Rail Yard Operational Excellence at Olin Bécancour

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Agenda

Introduction to Olin

Business need

Introduction to Hulix

Solution with the PI System

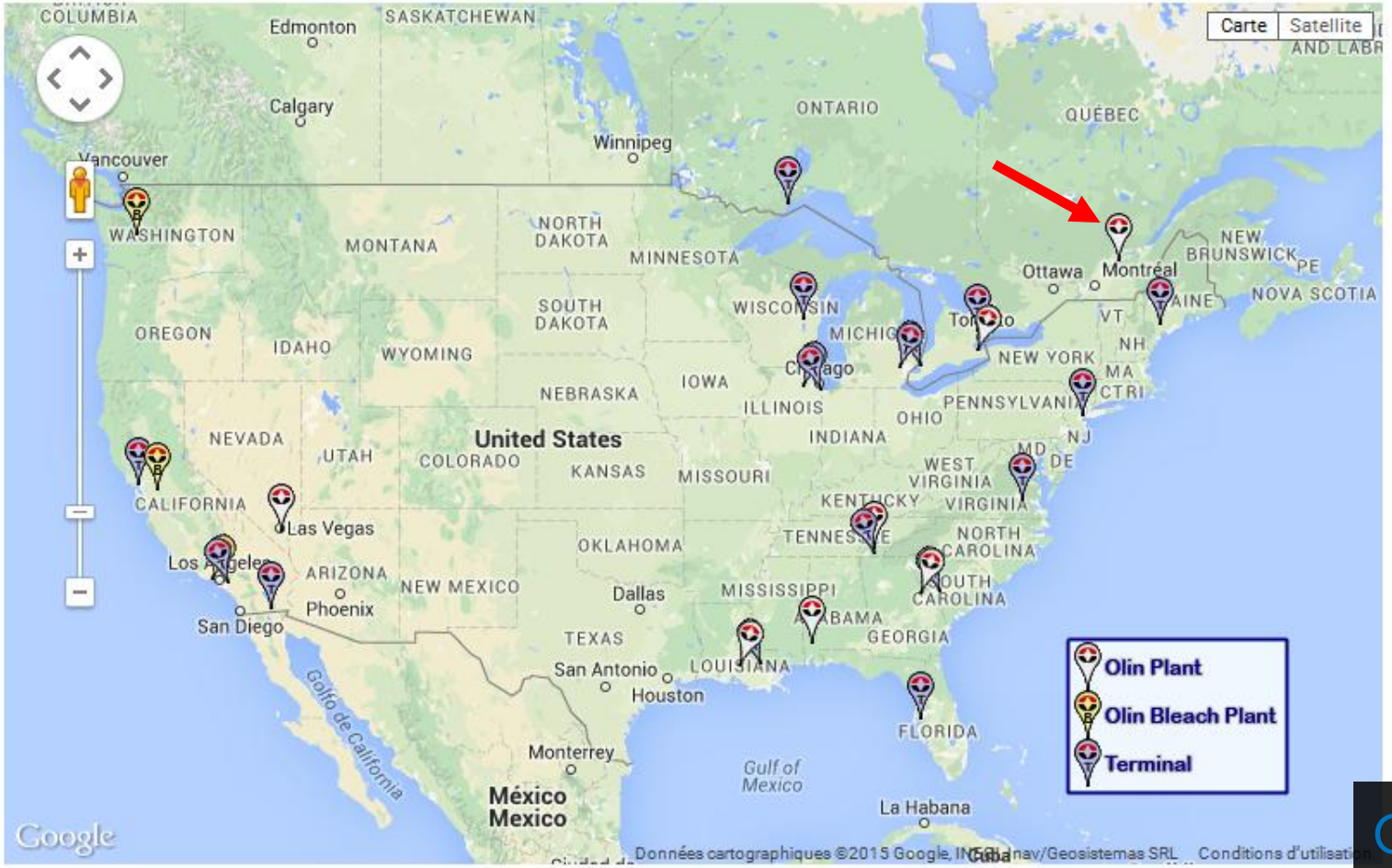
Reports

Benefits

Conclusion

Olin Bécancour

- Headquartered in Clayton, Missouri, C/A division in Cleveland, Tennessee.
- 2 distinct divisions:
  - Chloralkali (chemicals products)
  - Winchester (munitions)
- Olin Bécancour is part of the chloralkali division
- Olin Bécancour produces:
  - Liquid chlorine
  - Caustic 50%
  - Hydrochloric acid
  - Sodium hypochlorite (bleach)
  - Hydrogen



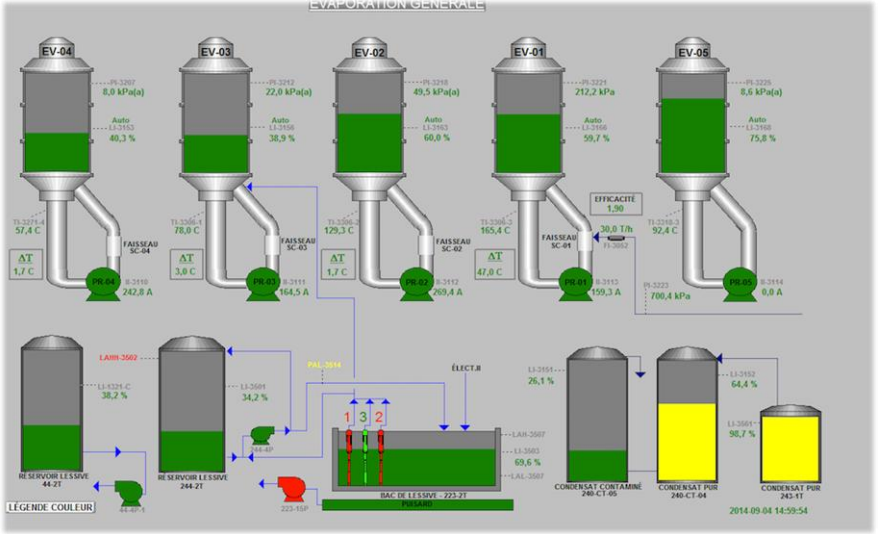
Olin Map

The PI System at Olin Bécancour

PI System user since 2010

Mainly used for process monitoring

- Stocks level
- Temperature, pressure, controls
- Root cause analysis
- Process optimization



Business need – Rail yard

Roughly 2,500 railcars transit in Olin rail yard

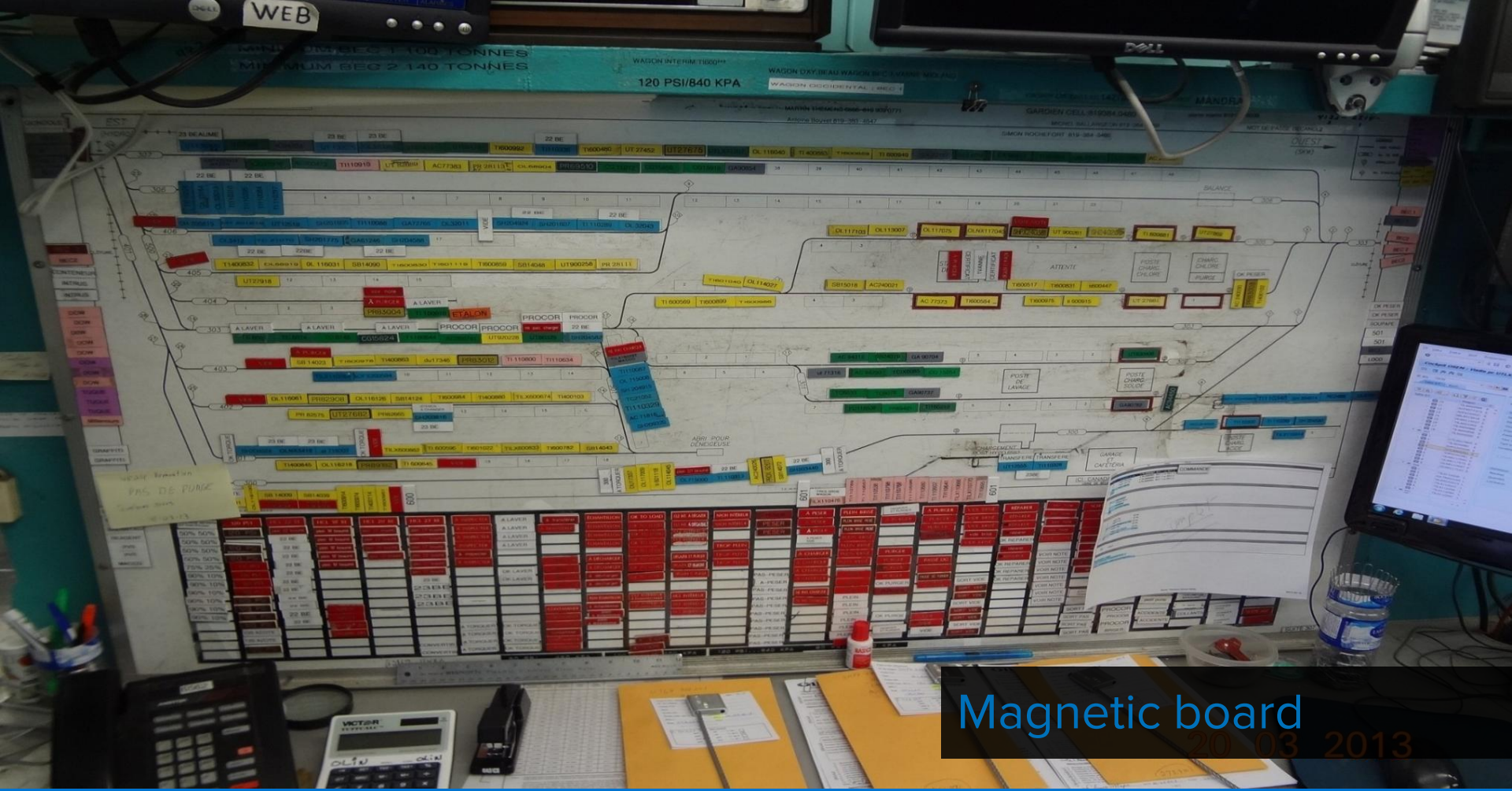
Need to share information in order to improve rail yard management

- How many chlorine railcars do we have?
- How many are full/empty?
- Which ones are reserved to specific customers?
- …

The questions are asked at any time during the day (5-6 people must be able to track this information)

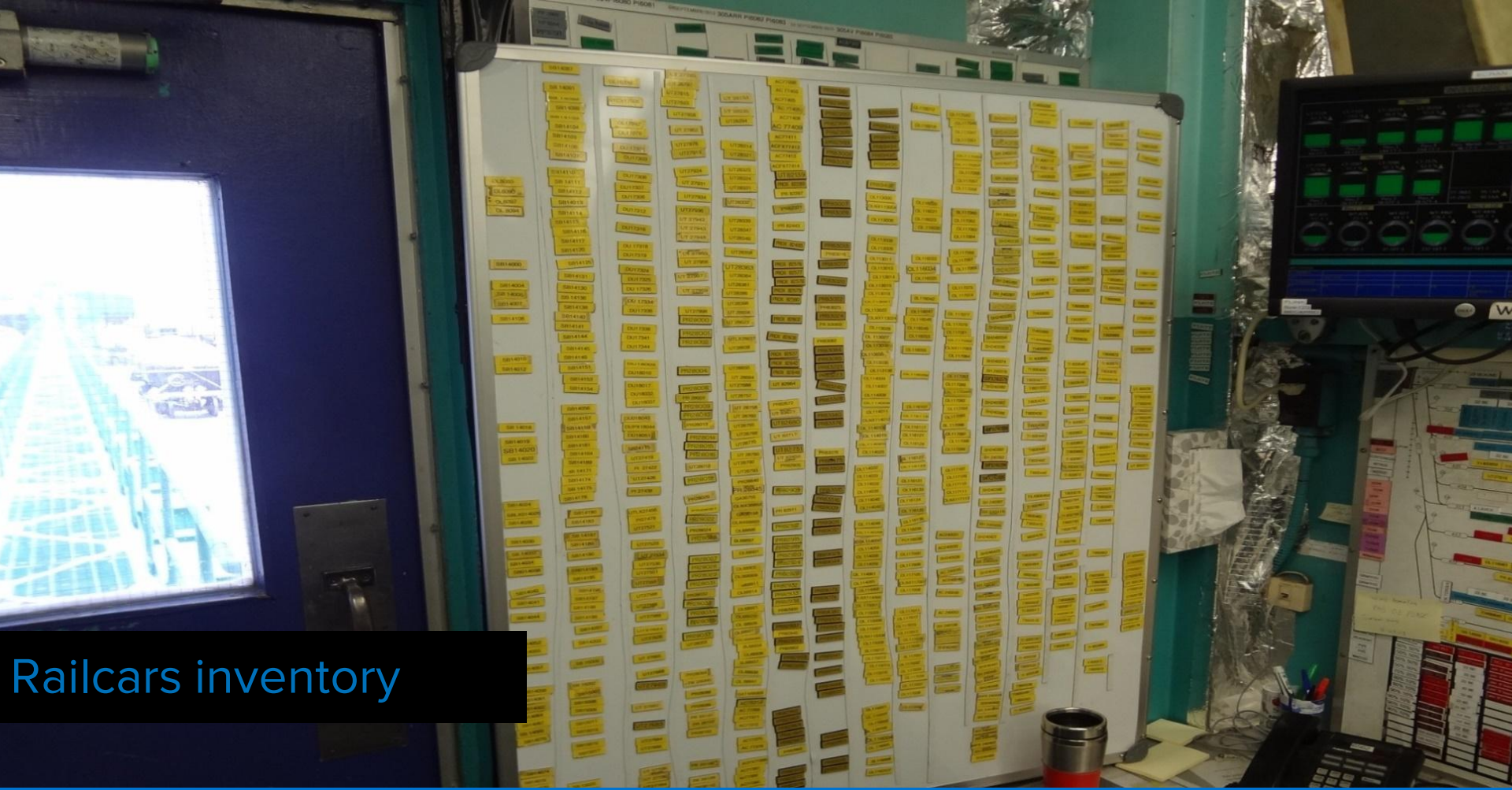
The former communication mechanism was … a magnetic white board

Need for shareable real-time data to spread the information efficiently across the plant

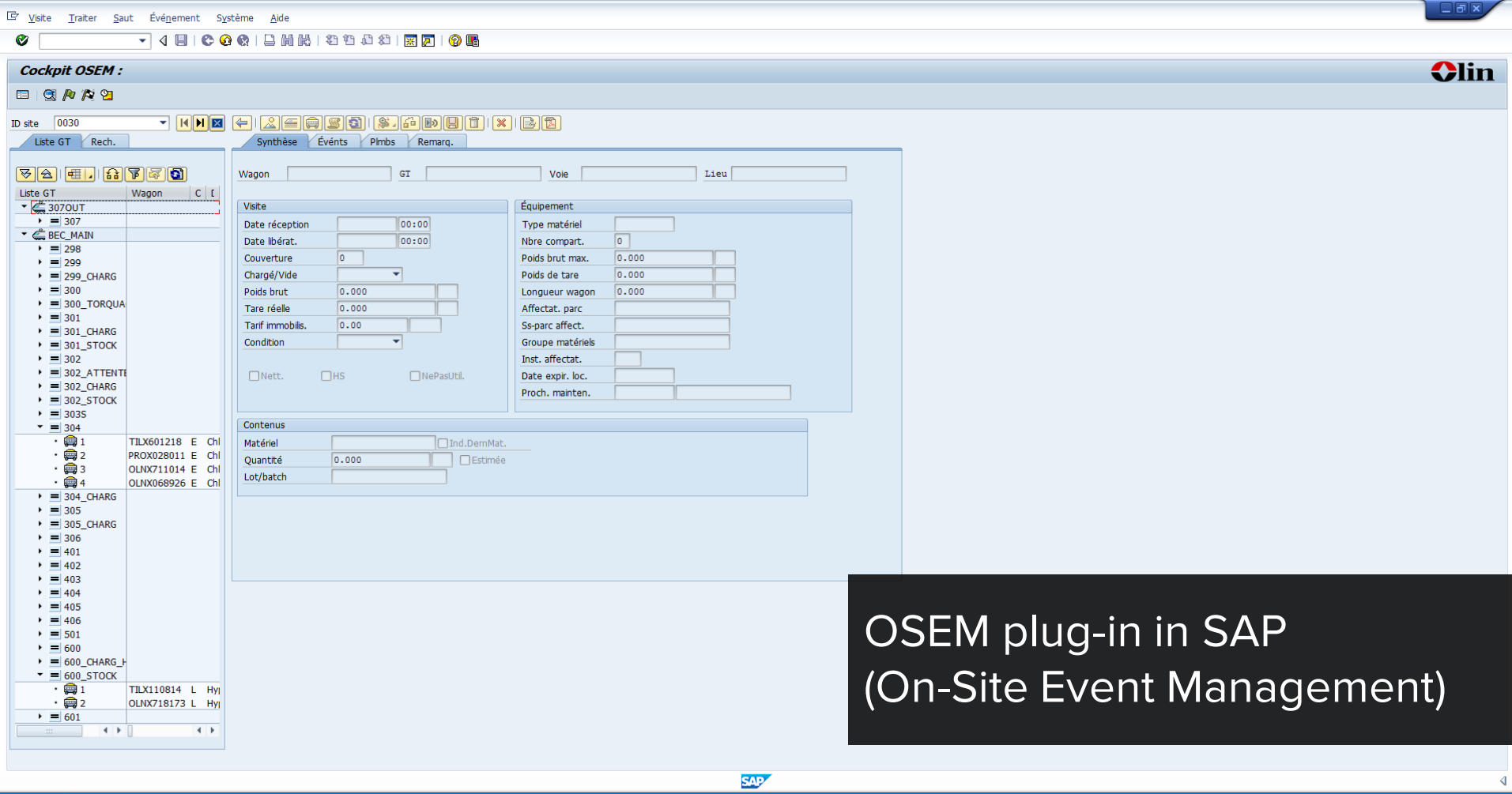


Magnetic board

20 03 2013



Railcars inventory



OSEM plug-in in SAP (On-Site Event Management)

Project timeline

March 2013 : PI System audit and discussions between Olin and OSIsoft

June 2013 : First meeting between Olin and Hulix at the Montreal regional seminar to discuss the data integration needs

July 2013 : OSIsoft – PI Interface for RDBMS installation to collect OSEM data

Knowledge transfer meeting with Olin, Hulix and OSIsoft

Begin working on the solution

January 2014 : Project Go-Live

www.hulix.com

Hulix Conseil

Founded in 2008 by Mr. François Ruel

Multiple OSIsoft Users Conference presentations from 2010 to 2013

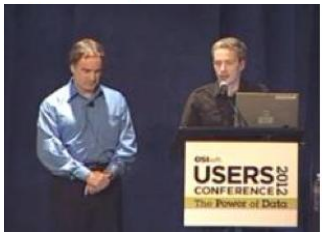
Approach for the Olin project

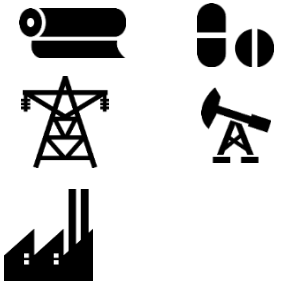
- Leveraging AF as a whole
- Event Frames generation and extraction
- Events aggregation, classification and grouping
- Custom PI ProcessBook and Microsoft Excel add-ins for reports and visualization

HULIX

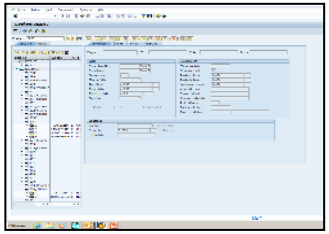
www.hulix.com

OSIsoft. partner





Solution



Manual data entries in SAP (no change in procedure)

AF hierarchy for rail yard configuration

OSEM

SAP

Poste PI System

Poste SAP

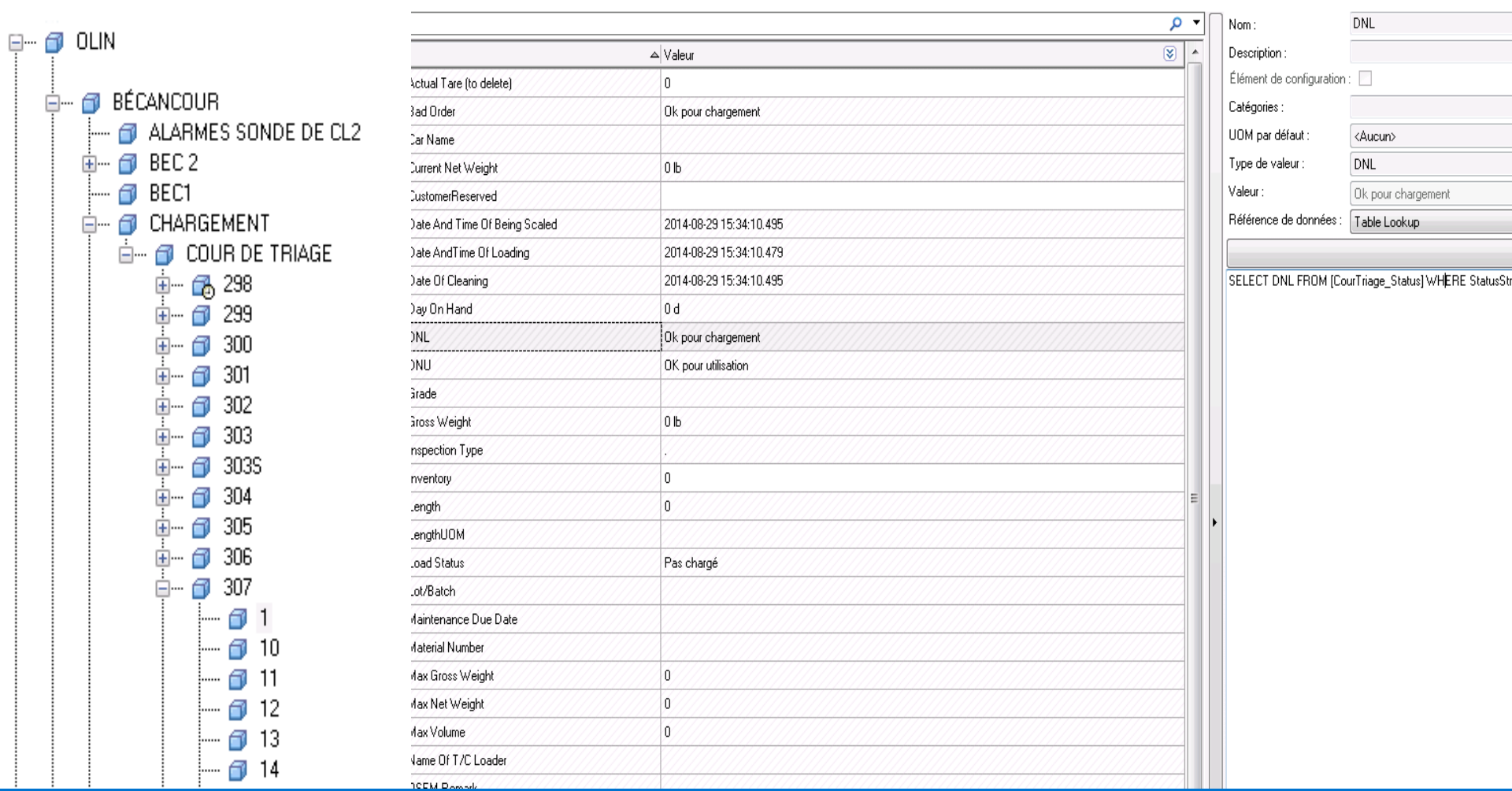
PI Server

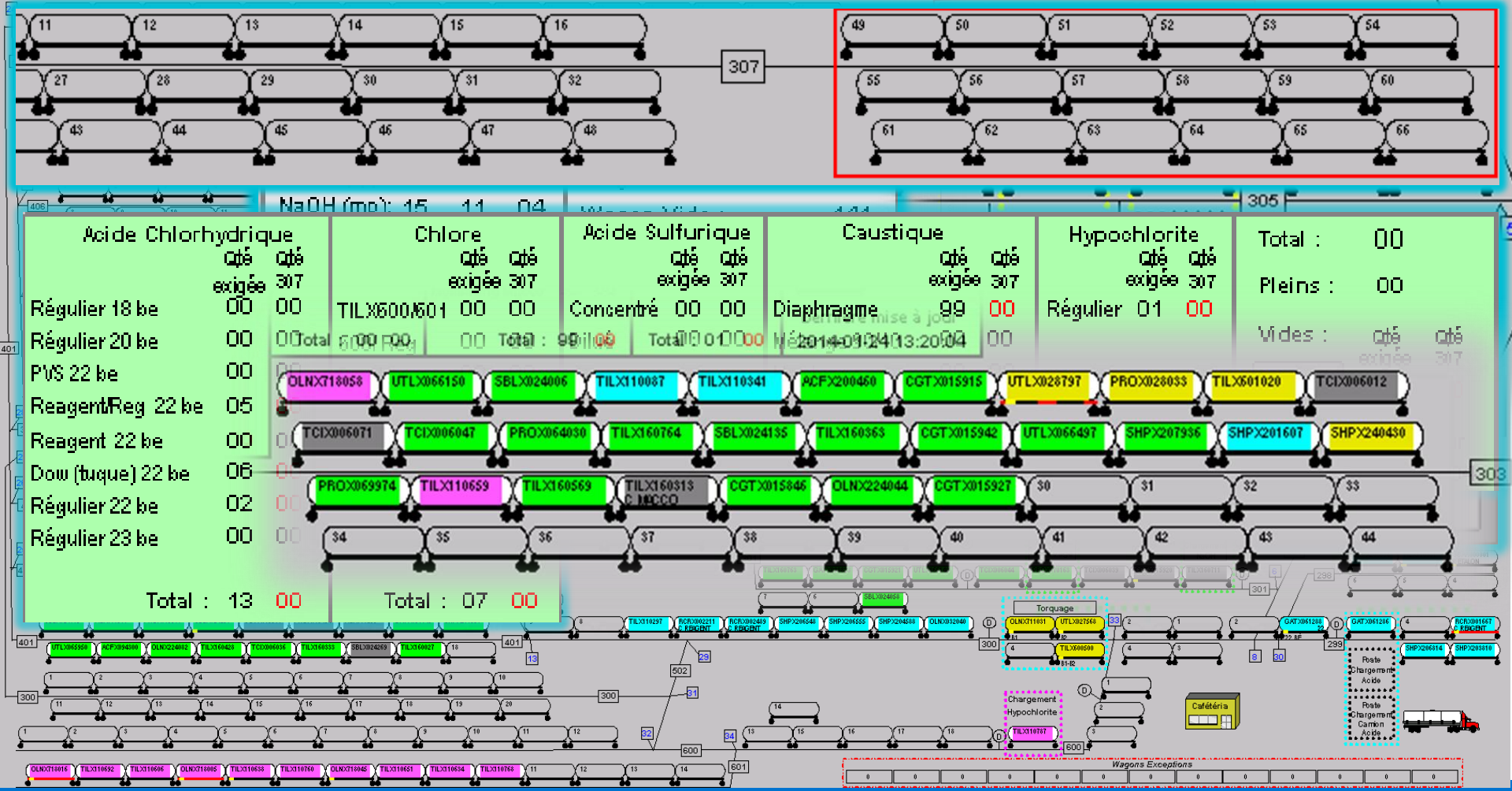
PI ProcessBook display for standard monitors

Data capture from OSEM to the PI System through the PI Interface for RDBMS

Corporatif

PI ProcessBook display on a 60in monitor to replace the magnetic board





Fermer

Wagon Detail

Olin

2014-08-21 13:37:54
V 1.0.8

Rail :	307
Localisation :	13
Matériel :	105031
Grade :	22
Statut de chargement :	Chargé
Lot / Batch:	22 BÉ
Ne pas charger (DNL) :	Ok pour chargement
Ne pas utiliser (DNU) :	OK pour utilisation
Hors service :	Ok pour chargement
Type d'inspection :	Inspection Mécanique

Réserver / Client : Réserver

Responsable du chargement : JL1D

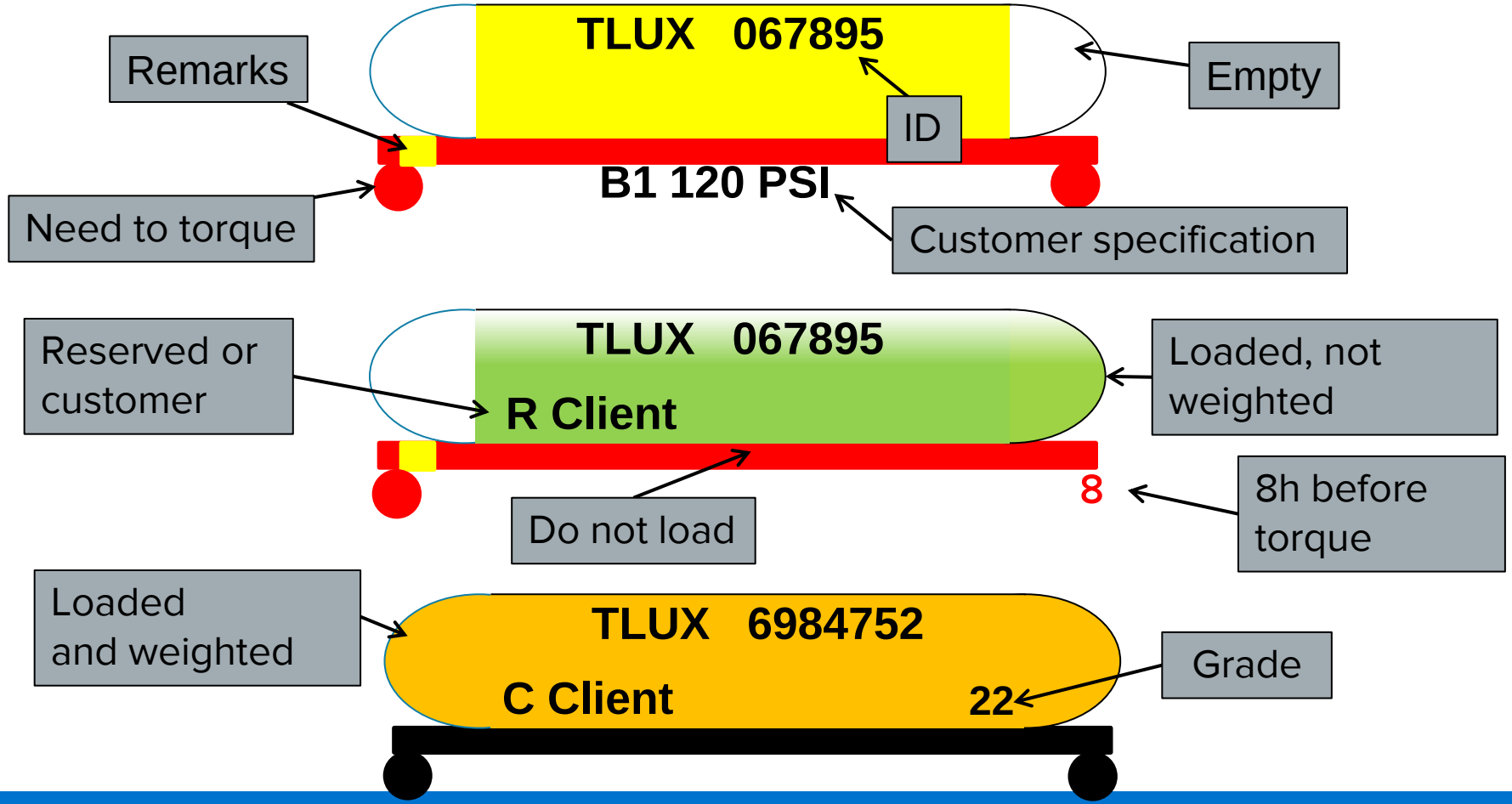
Poids à vide :	58200	LB
Poids net actuel :	194600	LB
Poids net maximun:	204800	LB
Poids brut :	252800	LB
Poids brut maximum :	263000	LB
Volume maximum :	20429	GAL
Longueur :	0	FT

Date et l'heure de la pesée :	08/20/2014 20:01
Date et l'heure de chargement :	08/20/2014 16:48
Date de nettoyage :	
Nbr. de jours en inventaire :	4
Date de maintenance:	

Maintenance

Remarques :

Soupape. 22 bé. Cond:0.02 20.08.14. J.D.L.



Functionalities

SAP (natives)

Positions

Moves

Basic info

- ID
- Product
- Weight
- Remarks
- Etc.

PI System (added with the project)

- Color coding based on product
- Torque timing
- Customer and reserved railcars management
- Scale management (calibration)
- Rollup for the court and railways
- Display orders shipped vs. ready to ship

Reports

PI DataLink

PI DataLink reports

Event Frames for rail car moves tracking

Examples :

- End of month inventory
- Rail cars loaded in the last 24h

WAGONS CHARGÉS

Date de début :	2014-08-25 07:00
Date de fin :	2014-08-26 07:00
Wagons chargés	1

Nombre de No. Wagon						
No. Produit	No. Wagon	Date & heure de chargement	Lot/Batch	Client \ Réservé	Nom du "chargeur"	Total
105009	TILX110757	2014-08-26 03:44	T2	(blank)	DB3433	1
	TILX110595	2014-08-25 08:52	T2	(blank)	DP7569	1
	OLNX718232	2014-08-25 13:04	T1	(blank)	DP7569	1
105009 Total						3
105015	TILX600587	2014-08-25 12:23	B2	(blank)	YA3657	1
	TILX600787	2014-08-25 21:28	B2 120	R 120 PSI	DB3433	1
105015 Total						2
105018	TILX160048	2014-08-26 03:40	1-3-4	(blank)	GC6830	1
	TILX160685	2014-08-25 08:02	1-3-4	(blank)	GR0236	1
	ACFX200465	2014-08-26 03:39	1-3-4	(blank)	GC6830	1
	TILX160763	2014-08-25 10:59	1-3-4	(blank)	GR0236	1
	CGTX015846	2014-08-25 16:40	1-3-4	(blank)	MD7270	1
	PROX064029	2014-08-25 11:00	1-3-4	(blank)	GR0236	1
	CGTX015824	2014-08-25 13:48	1-3-4	(blank)	GR0236	1
	SBLX024295	2014-08-25 08:00	1-3-4	(blank)	GR0236	1
	SBLX024129	2014-08-25 16:43	1-3-4	(blank)	MD7270	1
	SBLX024215	2014-08-25 13:49	1-3-4	(blank)	GR0236	1
105018 Total						10
105031	SHPX204916	2014-08-25 19:44	22 BÉ	(blank)	CB1B	1
	SHPX206816	2014-08-25 16:16	22 BÉ	(blank)	CB1B	1
	GATX072744	2014-08-25 14:25	22 BÉ	(blank)	JL1D	1
	SHPX201775	2014-08-25 08:52	22 BÉ	(blank)	JL1D	1
105031 Total						4
Grand Total						19

Benefits

Better information sharing from operation to management

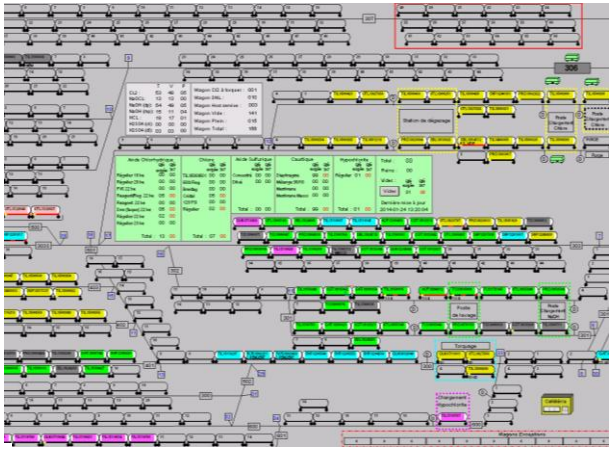
Improved rail yard management thanks to added features

Complete understanding of the rail yard at one sight

- Avoids shipping errors

Real-time data for real-time decision making

Rail Yard Operational Excellence at Olin Bécancour



”The loading sector took a major leap with this project. Processes have been improved, communications were made easier and everyone now has access to the same information. Who would have thought we would one day track a 285 railcars yard with a PI System!

24 operators embraced the change without any hesitation. Success across the board.”

- Hélène Bédard, Production director, Olin Bécancour

Olin

Business Challenges

- Improve communications
- Get a real-time overview of the rail yard status

Solution(s)

- Implement connectivity between the PI System and SAP using the PI Interface for RDBMS
- Organize the data with AF
- Visualize the rail yard with PI ProcessBook

Results and Benefits

- Better collaboration
- Global understanding at one sight
- Faster and better decision making

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Questions

Please wait for the microphone before asking your questions

State your
name & company

THANK YOU