

ERPsim

Transforming ERP Education 转型中的ERP教学

Jean-François Michon, M.Sc.
Operations Manager, ERPsim Lab
Lecturer, HEC Montréal
jfm@hec.ca
<http://linkedin.com/in/jfmichon>

Keynote Presentation
Beijing | June 17-18, 2016

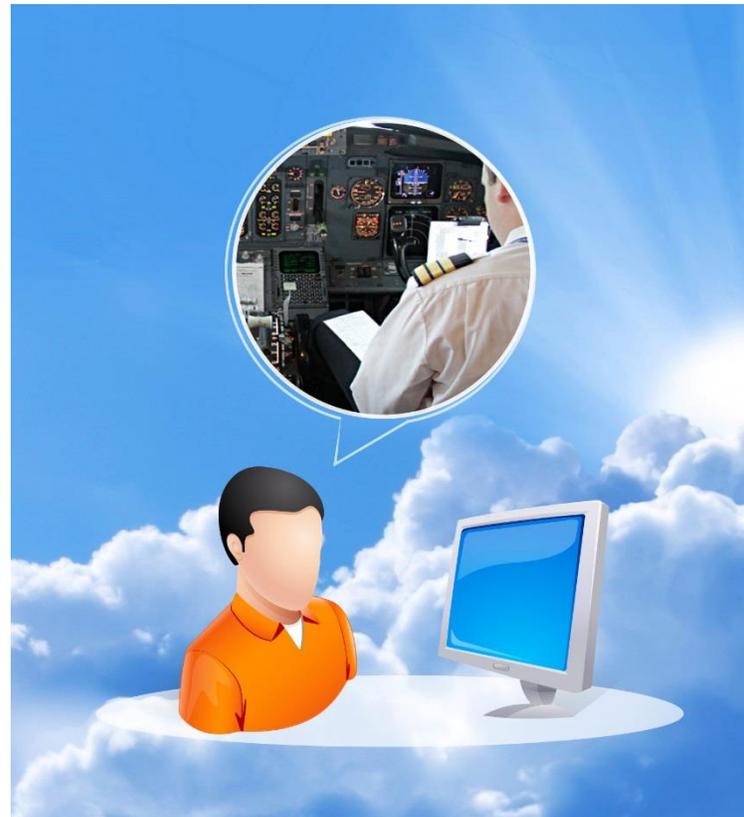
ERPsimLab
HEC MONTRÉAL

Serious games to learn enterprise
systems and business analytics

What is ERPsim? ERPsim是什么？

ERPsim acts like a flight simulator, but using a real plane in a virtual sky!

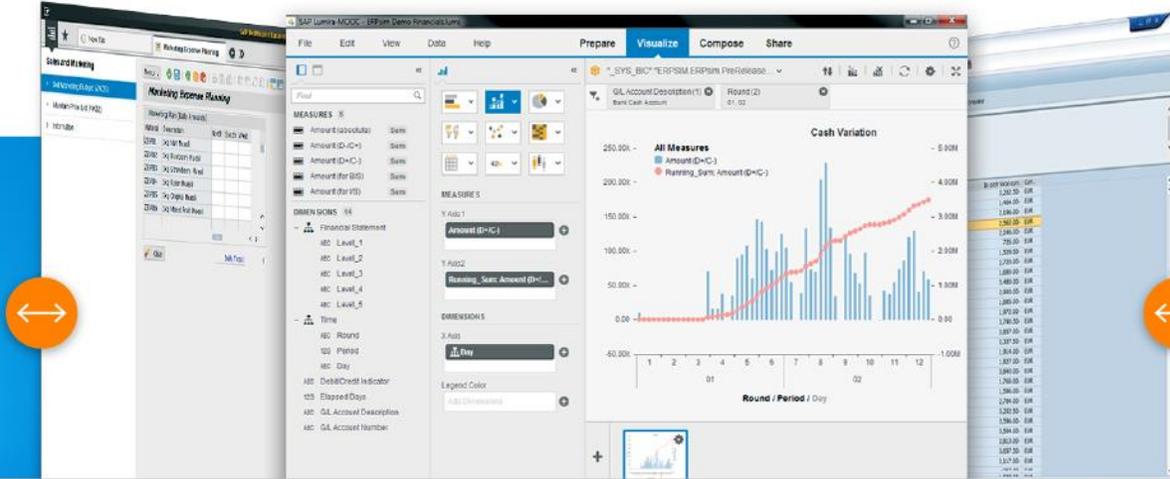
ERPsim的作用就像飞行模拟器，只是驾驶真正的飞机在虚拟的天空中飞行！



What ERPsim Does

ERPsim做什么？

ERPsim



Virtual System 虚拟系统

- 1 Automation of administrative tasks
管理任务自动化
- 2 Simulation of a market
模拟市场
- 3 Simulation of the passing of time
时间仿真

ERP System ERP系统



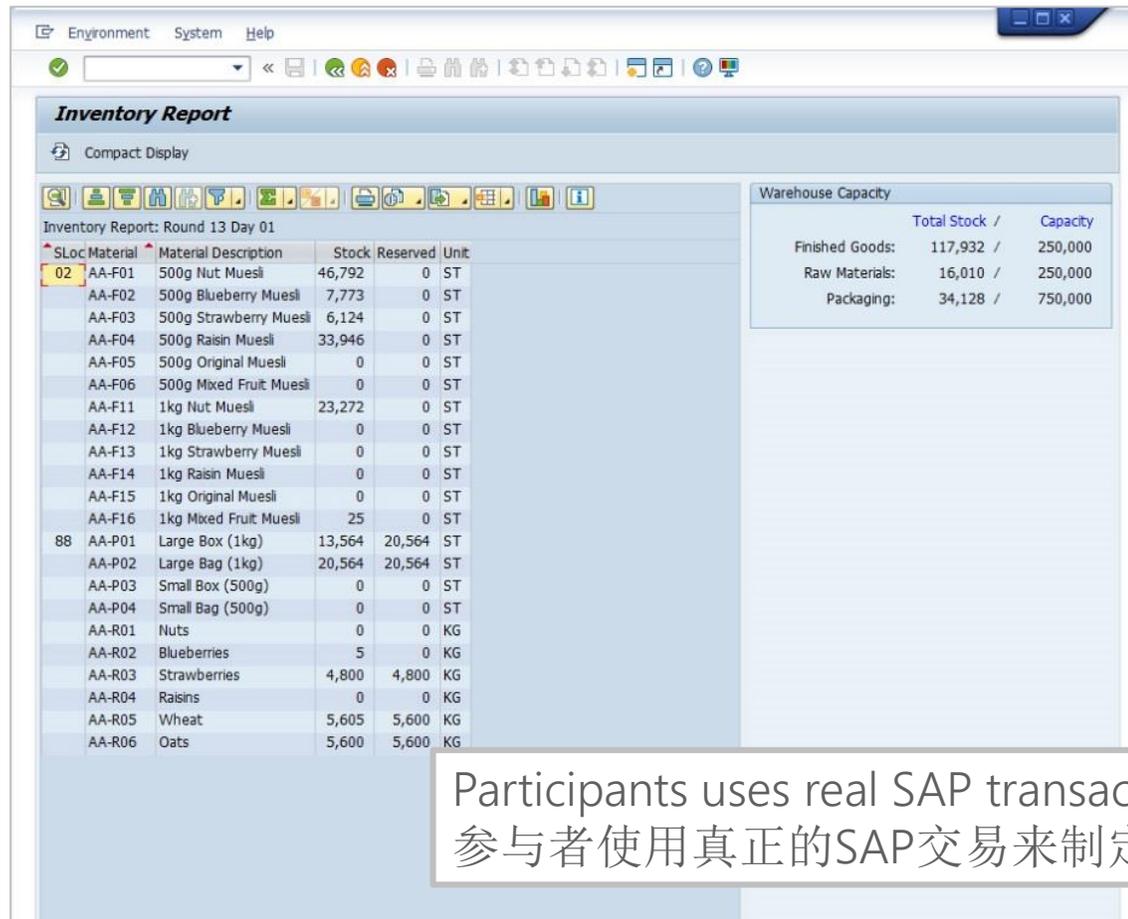
SAP ERP and Business Suite on HANA
SAP ERP和基于HANA的Business Suite

Participants 参与者

- 1 Business analytics
商业分析
- 2 Business decisions
商业决策

SAP ERP via SAP GUI

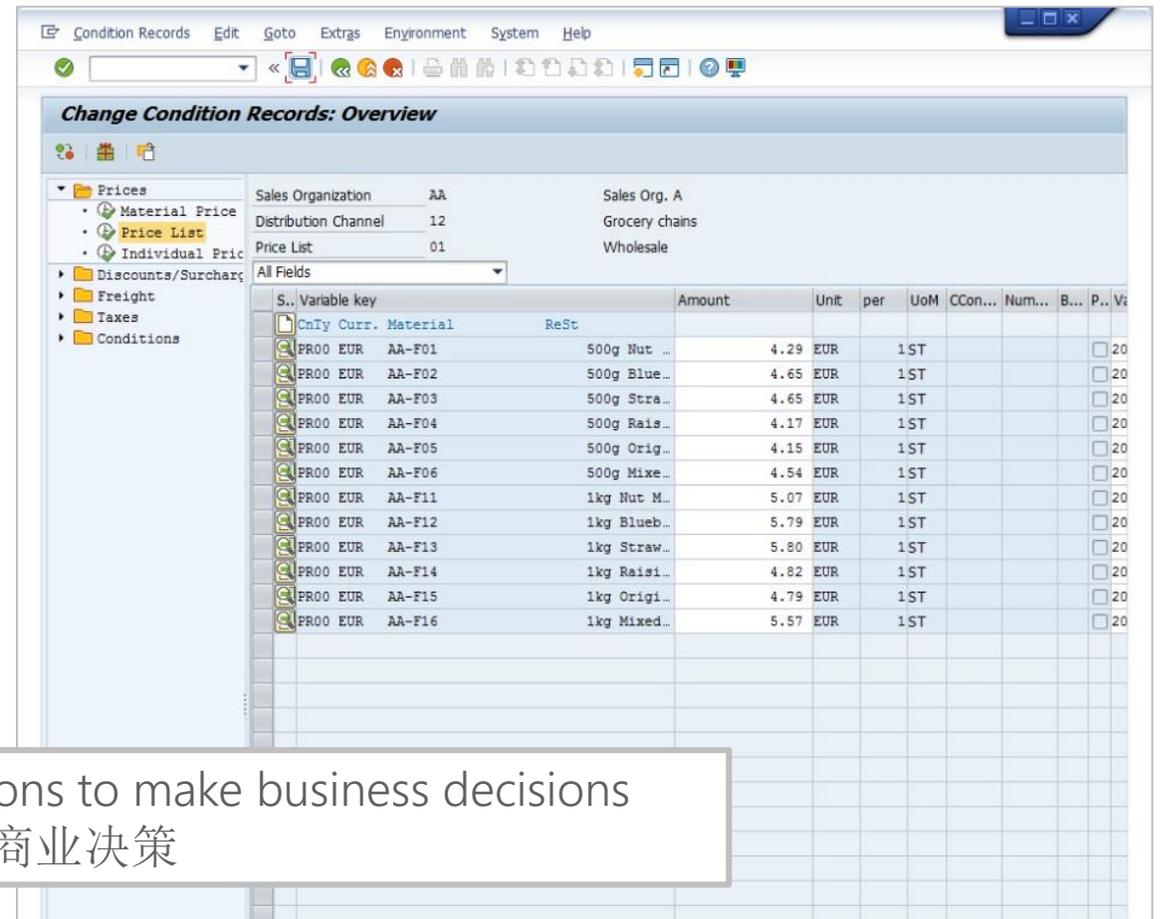
利用SAP GUI的SAP ERP



The screenshot shows the SAP Inventory Report interface. The main table lists materials with columns for Stock and Reserved. A 'Warehouse Capacity' summary table is also visible.

SLoc	Material	Material Description	Stock	Reserved	Unit
02	AA-F01	500g Nut Muesli	46,792	0	ST
	AA-F02	500g Blueberry Muesli	7,773	0	ST
	AA-F03	500g Strawberry Muesli	6,124	0	ST
	AA-F04	500g Raisin Muesli	33,946	0	ST
	AA-F05	500g Original Muesli	0	0	ST
	AA-F06	500g Mixed Fruit Muesli	0	0	ST
	AA-F11	1kg Nut Muesli	23,272	0	ST
	AA-F12	1kg Blueberry Muesli	0	0	ST
	AA-F13	1kg Strawberry Muesli	0	0	ST
	AA-F14	1kg Raisin Muesli	0	0	ST
	AA-F15	1kg Original Muesli	0	0	ST
	AA-F16	1kg Mixed Fruit Muesli	25	0	ST
88	AA-P01	Large Box (1kg)	13,564	20,564	ST
	AA-P02	Large Bag (1kg)	20,564	20,564	ST
	AA-P03	Small Box (500g)	0	0	ST
	AA-P04	Small Bag (500g)	0	0	ST
	AA-R01	Nuts	0	0	KG
	AA-R02	Blueberries	5	0	KG
	AA-R03	Strawberries	4,800	4,800	KG
	AA-R04	Raisins	0	0	KG
	AA-R05	Wheat	5,605	5,600	KG
	AA-R06	Oats	5,600	5,600	KG

Warehouse Capacity	
	Total Stock / Capacity
Finished Goods:	117,932 / 250,000
Raw Materials:	16,010 / 250,000
Packaging:	34,128 / 750,000

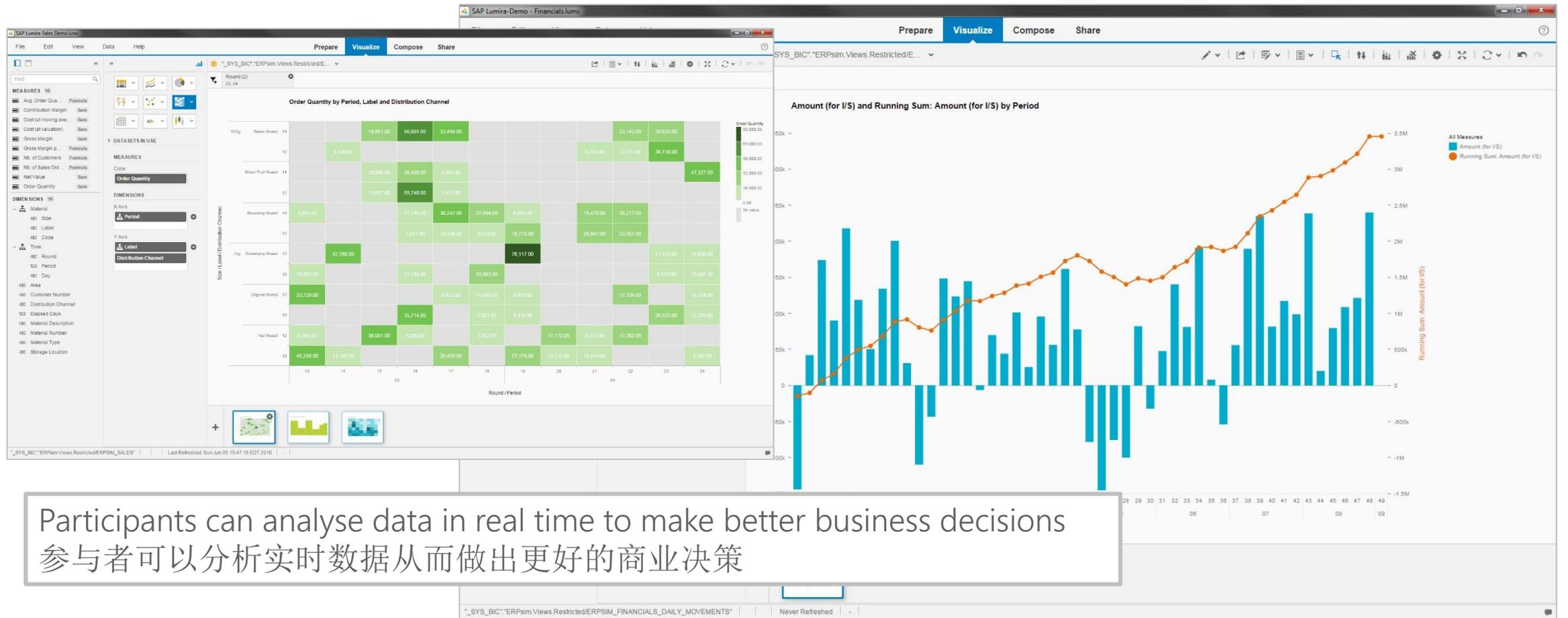


The screenshot shows the SAP Change Condition Records: Overview interface. It displays a list of price conditions with columns for Variable key, Amount, Unit, per, UoM, CCon..., Num..., B..., and P... V.

S...	Variable key	Amount	Unit	per	UoM	CCon...	Num...	B...	P... V
	CnTy Curr. Material ReSt								
	PROO EUR AA-F01 500g Nut ...	4.29	EUR		1ST				<input type="checkbox"/>
	PROO EUR AA-F02 500g Blue...	4.65	EUR		1ST				<input type="checkbox"/>
	PROO EUR AA-F03 500g Stra...	4.65	EUR		1ST				<input type="checkbox"/>
	PROO EUR AA-F04 500g Rais...	4.17	EUR		1ST				<input type="checkbox"/>
	PROO EUR AA-F05 500g Orig...	4.15	EUR		1ST				<input type="checkbox"/>
	PROO EUR AA-F06 500g Mixe...	4.54	EUR		1ST				<input type="checkbox"/>
	PROO EUR AA-F11 1kg Nut M...	5.07	EUR		1ST				<input type="checkbox"/>
	PROO EUR AA-F12 1kg Blueb...	5.79	EUR		1ST				<input type="checkbox"/>
	PROO EUR AA-F13 1kg Straw...	5.80	EUR		1ST				<input type="checkbox"/>
	PROO EUR AA-F14 1kg Raisi...	4.82	EUR		1ST				<input type="checkbox"/>
	PROO EUR AA-F15 1kg Origi...	4.79	EUR		1ST				<input type="checkbox"/>
	PROO EUR AA-F16 1kg Mixed...	5.57	EUR		1ST				<input type="checkbox"/>

Participants uses real SAP transactions to make business decisions
参与者使用真正的SAP交易来制定商业决策

ERPsim for SAP HANA ERPsim 支持 SAP HANA



Faculty Support 教职人员支持



Systems and user support (technical and pedagogical) are provided by SAP UCC BJTU.
系统与用户支持（技术及教学）由北京交通大学SAP大学能力中心提供。

Contact (联系方式)

- ucc@bjtu.edu.cn
- ucc.bjtu.edu.cn

The ERPsim Lab also provides support (in English) with regard to pedagogy and questions about the software and tools available.

ERPsim Lab同时提供教学、软件和工具相关问题的支持（英语）。

Contact (联系方式)

- erpsim@hec.ca
- erpsim.hec.ca

Instructional Material

1. **Job Aids (工作辅助表)**
2. **Slide Decks (幻灯片)**
3. **User Guide (用户指南)**

ERPsim Academic Release: 2016-2017

© Léger et al. 2004-2016. ERPsim is a proprietary technology developed by researchers at HEC Montréal, École Polytechnique de Montréal and Western Michigan Univ. Visit ersim.hec.ca for more information.

Job Aids 工作辅助表

Visual aids that accelerate the learning of business transactions and key parameters by participants.

直观的辅助信息使得参与者能够更快掌握业务交易和关键参数

生产制造介绍游戏 Manufacturing Introduction Game

登录名: \$1 到 \$9
密码: ERPSIM

HEC MONTRÉAL ERP SIMULATION GAME
Manufacturing Game
powered by ERPsim

销售预测 (Create Planned Indep. Req. (MD61))
1 选择产品组, 然后输入: \$\$-F
2
3 在第二个日期栏中更新预测量
4
? 预测量对应补货量

计算需求 (MRP Run (MD01))
1
2 再一次点击
3 在跳出窗口中

采购 (Automatic Gen. of POs (MES9N))
1

投入生产 (Coll. Conversion of PID Orders (CO41))
1

市场费用 (Marketing Expense Planning (ZAS5))
1

修改价格 (Condition Maintenance: Change (VK32))
1 打开Price文件夹并且双击Price List

产品设计

Nut \$\$-F01
40% 小麦
40% 燕麦
20% 坚果
1个盒子 / 1个袋子

Blueberry \$\$-F02
40% 小麦
40% 燕麦
20% 蓝莓
1个盒子 / 1个袋子

Strawberry \$\$-F03
40% 小麦
40% 燕麦
20% 草莓
1个盒子 / 1个袋子

Raisin \$\$-F04
40% 小麦
40% 燕麦
20% 葡萄干
1个盒子 / 1个袋子

Original \$\$-F05
50% 小麦
50% 燕麦
1个盒子 / 1个袋子

Mixed \$\$-F06
35% 小麦
35% 燕麦
30% 水果&坚果
1个盒子 / 1个袋子
*10% 坚果, 5% 蓝莓, 5% 草莓, 10% 葡萄干

基本信息

客户		供应商		
DC10	DC12	交货周期 (天)	3-5	
付款周期 (天)	20	10-15	付款周期 (天)	15

全部市场规模 生产产能
每团队每天收入 大概80000欧元
25000件/天

最初存货
每种成品100000件

德国市场

DC10 大型超市
DC12 杂货店

北部: DC10 2 家零售店, DC12 19 家零售店
西部: DC10 3 家零售店, DC12 17 家零售店
南部: DC10 7 家零售店, DC12 23 家零售店

Version: 2016_R0K_01
© Copyright 2004-2016, Léger et al., HEC Montréal. All rights reserved.

Chinese version | 中文版

Slide Decks 幻灯片

Ready-to-use set of slides to **ensure** that the **most critical parts** of the simulation **are well understood** by the participants.

现有整套幻灯片，**保证**模拟游戏中**最重要**的部分能够被参与者**充分理解**

Muesli麦片：物料清单

ERPsimLab
HEC MONTRÉAL

生产制造游戏：介绍
© Léger et al. 2004-2015.
École Polytechnique de M

产能

产能
每虚拟日
25000盒

只有一条
生产线-
每次只能
生产一种
产品

例如

虚拟日第一天
25000盒

虚拟日第二天
25000盒

ERPsimLab
HEC MONTRÉAL

生产制造游戏：介绍
© Léger et al. 2004-2015. ERPsim is a proprietary technology developed by researchers at HEC Montréal,
École Polytechnique de Montréal and Western Michigan Univ. Visit ersim.hec.ca for more information.

Commercial version
powered by
BATON
SIMULATIONS 38

Chinese version | 中文版

User Guide

用户指南

Each game comes with a participant's guide that **reviews** both the **main concepts** of the game and **SAP ERP functionalities**, and allows a better understanding of the business model surrounding the game.

每个游戏都配备有用户指南，**回顾**游戏中的**主要概念**和**SAP ERP功能**，增进（用户）对于该游戏相关商业模型的理解。



English version | 英文版

2016-2017 Release

1. **New (最新推出)**
 - ▶ ERPsim Retail Scenario
2. **Updated (升级)**
 - ▶ Manufacturing Scenario
3. **Roadmap (蓝图)**
 - ▶ Manufacturing Game
 - ▶ Logistics Game
 - ▶ Retail Game

ERPsim Academic Release: 2016-2017

© Léger et al. 2004-2016. ERPsim is a proprietary technology developed by researchers at HEC Montréal, École Polytechnique de Montréal and Western Michigan Univ. Visit ersim.hec.ca for more information.

New: ERPsim Retail Scenario

新推出：ERPsim零售游戏



HEC MONTRÉAL ERP SIMULATION GAME *Retail Game*

powered by ERPsim

Retail Scenario Pedagogical Objectives

零售游戏教学目标



New: ERPsim Retail Scenario

新推出：ERPsim零售游戏



Features

- Longer game timeline (a year) tagged with calendar dates
- Customer geolocation
- Demand variation by season
- Multiple vendors, freight costs, varied lead times
- ECC on HANA

功能

- 更长的游戏时间线（一年）以日历日期标注
- 客户地理定位
- 需求按季变化
- 多个供应商、运费、不同的交付周期
- ECC on HANA

Updated: Manufacturing Scenarios

升级：生产制造游戏



- Master data to support all 12 products
- Improved analytics support
- Revised accounting
 - Inventory Valuation
 - New Company Valuation metric used to rank teams and determine winner
- Better continuity between Introduction, Extended and Advanced scenarios
- Improved Costs, Inventory, and Sales tracking and reporting
- And many, many more...

- 主数据支持全部12种产品
- 改进了对分析的支持
- 修订了会计制度
 - 存货估价
 - 用于队伍排名和决定冠军的新的公司估值指标
- 入门游戏、扩展游戏和高阶游戏之间更具延续性
- 改进成本、库存、销售追踪和报表
- 还有更多，更多.....

Manufacturing Scenario Roadmap

生产制造游戏蓝图

Fall 2016

2016秋

Updated offering 更新内容

- Timeline tagged with calendar dates
- Customer geolocation
- ECC on HANA

Winter 2017

2017冬

Planned Innovations* 计划更新*

- S/4 HANA and Fiori UX
- SAP BusinessObjects Cloud

* Subject to SAP support and technology roadmap
* 根据SAP支持和技术蓝图

Future Direction 未来方向

Possible Innovations 潜在更新

- Other UX options*
 - SAP Personas
 - SAP Business Client
 - Fiori 2.0

Logistics Scenario Roadmap

物流游戏蓝图

Fall 2016

2016秋

Same offering
同样内容

Winter 2017

2017冬

Planned Innovations*
计划更新*

- S/4 HANA and Fiori UX
- SAP BusinessObjects Cloud

* Subject to SAP support and technology roadmap
* 根据SAP支持和技术蓝图

Future Directions 未来方向

Possible Innovations
潜在更新

- Other UX options*
 - SAP Personas
 - SAP Business Client
 - Fiori 2.0
- Replacement of Crystal Dashboards (Xcelsius), possibly by SAP Digital Boardroom

Retail Scenario Roadmap

零售游戏蓝图

Fall 2016

2016秋

Initial offering 初始内容

- Longer game timeline (a year) tagged with calendar dates
- Customer geolocation
- Demand variation by season
- Multiple vendors, freight costs, varied lead times
- ECC on HANA

Winter 2017

2017冬

Planned Innovations* 计划更新*

- S/4 HANA and Fiori UX
- SAP BusinessObjects Cloud
- SAP Digital Boardroom beta
- Demand variation by season and product categories

* Subject to SAP support and technology roadmap
* 根据SAP支持和技术蓝图

Future Directions 未来方向

Possible Innovations 潜在更新

- Social sentiment
- Internet of Things
- Brand loyalty and reputation management
- Adoption of new SAP innovations, particularly for Retail Industry Solution*
- Other UX options such as SAP Personas and SAP Business Client*

ERPsim International Competition

ERPsim Academic Release: 2016-2017

© Léger et al. 2004-2016. ERPsim is a proprietary technology developed by researchers at HEC Montréal, École Polytechnique de Montréal and Western Michigan Univ. Visit ersim.hec.ca for more information.

ERPsim International Competition

ERPsim 国际竞赛

Each year, an international competition is hosted remotely by HEC Montréal with the best teams from four regions: Americas, EMEA, APJ and Greater China.

This year, three universities from China will participate in the final on June 21:

今年，三所中国高校将参加6月21日的决赛：

- China University of Petroleum – Beijing
- Jiangxi University of Finance and Economics – Jiangxi
- Donghua University – Shanghai

Good luck to the participating teams!

祝参赛团队好运！



Thank you!
谢谢!

Learn more about ERPsim

更多了解ERPsim

erpsim.hec.ca erpsim@hec.ca