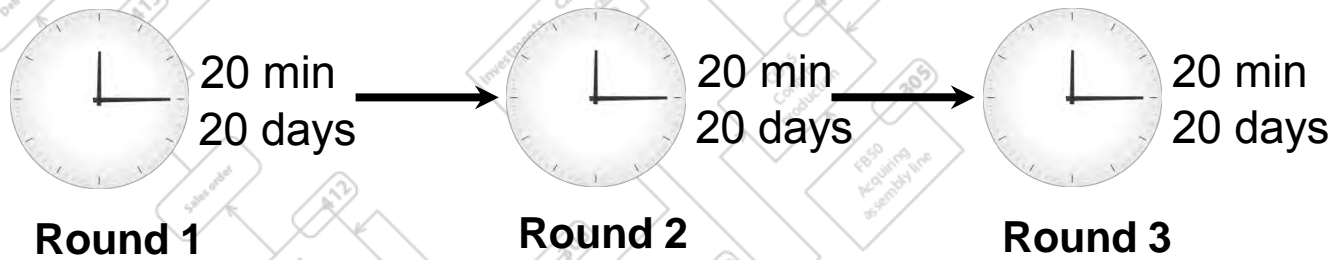
A Pull strategy specifies the target quantity for each product in each area and the number of days between deliveries.



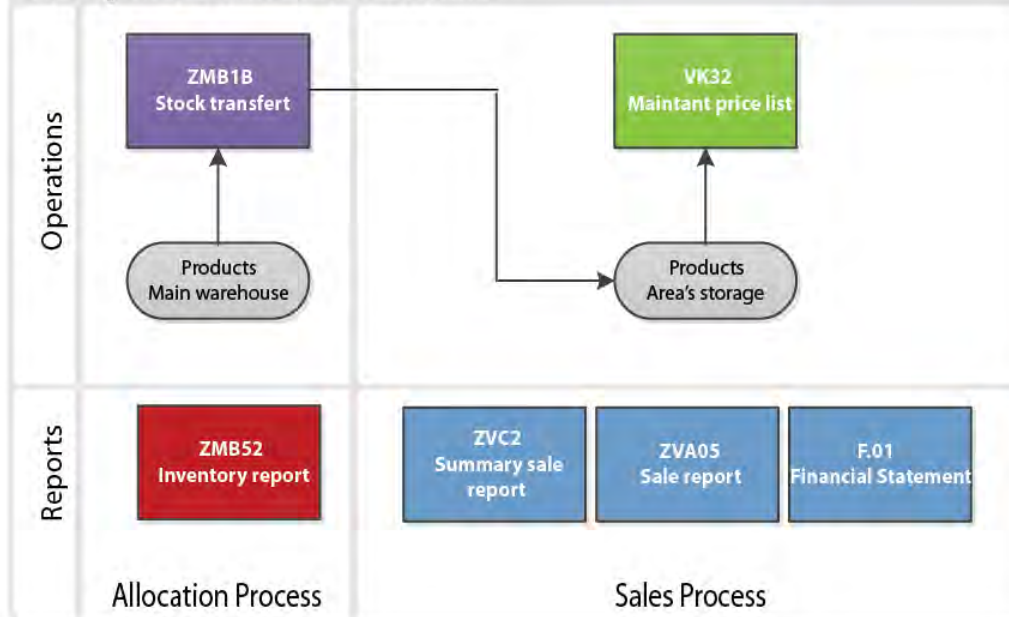
# Rules

- Each round will last 20 days (a bit more than one minute per day)
- End-of-round inventory is carried over to the next round.
- You may sell a product only if the stock is available through your regional storage location.
- You are competing against other teams.
- Your objective is to maximize profits.

# Game Layout

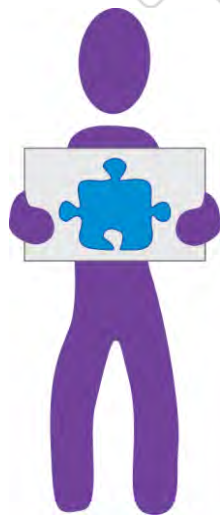


## Complete Business Process





# 4 Players Per Team



**Logistics  
Manager**



**Stock  
Manager**



**Pricing  
Manager**



**Sales  
Vice-President**

# Job Aids (1/2)



## Job-Aid Executives Game

### Products

	<b>\$\$-T01</b>	Milk		<b>\$\$-T04</b>	Cheese
Unit		Cost	Unit		Cost
Box of 9 units		<b>22,95 €</b>	Box of 20 units		<b>82,68 €</b>
	<b>\$\$-T02</b>	Cream		<b>\$\$-T05</b>	Butter
Unit		Cost	Unit		Cost
Box of 28 units		<b>72,07 €</b>	Box of 20 units		<b>59,88 €</b>
	<b>\$\$-T03</b>	Yoghurt		<b>\$\$-T06</b>	Ice Cream
Unit		Cost	Unit		Cost
Box of 12 units		<b>25,85 €</b>	Box of 8 units		<b>43,15 €</b>

### German Market



Suppliers		Customers	
Lead time (days)	<b>1-3</b>	Lead time (days)	<b>1-3</b>
Payment time (days)	<b>2</b>	Payment time (days)	<b>2</b>

### General information

Days / Quarter: 20  
Distribution Channel: DC16: Retail stores

Replenishment Inventory (Quarter 1)		
Product Code	Description	Units (every 5 days)
T01	Milk	950
T02	Cream	300
T03	Yoghurt	700
T04	Cheese	350
T05	Butter	400
T06	Ice Cream	300

**Total Market Size**  
Approx. € 6,000 per company per day

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# Job Aids (2/2)



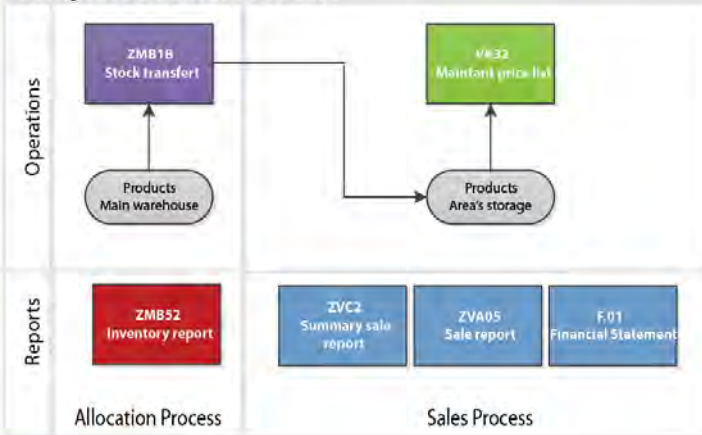
## Logistics Manager

Login **\$\_TRANSFER** Password **ERPSIM**

Replenishment Level		
Product Code	Description	Number of Units (every 5 days)
\$\$-T01	Milk	1400
\$\$-T02	Cream	300
\$\$-T03	Yoghurt	900
\$\$-T04	Cheese	600
\$\$-T05	Butter	450
\$\$-T05	Ice Cream	350

Transportation fees	
Supplier to main warehouse	€ 1000
Main warehouse to storage location	€ 100

### Complete Business Process



stock transfer	
Stock Transfer Planning (ZMB18)	
1	Choose between a push and a pull stock allocation logistic
2	Choose your delivery schedule
3	Enter the amount of products you wish to send/maintain in each region

- Logistics Manager
- Stock Manager
- VP Sales
- Pricing Manager

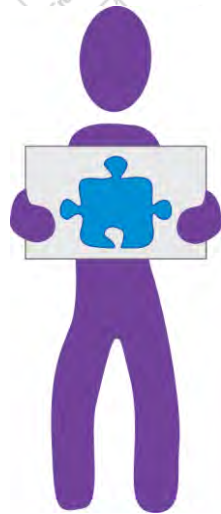
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# HEC MONTRÉAL ERP SIMULATION GAME

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# SAP Navigation

# 4 Players Per Team



**Logistics  
Manager**

Login : \$\_transfer  
Password : ERPSIM



**Stock  
Manager**

Login : \$\_stock  
Password : ERPSIM



**Pricing  
Manager**

Login : \$\_pricing  
Password : ERPSIM



**Sales  
Vice-President**

Login : \$\_sales  
Password : ERPSIM

*N.B. : \$ is your team letter*

# Login Information

The screenshot shows the SAP login interface. At the top, there is a menu bar with 'User', 'System', and 'Help'. Below the menu bar is a toolbar with various icons. The main area is titled 'SAP' and contains a 'New password' button. Below this are four input fields: 'Client' (with a yellow dropdown arrow), 'User' (with a checkmark icon), 'Password' (with a masked password field of asterisks), and 'Language' (with a checkbox). At the bottom right, there is a status bar with 'ackbar' and 'INS'.

**Client will be provided  
by the instructor**

**Login:**

**According to your role:**

*\$\_transfer*

*\$\_stock*

*\$\_pricing*

*\$\_sales*

*\$\_report*

*Where \$ is your team letter*

**Password: ERPSIM**

*You will have to change your  
password the first time you enter.*

# SAP Menu & Navigation

- Favorites
- ▼ User menu for LOGISTICS MENU
  - Create Planned Indep. Requirements
  - MRP Run
  - Automatic generation of POs
  - ERPsim: Stock Transfer Planning
  - Condition Maintenance: Change
  - ▼ Reports
    - ERPsim: Inventory Report
    - ERPsim: Purchase Order Tracking
    - ERPsim: Summary Sales Report
    - ERPsim: Sales Report
    - ABAP Report: Financial Statements



- Favorites
- ▼ User menu for LOGISTICS MENU
  - MD61 - Create Planned Indep. Requirements
  - MD01 - MRP Run
  - ME59N - Automatic generation of POs
  - ZMB1B - ERPsim: Stock Transfer Planning
  - VK32 - Condition Maintenance: Change
  - ▼ Reports
    - ZMB52 - ERPsim: Inventory Report
    - ZME2N - ERPsim: Purchase Order Tracking
    - ZVC2 - ERPsim: Summary Sales Report
    - ZVA05 - ERPsim: Sales Report
    - F.01 - ABAP Report: Financial Statements

**Top Menu: Extras / Settings / Display Technical Names**

# HEC MONTRÉAL ERP SIMULATION GAME

powered by ERPsim

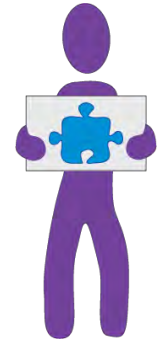
## Training for Your New Job!



# HEC MONTRÉAL ERP SIMULATION GAME

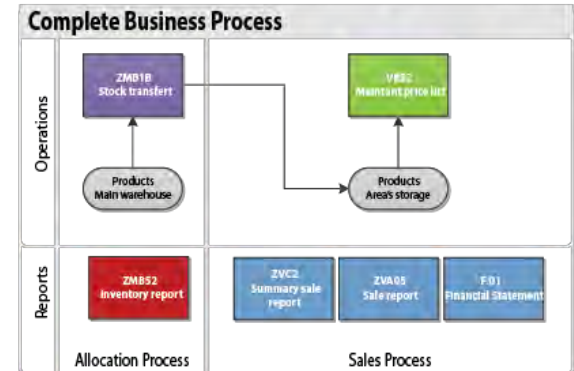
powered by ERPSim

# Logistics Game: Logistics Manager



## Logistics Manager

Login **\$\_TRANSFER** Password **ERPSIM**



Replenishment Inventory		
Product Code	Description	Units (every 5 days)
T01	Milk	950
T02	Cream	300
T03	Yoghurt	700
T04	Cheese	350
T05	Butter	400
T06	Ice Cream	300

Transportation fees	
Supplier to main warehouse	€ 1000
Main warehouse to storage location	€ 100

stock transfer	
Stock Transfer Planning (ZM01B)	
U	Choose between a push and a pull stock allocation logistic
Q	Choose your delivery schedule
O	Enter the amount of products you wish to send/maintain in each region

- Logistics Manager
- Stock Manager
- VP Sales
- Pricing Manager

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Login **\$\_TRANSFER** Password **ERPSIM**

# Transfer Planning Logistics



stock transfer	
Stock Transfer Planning (ZMB1B)	
①	Choose between a push and a pull stock allocation logistic
②	Choose your delivery schedule
③	Enter the amount of products you wish to send/maintain in each region

### Stock Transfer Planning

Planning Mode

Push

Pull

Scheduling

3 days

Allocation Plan

Material	Description	North	South	West
ZZ-T01	Milk	200	300	300
ZZ-T02	Cream	300	200	400
ZZ-T03	Yoghurt	300	400	200
ZZ-T04	Cheese	400	200	400
ZZ-T05	Butter	200	400	400
ZZ-T06	Ice Cream	200	400	400

Clear

# HEC MONTRÉAL ERP SIMULATION GAME

powered by ERPSim

# Logistics Game: Stock Manager

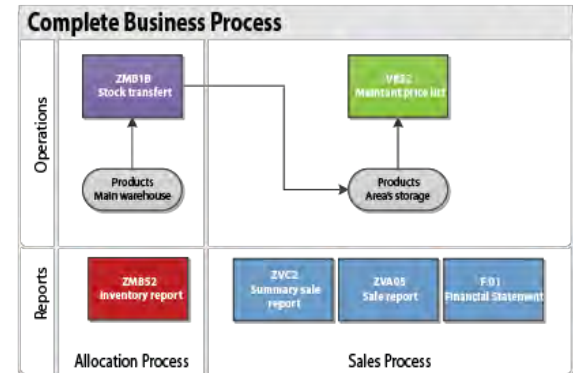


## Stock Manager

Login  Password

Replenishment Inventory		
Product Code	Description	Units (every 5 days)
T01	Milk	950
T02	Cream	300
T03	Yogurt	700
T04	Cheese	350
T05	Butter	400
T06	Ice Cream	300

Transportation fees	
Supplier to main warehouse	€ 1000
Main warehouse to storage location	€ 100



stock levels	
Inventory report (ZMB52)	
Shows all stock levels.	

- Logistics Manager
- Stock Manager
- VP Sales
- Pricing Manager

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Login

Password

# Stock Levels in Material Overview



## stock levels

Inventory report(ZMB52)

Shows all stock levels.

**Inventory Report**

Warehouse Capacity

Finished Goods:	1.852 /	4.000
Raw Materials:	0 /	250.000
Packaging:	0 /	1.000.000

Inventory Report: Quarter 4 Day 01

SLoc	Material	Descr.	Stock	Unit
03	ZZ-T01	Milk	600	ST
	ZZ-T02	Cream	2	ST
	ZZ-T03	Yoghurt	0	ST
	ZZ-T04	Cheese	0	ST
	ZZ-T05	Butter	0	ST
	ZZ-T06	Ice Cream	0	ST
03N	ZZ-T01	Milk	0	ST
	ZZ-T02	Cream	72	ST
	ZZ-T03	Yoghurt	0	ST
	ZZ-T04	Cheese	223	ST
	ZZ-T05	Butter	43	ST
	ZZ-T06	Ice Cream	8	ST
03S	ZZ-T01	Milk	78	ST
	ZZ-T02	Cream	52	ST
	ZZ-T03	Yoghurt	116	ST
	ZZ-T04	Cheese	57	ST
	ZZ-T05	Butter	63	ST
	ZZ-T06	Ice Cream	5	ST
03W	ZZ-T01	Milk	0	ST
	ZZ-T02	Cream	122	ST

# HEC MONTRÉAL ERP SIMULATION GAME

powered by ERPSim

# Logistics Game: Pricing Manager

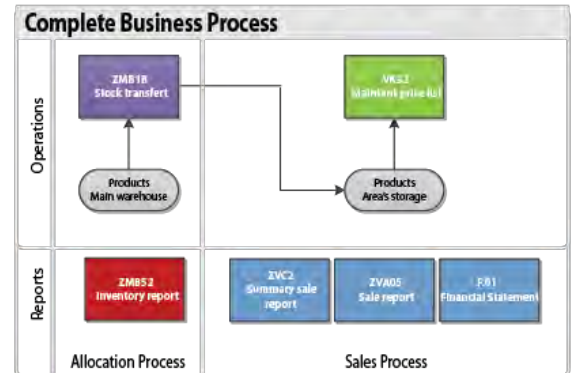


## Pricing Manager

Login **\$\_PRICING** Password **ERPSIM**

Replenishment Inventory		
Product Code	Description	Units (every 5 days)
T01	Milk	950
T02	Cream	300
T03	Yoghurt	700
T04	Cheese	350
T05	Butter	400
T06	Ice Cream	300

Transportation fees	
Supplier to main warehouse	€ 1000
Main warehouse to storage location	€ 100



**change price**

Condition Maintenance: Change (M32)

- Open prices field and click on Price list
- In Distribution channel, enter DC 16
- In Material, enter product code (optional)
- Enter your prices

- Logistics Manager
- Stock Manager
- VP Sales
- Pricing Manager

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Login **\$\_PRICING**

Password **ERPSIM**

# Maintain Prices for DC 16



change price

Condition Maintenance: Change (VK32)

- 1 Open *prices* folder and dbl click on *Price list*
- 2 In *Distribution channel*, enter DC 16
- 3 In *Material*, enter product code (optional)
- 4
- 5 Enter your prices
- 6

- Prices
  - Material Price
  - Price List**
  - Individual Prices
- Discounts/Surcharges
- Freight
- Taxes
- Conditions

### Price List with Release Status

Sales Organization: ZZ  
 Distribution Channel: **16**  
 Price List:  
 Condition Type: PR00  
 Document Currency: EUR  
 Material:  
 Release status:  
 Valid On: 06.07.2011  
 Max. hits per table: 500

S	Variable key	Amount
	<b>CnTy Curr. Material</b> <b>ReSt</b>	
	PR00 EUR ZZ-T01      Milk	25,25
	PR00 EUR ZZ-T02      Cream	79,28
	PR00 EUR ZZ-T03      Yoghurt	28,43
	PR00 EUR ZZ-T04      Cheese	90,95
	PR00 EUR ZZ-T05      Butter	65,87
	PR00 EUR ZZ-T06      Ice Cream	47,47

# HEC MONTRÉAL ERP SIMULATION GAME

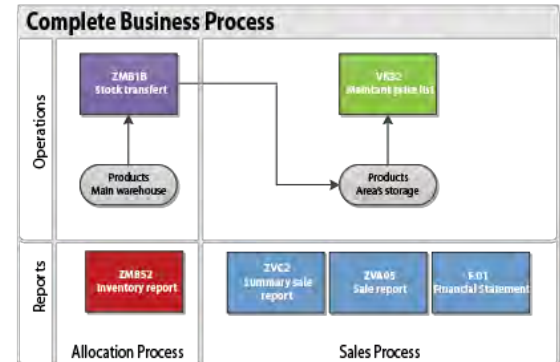
powered by ERPsim

# Logistics Game: Sales Vice-President



## VP Sales

Login  Password



Replenishment Inventory		
Product Code	Description	Units (every 5 days)
T01	Milk	950
T02	Cream	300
T03	Yoghurt	700
T04	Cheese	350
T05	Butter	400
T06	Ice Cream	300

Transportation fees	
Supplier to main warehouse	€ 1000
Main warehouse to storage location	€ 100

financial statement	
Financial Statements (E01)	
0	In company code, enter your company number (SS)
0	Select AVL Tree Control

sales and market data	
Sales order report (ZVA05)	
Shows sales transactions: time, sales revenues, bottles sold and price per box.	
Summary sales report (ZVC2)	
Shows daily sales	

- Logistics Manager
- Stock Manager
- VP Sales
- Pricing Manager

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Login

Password

# Checking the Sales Summary Report



## sales and market data

### Sales order report (ZVA05)

Shows sales transactions:  
time, sales revenues, bottles  
sold and price per box.

### Summary sales report (ZVC2)

Shows daily sales

## Summary Sales Order Report



Summary Sales Order Report: Quarter 4 Day 01

Qtr	Day	Descr.	Orders	Qty	Value
1	10	Butter	4	62	4.083,94
		Cheese	5	61	5.5
		Ice Cream	2	56	2.6
		Milk	6	244	6.1
		Yoghurt	5	250	7.1
	09	Butter	3	42	2.7
		Cheese	4	54	4.9
		Cream	1	14	1.1
		Ice Cream	2	41	1.9
		Milk	5	209	5.2
		Yoghurt	4	165	4.6
	08	Butter	6	102	6.7
		Cheese	5	65	5.9
		Cream	2	27	2.1
		Ice Cream	6	167	7.9
		Milk	5	269	6.7
		Yoghurt	8	320	9.0

## Detailed Sales Order Report



Detailed Sales Order Report: Quarter 4 Day 01

Qtr	Day	DChl	Area	Descr.	Sold-to pt	Price	Qty	Value	A/R Qtr	A/R Day
1	10	16	NO	Cheese	80294	90,95	17	1.546,15	2	02
				Milk	80294	25,25	33	833,25	2	02
				Butter	80296	65,87	19	1.251,53	2	02
				Yoghurt	80296	28,43	65	1.847,95	2	02
				Yoghurt	80295	28,43	49	1.393,07	2	02
			SO	Ice Cream	80300	47,47	17	806,99	2	02
				Milk	80300	25,25	51	1.287,75	2	02
				Butter	80299	65,87	17	1.119,79	2	02
				Yoghurt	80299	28,43	43	1.222,49	2	02
				Butter	80298	65,87	14	922,18	2	02
				Yoghurt	80298	28,43	36	1.023,48	2	02
				Butter	80299	65,87	12	790,44	2	02
				Cheese	80299	90,95	18	1.637,10	2	02
				Milk	80299	25,25	69	1.742,25	2	02
			WE	Ice Cream	80302	47,47	39	1.851,33	2	02
				Cheese	80302	90,95	9	818,55	2	02
				Milk	80302	25,25	47	1.186,75	2	02



# Checking the Financial Statements



financial statement	
Financial Statements (F.01)	
❶	In <i>company code</i> , enter your company number (\$\$)
❷	Select AVL Tree Control

### Financial Statements

G/L account selection

Chart of accounts

G/L account

Company code

---

Further selections | Special evaluations

Financial statement version

Reporting year

Reporting periods

Comparison year

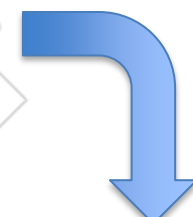
Comparison periods

Plan version (ledger 00 only)

---

List output

Classical list  
 ALV grid control Layout  
 ALV Tree Control Layout  
 As structured balance list



### Financial Statements - ERPsim Game

OL Ledger  
 10 Currency type Company code currency  
 EUR Amounts in European Euro  
 2011.01 - 2011.16 Reporting periods  
 2010.01 - 2010.16 Comparison periods

F.S. item/account	Tot.rpt.pr
Balance Sheet	0,00
Assets	504.284,43
Current assets	254.284,43
113300 Bank Cash Account	113.465,89
140000 Customers - Domestic Receivables 1	46.260,94
792000 Finished goods	94.557,60
Long-term assets	250.000,00
011000 Machinery and equipment	250.000,00
Liabilities and Owners' Equity	504.284,43
Equity	504.284,43
Income Statement	4.284,43
Revenues	84.849,33
800000 Sales revenues - domestic	84.849,33
Cost of Goods Sold	80.564,90
400020 Raw mat.consumed/trading goods without cost center	80.114,90
472000 Shipping costs	450,00
Net Income/Loss	4.284,43
Calculated profit	4.284,43

# HEC MONTRÉAL ERP SIMULATION GAME

powered by ERPsim

## Logistic Game: Round 1

# Game timing

## Round 1



20 days

# Cost, Inventory, and Initial Pricing

Material	\$\$-T01	\$\$-T02	\$\$-T03	\$\$-T04	\$\$-T05	\$\$-T06
Name	Milk	Cream	Yoghurt	Cheese	Butter	Ice Cream
Number of Units per Package	Box of 9 units	Box of 28 units	Box of 12 units	Box of 20 units	Box of 20 units	Box of 8 units
Initial Cost	€22.95	€72.07	€25.85	€82.68	€59.88	€43.15
Initial Price	€25.25	€79.28	€28.43	€90.95	€65.87	€47.47
Initial Stock	950	300	700	350	400	300

# The Logistic Game: Round 1 (10 days)

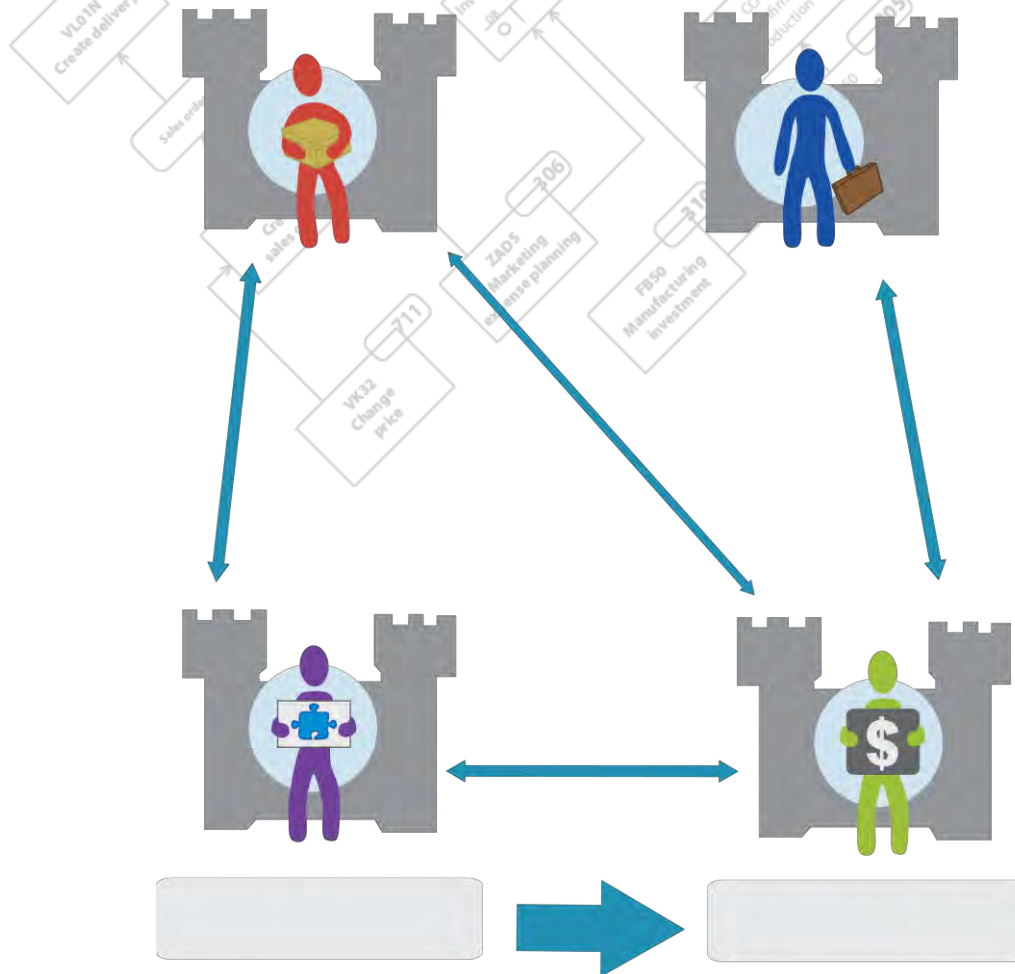
**Let's start the simulator for  
20 days!**

# HEC MONTRÉAL ERP SIMULATION GAME

powered by ERPsim

## Debriefing: Round 1

# Working in Silos



# HEC MONTRÉAL ERP SIMULATION GAME

powered by ERPsim

## Logistics Game: Round 2



# New Logins

Login : **ERP\_#\$**  
Password : **ERPSIM**



Login : ERP\_1\$

Password : ERPSIM



Login : ERP\_2\$

Password : ERPSIM



Login : ERP\_3\$

Password : ERPSIM



Login : ERP\_4\$

Password : ERPSIM

# Login Information

The screenshot shows the SAP login interface. At the top, there is a menu bar with 'User', 'System', and 'Help'. Below the menu bar is a toolbar with various icons. The main area contains the following fields:

- Client:** A text input field with a yellow background. An arrow points to it from the text 'Client will be provided by the instructor.'
- User:** A text input field with a checkmark icon. An arrow points to it from the text 'Login: ERP\_\$ #'. Below this field is the text 'Where \$ is your team letter, and # is your team number.'
- Password:** A text input field with a masked password (dots). An arrow points to it from the text 'Password: ERPSIM'. Below this field is the text 'You will have to change your password the first time you enter.'
- Language:** A dropdown menu with a small square icon.

At the bottom of the screen, there is a status bar with the text 'ackbar INS'.

**Client will be provided  
by the instructor.**

**Login:**

**ERP\_ \$ #**

*Where \$ is your team letter,  
and # is your team number.*

**Password: ERPSIM**

*You will have to change your  
password the first time you enter.*

# News Job-Aid



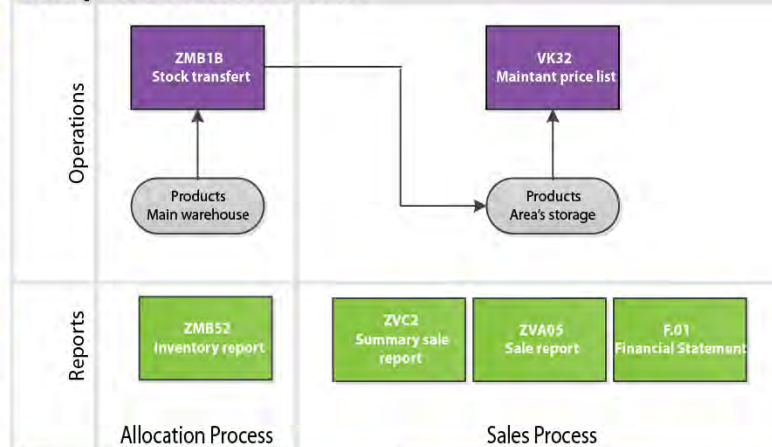
## Logistics Game

Login **ERP\_#** Password **ERPSIM**

Replenishment Level		
Product Code	Description	Number of Units (every 5 days)
\$\$-T01	Milk	1400
\$\$-T02	Cream	300
\$\$-T03	Yoghurt	900
\$\$-T04	Cheese	600
\$\$-T05	Butter	450
\$\$-T05	Ice Cream	350

Transportation fees	
Supplier to main warehouse	€ 1000
Main warehouse to storage location	€ 100

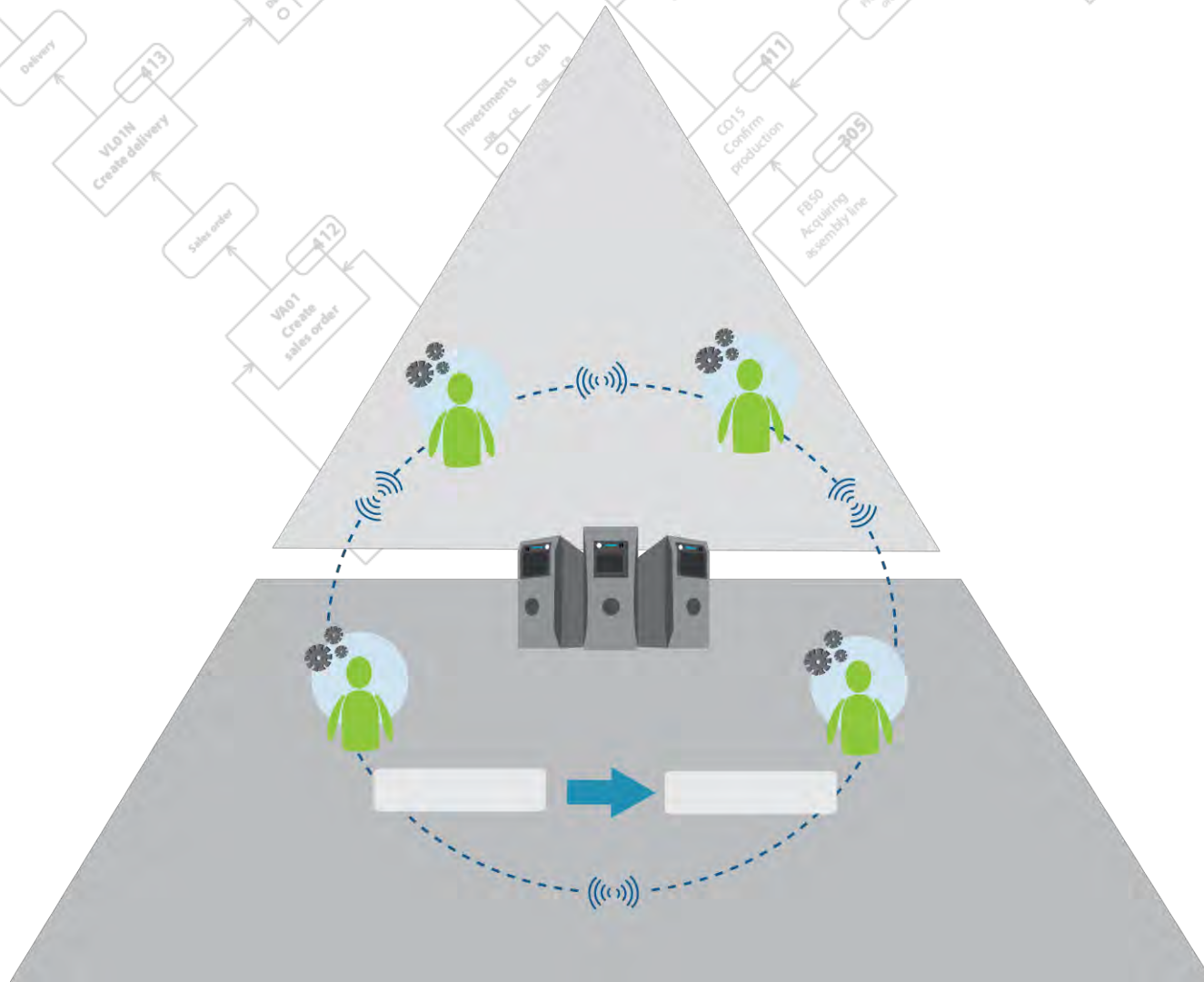
### Complete Business Process



stock transfer	change price	financial statement	sales and market data
<b>Stock Transfer Planning (ZMB1B)</b> Choose between a push and a pull stock allocation logistic Choose your delivery schedule Enter the amount of products you wish to send/maintain in each region	<b>Condition Maintenance: Change (VK32)</b> 1 Open prices folder and dbl click on <i>Price list</i> 2 In <i>Distribution channel</i> , enter DC 16 3 In <i>Material</i> , enter product code (optional) 4  Enter your prices 5	<b>Financial Statements (F.01)</b> 1 In <i>company code</i> , enter your company number (\$\$) 2 Select AVL Tree Control	<b>Sales order report (ZVA05)</b> Shows sales transactions: time, sales revenues, bottles sold and price per box. <b>Summary sales report (ZVC2)</b> Shows daily sales
		<b>stock levels</b> Inventory report(ZMB52) Shows all stock levels.	

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# Game Design



# The Logistics Game: Round 2 (20 days)

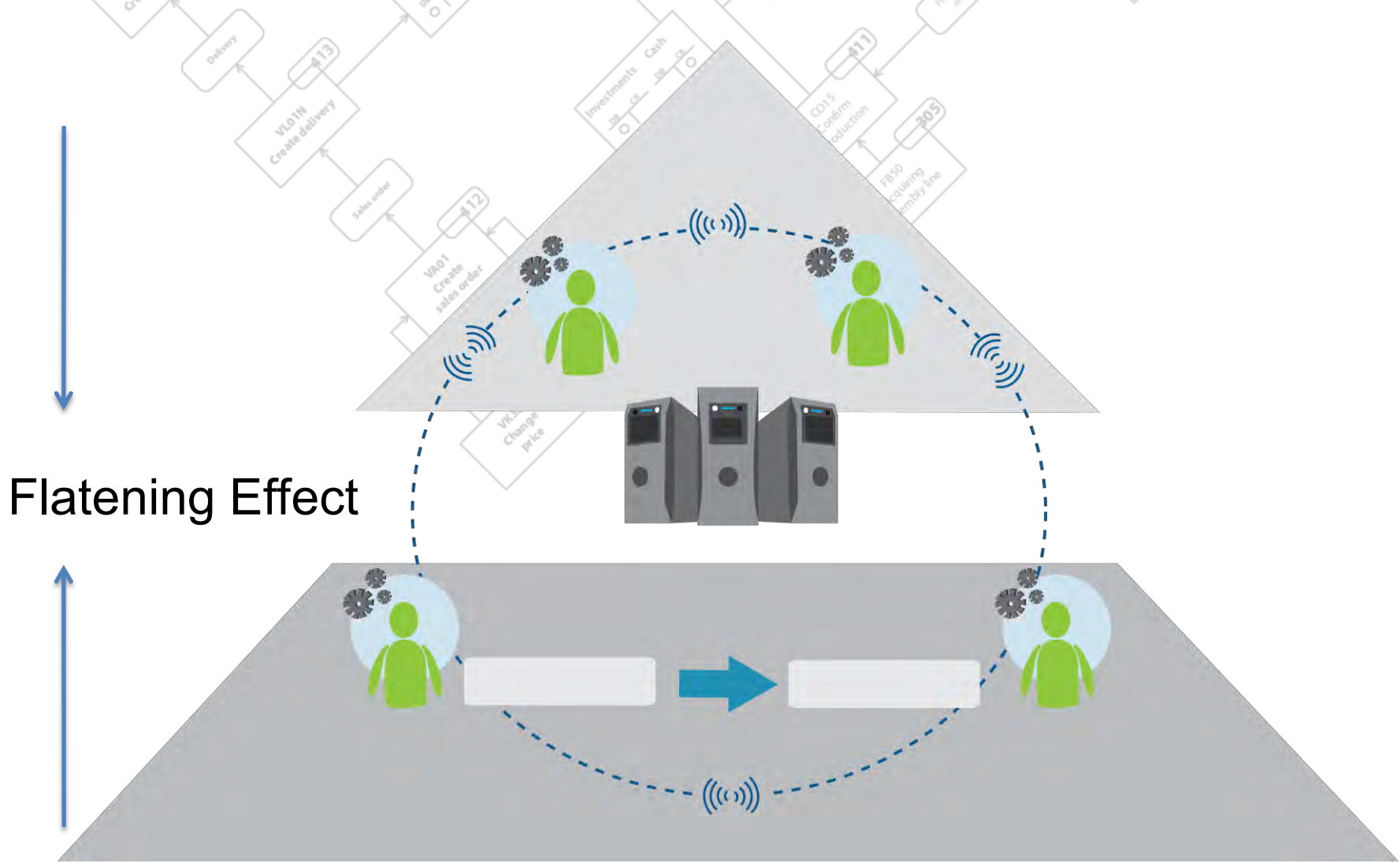
**Let's start the simulator for  
20 days!**

# HEC MONTRÉAL ERP SIMULATION GAME

powered by ERPsim

## Debriefing: Round 2

# Flatening Effect



Flatening Effect

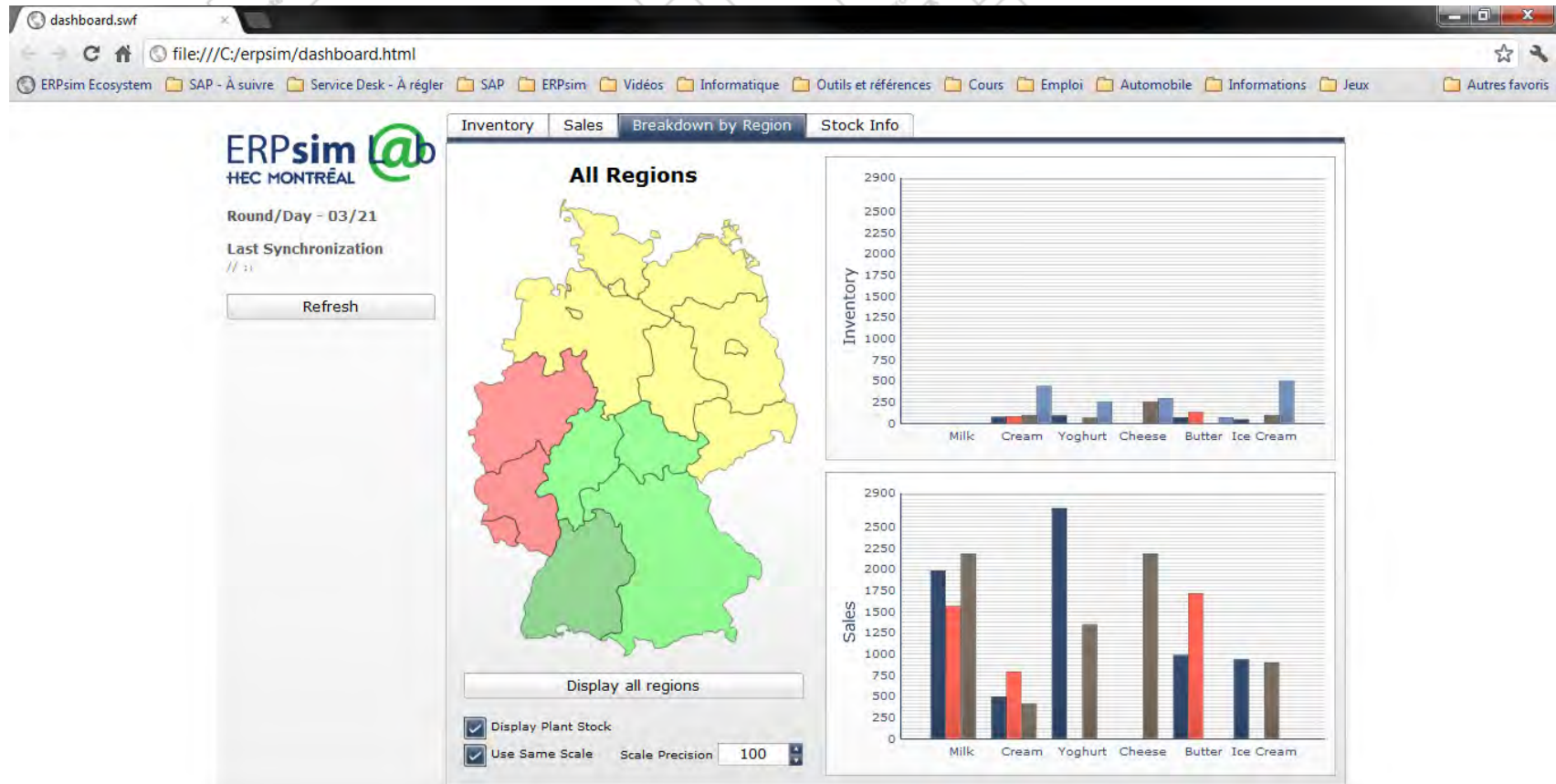
# HEC MONTRÉAL ERP SIMULATION GAME

powered by ERPsim

## Logistics Game: Round 3



# SAP Crystal Dashboard for ERPsim



# The Logistics Game: Round 3 (20 days)

**Let's start the simulator for  
the last 20 days!**

# HEC MONTRÉAL ERP SIMULATION GAME

powered by ERPsim

## Final Debriefing

# HEC MONTRÉAL ERP SIMULATION GAME

powered by ERPsim

## Conclusion

# Pedagogical Material and Resources

## ERPsim Participant's Guide

- The ERPsim Participant's Guide (eBook) is the main source of ERPsim R&D funding.
- Authors of the eBook have transferred copyrights to ERPsim Lab.
- ERPsim Lab's mission is to ensure the continued development and support of this simulation software.
- Proceeds from the sale of this eBook are used to fund the faculty support website and the team behind it.

# Requirements

- HEC Montréal grants a free educational ERP Simulation Game license to members of the SAP University Alliance (client request subject to a fee from the UCC).
- Students must purchase electronic material and access to the simulation for the manufacturing game.
- In order to have access to the game, interested Faculty members require ERPsim Instructor Training (Level 1) from one of our ERPsim Certified Trainers.

# SAP Summer Workshop

- Montreal, June 18 to 22, 2012
- Two Concurrent Tracks:
  - Level 1 : ERPsim Instructor
  - Level 2 : ERPsim Trainer
- Symposium on Experiential Learning in IT Education: June 17<sup>th</sup>

# Level 1: ERPsim Instructor



- Objectives:
  - Learn how to use ERPsim effectively and become confident in using the solution
  - Understand how to implement ERPsim and SAP in a curriculum
- Coverage:
  - Before the workshop
  - Distribution game (pre-workshop game)
  - During the workshop
  - Manufacturing Introduction
  - Manufacturing Extended
  - ERPsim Console administration
  - Simulation game and enactive learning pedagogical approaches
- Additional notes
  - A pre-workshop game is required. The remote game will use the Distribution game as an introduction to ERPsim.



# Level 1: ERPsim Instructor



Day	Description
1	Intro Manufacturing
2	SAP related knowledge for manufacturing scenario
3	ERPsim console admin
4	Extended Manufacturing and pedagogical approaches

# Level 2: ERPsim Trainer



- Pre-requisite
  - Level 1 training required
- Objectives:
  - Learn advanced ERPsim functionalities
  - Obtain Level 2 certification to become a “Train-the-Trainer”
- Coverage:
  - Logistics game
  - ERPsim BI and SAP Business Object
  - Advanced pedagogical approaches and troubleshooting
- Level 2 Certification Exam

# Level 2: ERPsim Trainer



Day	Description
1	Logistics game
2	Enactive approach to learning BI
3	Enactive approach to learning BI and configuration
4	Advanced pedagogical approaches and ERPsim troubleshooting, and Level 2 certification exam

# Symposium on Experiential Learning in IT Education: Call for Participation

- Organizers: Pierre-Majorique Léger (HEC Montréal), Paul Cronan (University of Arkansas), Jacques Robert (HEC) and Gilbert Babin (HEC Montréal)
- The purpose on this conference is to bring together researchers and educator willing to share their pedagogical experience and ongoing research related to the use of experiential learning in IT education.
- Workshop topics include, but are not limited to:
  - 1) Presentation of novel pedagogical material using experiential approach in IT, such as serious games, business simulation games and role playing simulations
  - 2) Research on the impact and benefits of experiential learning in IT.
- June 17, 2012 at HEC Montréal, Montreal, QC.

A Serious Game for Learning  
Enterprise Resource Planning Concepts

HEC MONTRÉAL  
ERP SIMULATION GAME

powered by ERPsim

# ERPsim Academic Version 2011-12

Prof. Pierre-Majorique Léger, Ph.D.

*Director, ERPsim Lab*

Jean-Francois Michon

*Operation manager, ERPsim Lab*

Pierre-Majorique LÉGER  
Jacques ROBERT  
Gilbert BABIN  
Robert PELLERIN  
Bret WAGNER

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ERP Simulation Game

Version : August 2011

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ERPsim  HEC MONTRÉAL  
<http://ersim.hec.ca>