

ERPsim

Leap Year Challenge

Round 4 → Round 5

Please Note

This event might be recorded and made available on the ERPsim website. Please be aware that questions you ask or discussions you participate in will be recorded as a part of the presentation.

By attending this online event you are giving your permission to being recorded. Participant names / photos / video (if connected to event via webcam) may be shared. If you do not wish to be recorded, please disconnect from the event at this time.

This presentation contain references to products of SAP SE, Dietmar-Hopp-Allee 16, 69190 Walldorf, Germany. The names of these products are registered and/or unregistered trademarks of SAP SE. SAP SE is neither the author nor the publisher of this presentation and is not responsible for its content.

ERPsim Leap Year (Logistics Sustainability) Challenge
Asynchronous | February 22, 2024

ERPsimLab
HEC MONTRÉAL

Serious games to learn enterprise
systems and business analytics

בְּרוּךְ הַבָּא
välkommen 欢迎 velkommen
chào mừng ようこそ hoşgeldiniz merħba
خوش آمدید
benvenuto willkommen 환영
witamy selamat datang
أهلاً بك Welcome bienvenu
fáilte welkom bine ati venit bienvenido
добро пожаловать स्वागत vitéjte
bem-vindo tervetuloa خوش آمدی
wamukelekile wëllkomm καλώς ήρθες

Schedule (Montréal Time)

Thursday, Feb 22, 2024

- 12:00 – Welcome
- 12:05 - Round 4 Review, FAQ
- 12:10 - Round 4 Run
- 12:20 - Round 4 Results
- 12:25 – Round 5 Information
- 12:30 – Q&A

Teams

AA - Tecnológico de Monterrey
BB - University of Nottingham
~~**CC** - Conestoga College~~
DD - Durham College
EE - The University of Texas at Dallas
FF - Neusoft Institute Guangdong
GG - International School of Business (UEH-ISB)
HH - Central Michigan University
II - Penn State University
JJ - Beijing Jiaotong University
KK - JAMK - Jyväskylä University of Applied Sciences
LL - St Michael Learning Academy
MM - Missouri University of Science & Technology
NN - SENATI
PP - Purdue University
QQ - Seneca Polytechnic
RR - Metro State University

A2 - The University of Melbourne
B2 - University of the Cordilleras
C2 - Doon Business School, India
D2 - Duy Tan University
~~**E2** - Excelsior Community College~~
F2 - Universidad Catolica Andres Bello
G2 - Purdue University Global
H2 - Hebei University of Science and Technology
I2 - Laval University
J2 - Xi'an Jiaotong-Liverpool University
K2 - East Carolina University
~~**L2** - UCLL~~
M2 - Morgan State University
N2 - Niagara College
P2 - Université de Sherbrooke
Q2 - SIIT Thammasat University
R2 - California State University, Chico

<https://www.linkedin.com/company/erpsimlab>

ERPsim Lab - HEC Montréal
1,325 followers
5d • 🌐

🏆 ERPsim Leap Year Challenge: Week 4

As we venture into Week 4, the government is significantly increasing the carbon tax 📈, emphasizing their commitment to further decrease GHG emissions.

This week, one of your main suppliers is in a tough spot and has to resort to an old factory equipped with outdated, more pollutant machinery 🏭.


On the flip side, another supplier has invested in greener manufacturing initiatives 🌱, reducing his carbon footprint per unit delivered.

As we move forward, these changes mean you might have to think over your plans again... 😊

How will these developments shape your decisions?

Best of luck to all teams! 🌱

#ERPsim20Years #ERPsimChallenge #Week4 #SustainableBusiness #AdaptiveStrategy #ERPsim #LeapYearChallenge #SAPNextGen #UniversityAlliances




👍 Pierre-Majorique Léger and 21 others



ERPsim Lab - HEC Montréal
1,325 followers
1d • Edited • 🌐

📌 Reminder: ERPsim Leap Year Challenge - Round 4 coming Up!

As we delve deeper into Week 4, the increased carbon tax demands stra...see more



WEEK 4



HEATHER (CZECH) MATTHEWS and 30 others

5 reposts

Round 4 Review

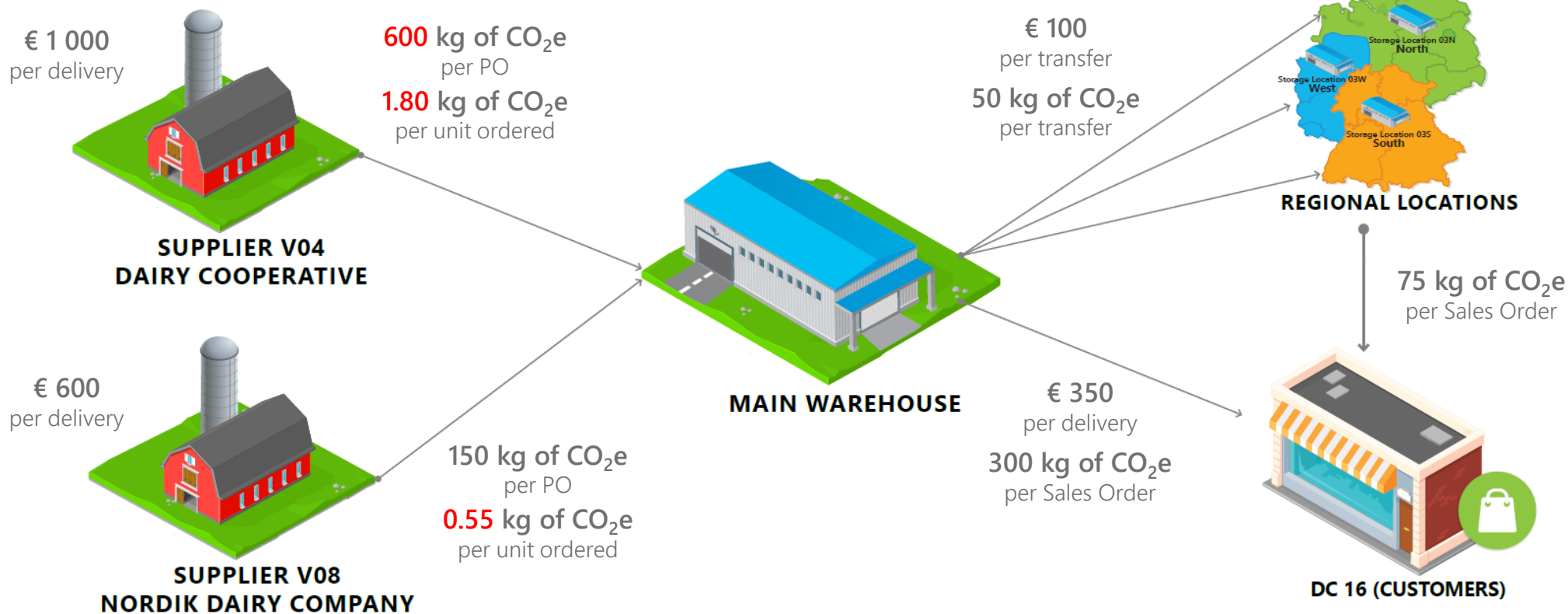
Round 4 - Facts and Brainteasers

- Carbon Tax Value: **€ 0.45/kg** of CO₂e
- Two suppliers (V04 & V08)
 - V04: 1.50 → **1.80 kg** CO₂e per unit
 - V04: 400 → **600 kg** CO₂e per delivery
 - V04: € 1 000 per delivery
 - V08: 0.80 → **0.55 kg** CO₂e per unit
 - V08: 150 kg CO₂e per delivery
 - V08: € 600 per delivery
- Procurement is enabled.
- Stock transfer is enabled, sell from central, regions or both!
- Choose your **supplier!**
- Check your **pricing!**
- Replenish your **inventory!**
- Some **reports** are available for a fee.
- OData (all) is enabled.

Round 4 - Scenario

Carbon Tax: € 0.45
per kg of CO₂e

	 \$\$-T01	 \$\$-T02	 \$\$-T03	 \$\$-T04	 \$\$-T05	 \$\$-T06
V04	€ 22.95	€ 72.07	€ 25.85	€ 82.68	€ 59.88	€ 43.15
V08	€ 23.52	€ 73.87	€ 26.50	€ 84.75	€ 61.38	€ 44.23



Round 4 - Considerations

- How the increased carbon tax impacts our business?
- How suppliers' carbon emissions changes impact our strategy?
- What can we do to alleviate the impact?
- What and how much to order? From which supplier?
- Should we sell from regions, central, or both?
- Push or pull our stock transfers? How often?
- Are our prices too high, too low, OK?
- What about our competitors?

Round 4 - FAQ

- Choice of Vendor – How to avoid errors?

Round 4 Run

Round 4 Results

Round 3 – Results Top 10

Rank	Company Code	Financial Metrics							Sustainability Metrics		
		Company Valuation (EUR)	Credit Rating	Cumulative Net Income (EUR)	Round Net Income (EUR)	Total Sales (EUR)	Gross Margin	Net Margin	Total CO2e	CO2e per Unit Sold (kg/unit)	CO2e per Sales (kg/euro)
1	P2	868,873.60	AAA+	32,582.76	15,575.61	360,791.93	15.447%	9.031%	39,054.20	5.14	0.11
2	K2	761,552.37	AA+	28,825.08	16,706.31	376,815.78	15.724%	7.650%	45,316.80	5.77	0.12
3	AA	697,193.18	AA+	28,105.60	16,092.51	348,656.97	14.027%	8.061%	38,096.60	5.52	0.11
4	Q2	662,994.40	AAA+	23,612.29	14,389.19	329,040.74	13.528%	7.176%	35,843.10	4.78	0.11
5	DD	548,078.13	AAA+	20,552.93	13,303.35	518,679.34	11.607%	3.963%	68,650.00	5.18	0.13
6	GG	509,958.40	AAA+	18,498.44	12,784.90	351,359.63	11.775%	5.265%	40,835.00	4.96	0.12
7	MM	505,412.00	AAA+	18,952.95	11,294.98	322,843.25	12.484%	5.871%	37,195.00	4.73	0.12
8	BB	490,843.15	AA	18,622.28	6,799.79	240,619.04	16.446%	7.739%	34,485.00	6.58	0.14
9	R2	420,375.20	AAA+	13,764.07	14,765.38	430,983.70	9.723%	3.194%	47,338.50	5.16	0.11
10	QQ	416,206.88	AA+	16,778.34	3,994.48	389,475.83	12.858%	4.308%	53,436.00	5.56	0.14

Round 4 – Results Top 10

Rank	Company Code	Financial Metrics							Sustainability Metrics		
		Company Valuation (EUR)	Credit Rating	Cumulative Net Income (EUR)	Round Net Income (EUR)	Total Sales (EUR)	Gross Margin	Net Margin	Total CO2e	CO2e per Unit Sold (kg/unit)	CO2e per Sales (kg/euro)
1	K2	924,297.60	AAA+	44,614.88	15,989.80	493,842.58	15.499%	9.034%	51,074.05	5.09	0.10
2	P2	906,055.40	AAA+	45,302.77	12,720.01	462,489.03	15.060%	9.795%	45,866.70	4.63	0.10
3	AA	861,937.40	AAA+	43,096.87	14,991.27	483,237.07	13.533%	8.918%	44,836.00	4.79	0.09
4	DD	715,432.60	AAA+	35,771.63	15,218.70	625,930.99	12.289%	5.715%	74,671.35	4.71	0.12
5	Q2	714,534.80	AAA+	34,726.74	11,114.45	509,835.93	11.352%	6.811%	48,124.05	4.36	0.09
6	GG	673,581.60	AAA+	33,179.08	14,680.64	506,788.13	12.097%	6.547%	49,207.00	4.22	0.10
7	BB	640,552.60	AAA+	30,727.63	12,105.35	330,356.04	15.976%	9.301%	38,810.00	5.03	0.12
8	QQ	623,730.40	AAA+	31,186.52	14,408.18	492,362.65	13.280%	6.334%	57,686.00	4.89	0.12
9	MM	577,050.80	AAA+	28,852.54	9,899.59	472,446.44	10.880%	6.107%	49,646.40	4.20	0.11
10	D2	462,221.77	AA+	23,444.42	10,235.02	323,805.80	11.973%	7.240%	36,683.40	5.69	0.11

Round 5 Information

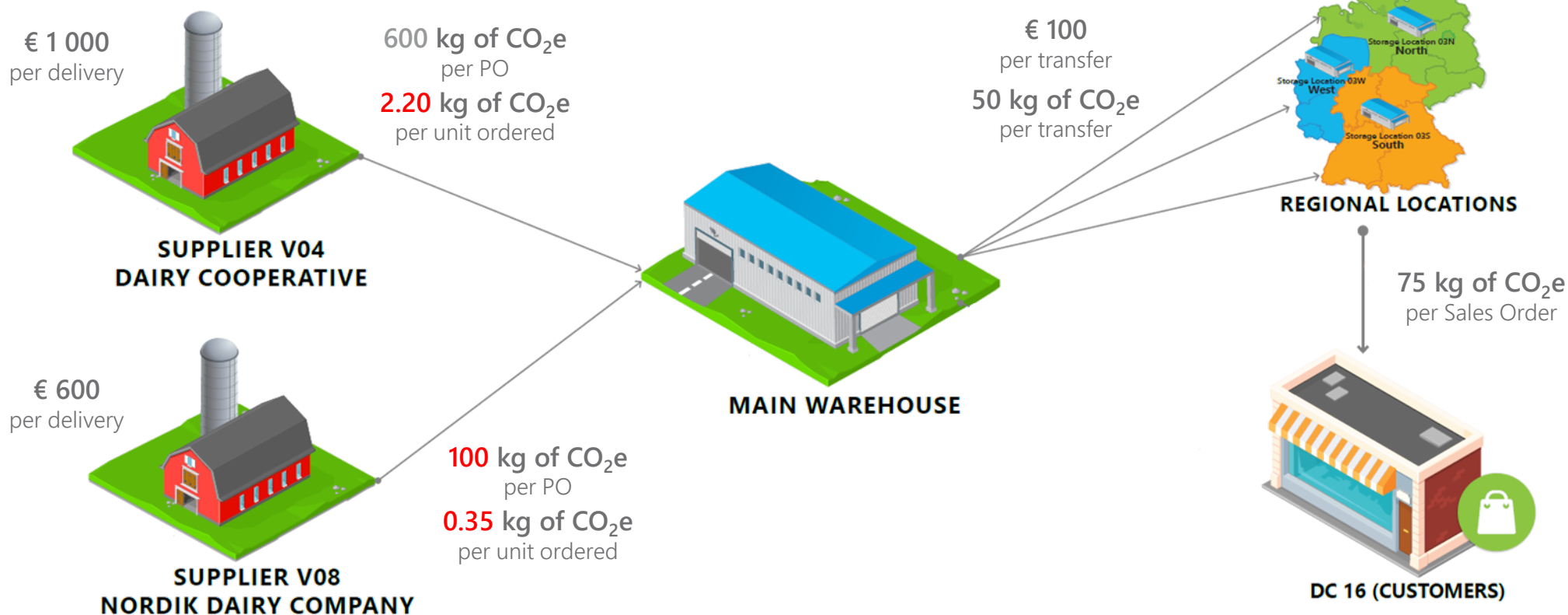
Round 5 - Facts and Brainteasers

- Carbon Tax Value: **€ 0.50/kg** of CO₂e
- Two suppliers (V04 & V08)
 - V04: 1.80 → **2.20 kg** CO₂e per unit
 - V04: € 600 CO₂e per delivery
 - V04: € 1 000 per delivery
 - V08: 0.55 → **0.35 kg** CO₂e per unit
 - V08: 150 → **100 kg** CO₂e per delivery
 - V08: € 600 per delivery
- Procurement is **enabled** with choice of vendor.
- Stock transfer is enabled but selling from **regions only!**
- Choose your **supplier!**
- Check your **pricing!**
- Replenish your **inventory!**
- Some **reports** are available **for a fee.**
- OData (all) is **enabled.**

Round 5 - Scenario

Carbon Tax: € 0.50
per kg of CO₂e

	 \$\$-T01	 \$\$-T02	 \$\$-T03	 \$\$-T04	 \$\$-T05	 \$\$-T06
V04	€ 22.95	€ 72.07	€ 25.85	€ 82.68	€ 59.88	€ 43.15
V08	€ 23.52	€ 73.87	€ 26.50	€ 84.75	€ 61.38	€ 44.23



Round 5 - Thoughts

- Did the carbon reports help us make better decisions?
- Are we able to optimize our company's operations and maximize value given the presence of carbon costs?
- Which products shall I continue selling?
- What is the best stock transfer strategy to sell from regions?
- Are our prices too high, too low, OK?
- What about our competitors?
- Avoid last round "temptations"

Thank you!

Learn more about ERPsim

erpsim.hec.ca erpsim@hec.ca