

Importexa SA



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Commission for Technology and Innovation CTI

KTI/CTI
DIE FÖRDERAGENTUR FÜR INNOVATION
L'AGENCE POUR LA PROMOTION DE L'INNOVATION
L'AGENZIA PER LA PROMOZIONE DELL'INNOVAZIONE
THE INNOVATION PROMOTION AGENCY

Fairtrace

Tracing the textile industry

Bruno Alves
University of Applied Sciences
Western Switzerland



ISCW2012, Boston
14th Nov. 2012



Traceability concerns

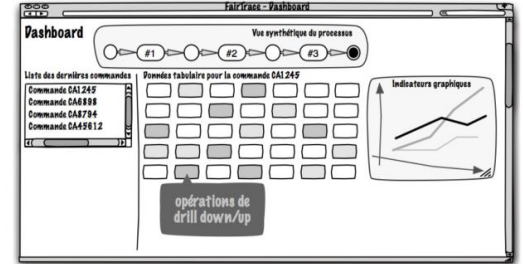
- Euro2012 Fan's Shirts
- Greenpeace Germany commissioned report
- REACH regulation

No or partial knowledge of their supply chain



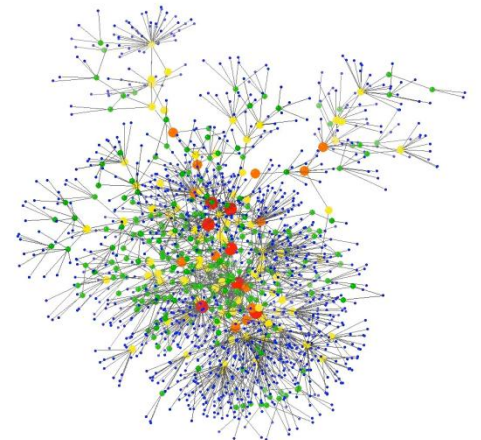
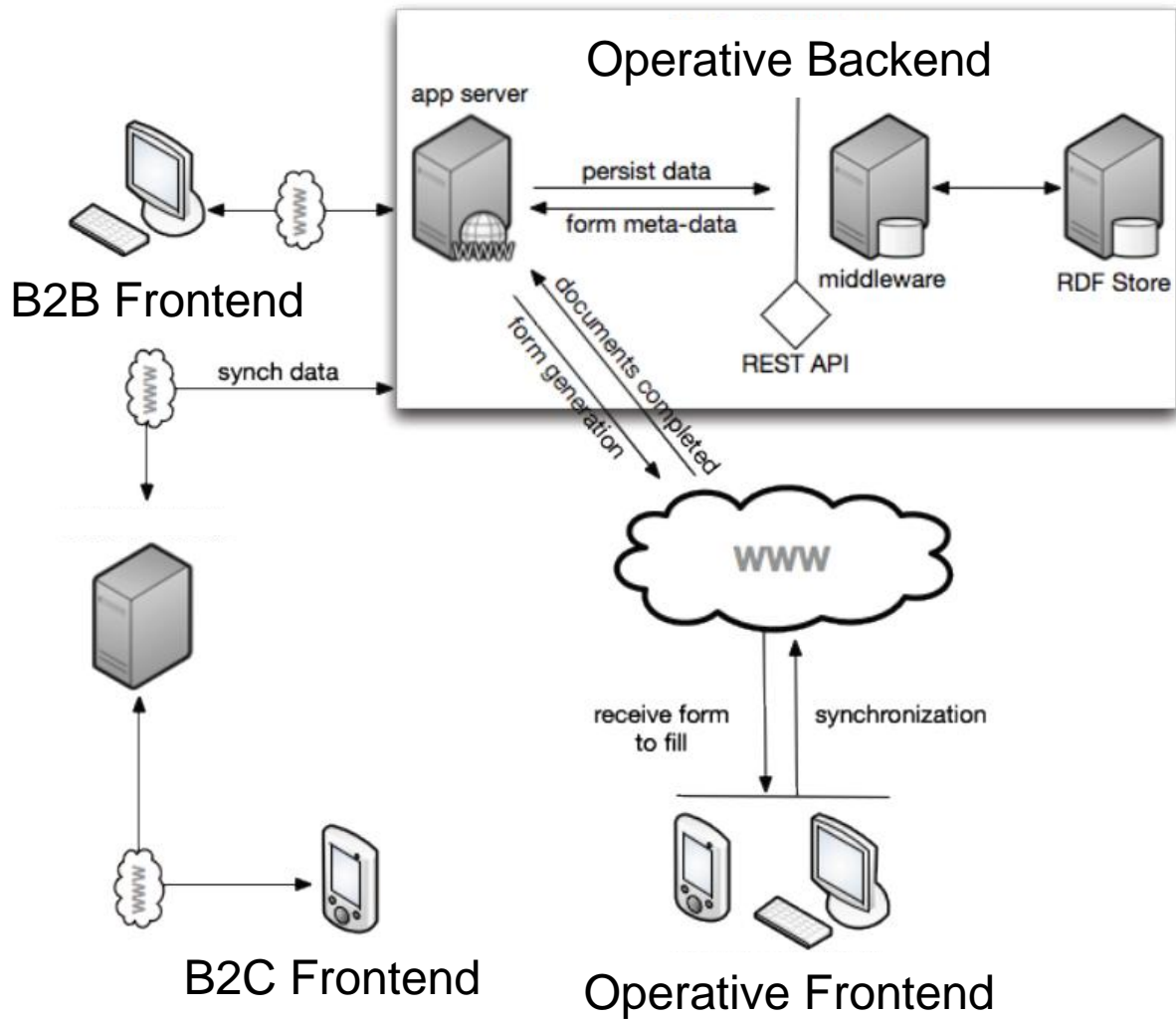


Fairtrace



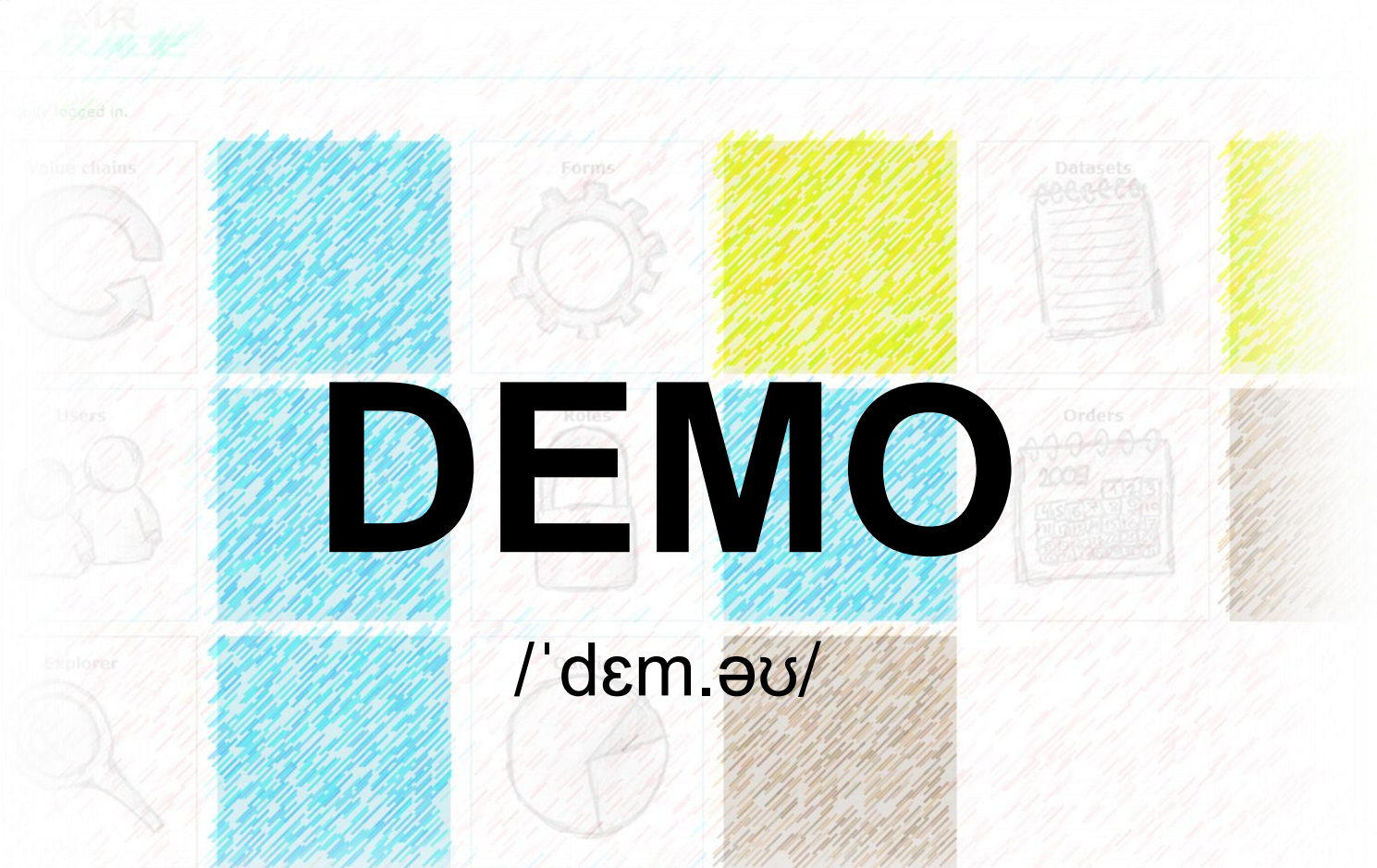


Technology





Little demo





Little demo – Formulars



<p>Value chains</p>		<p>Forms</p>		<p>Datasets</p>	
<p>Users</p>		<p>Roles</p>		<p>Orders</p>	
<p>Explorer</p>		<p>Queries</p>			



Little demo – Datasets

Home Value chains Forms Datasets Users Roles Orders Explorer Queries

[Logout](#) | [air](#)



<p>Value chains</p> 		<p>Forms</p> 		<p>Datasets</p> 	
<p>Users</p> 		<p>Roles</p> 		<p>Orders</p> 	
<p>Explorer</p> 		<p>Queries</p> 			





Understanding the textile process

Question: How do we define our models?

- Document search
- Link chaining
- Minimal data set

Fulchand Exports Factory, Tirupur.

Order Programme Details 02-06-10

Style No. :	Infants Romber	L.O.No	403/Fe
Yarn Counts:	40's Biocln	GSM	220
Fabric :	100% Biocln 40's Interlock		

campus - 704/07.06.10

525.000 Kgs

Knitting Programme		Final Gsm :220
Fabric	Weight (in Kgs)	
Interlock	525.000	
	525.000	
Dyeing Programme		Final Gam : 220
Colour	Weight (in Kgs)	
KTP-19433/17 Beige	→ KIP-757/11.06.10 75.000	
KTP-19487/25 Red	→ KIP-818/15.06.10 339.000	
KTP-24929/13 Brown	→ KIP-758/11.06.10 20.000	
KTP Non Shade White	→ KIP-759/11.06.10 91.000	
	525.000	

for Fulchand Exports Factory

18000.00

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achat CA14905 Page 2

Designation Date planifié Prix unitaire % Montant

Hang Tag " Edelweiss" provided by Polycorp

Yarn: Bio Swiss Baby

Location: on front, size 10 cm width

Colour: brown PMS 1545C

Baby romper short sleeves as per order Ca14099

Quality: 100% bio cotton 40's interlock

W: 220 GSM

Colour: red with piping in white

Size: 18 Months

Quantities: 300 / 6.9.11

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ORGANIC COTTON

Textile Process

OF SUDIAMA (NOBILITIES)

Date: 23/06/2010

Time: 4:44:56AM

Dye No.: S2-40

Drop Needle	NO	Reqd.	Length	Machine No.	Of	Weight
Compacting	NO	Reqd.	Length	Rolls		In Kgs
Special Softener	NO					
Knit	Grelge	0	204	226	69.10	70
					69.10	2
					20.050	2
					20.050	2

Total batch Weight

Process: Organic Dyeing

Dyeing Percentage: 58.13%

L.W.: 0.284





Defining the data model(s)



product

RDF Schema vs OWL*



process





Implementation – problems & techniques¹⁰

- Data depth & query complexity
 - Gather data at single points

- Link for
– Data
mec

```
?dataset fpos:hasDatasetUser ?user ;  
      fpos:hasDatasetForm ?form ;  
      fpos:hasDatasetScope <.../order001> ;  
      fpos:hasDatasetTimestamp ?timestamp .
```

- Data source
– Order subclassOf Scope,
Dataset



Impartexa u.
CA 14874





Competitive advantage

- No dependency on the schema
 - Greater adaptability
- Different product domains
 - Change product ontology
- Easy data binding
 - Different process / products





Lessons learnt

- Inferences can be confusing
 - subClassOf
- Consistent naming conventions
 - hasOrderId vs hasId
- Data update and deletion is scary
 - is data still there ?





Conclusions

- Traceability becomes a trend
- Start-up (CTI-Startup) with a commercializable product
 - Patent pending
 - Already one customer
- Linked Data / SPARQL 1.1
- Research



Thank you !



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EXTRA: Choosing the storage technology

Choice: Relational database or semantic store ?

- Query
- Depth
- Missing information

