

Post-Manufacturing **Traceability** of **chemicals in products**: Features & Benefits

TAG'N TRACE YOUR PRODUCTS TO :



- Guarantee product conformity
- Protect against counterfeits
- Comply with traceability regulations



- 保证产品合格率
- 防止假冒行为
- 符合有关产品可追溯性的新法规



www.tag-n-trace.com



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7 years as a R&D member staff with Texas Instruments



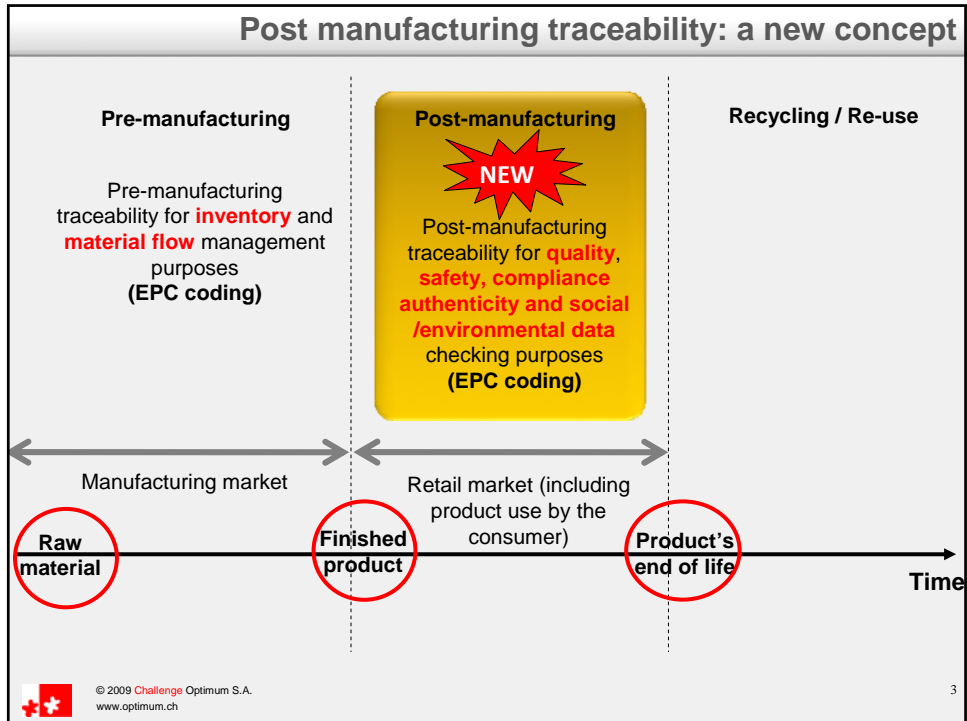
5 years as CEO of Challenge Optimum S.A., Swiss French speaking leader in sustainable management systems consulting & training



Coordinator & co-author of the publication of a **feasibility study of a post-manufacturing traceability system between the PRC and the EU** (2008)



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Post manufacturing traceability: a major challenge

Post-manufacturing traceability is insufficiently developed today with 2 major consequences, in case of **problems on the retail market**:

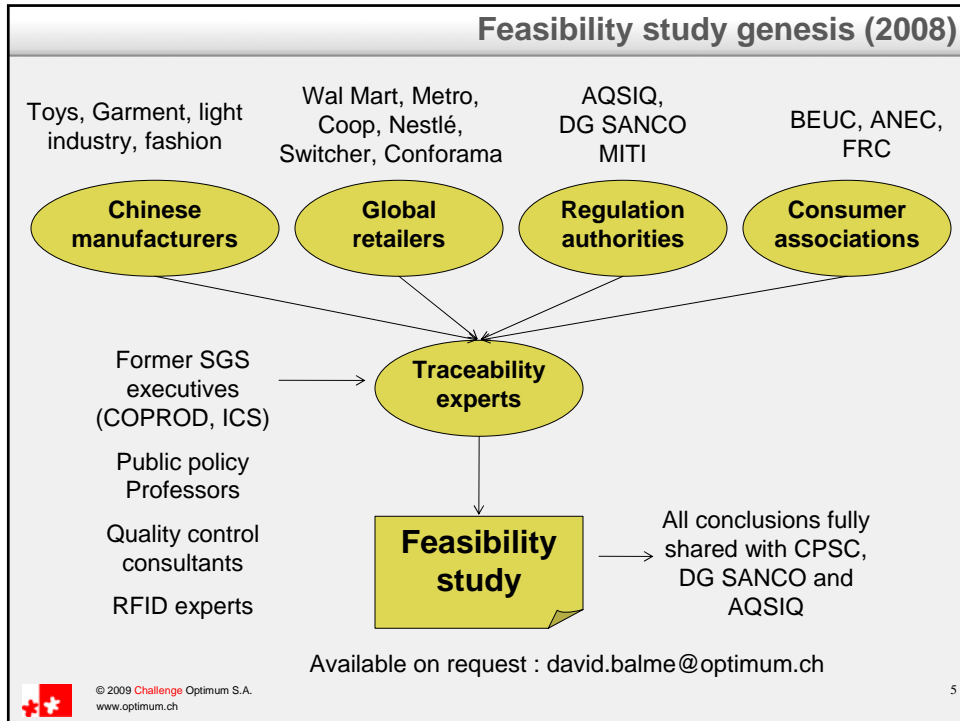


1- The **cost of recalls** of products from the retail market is very high for distributors and manufacturers and affect directly their profitability in large numbers



2- The **cost for the society** can also be very high when the health of the consumer is impacted

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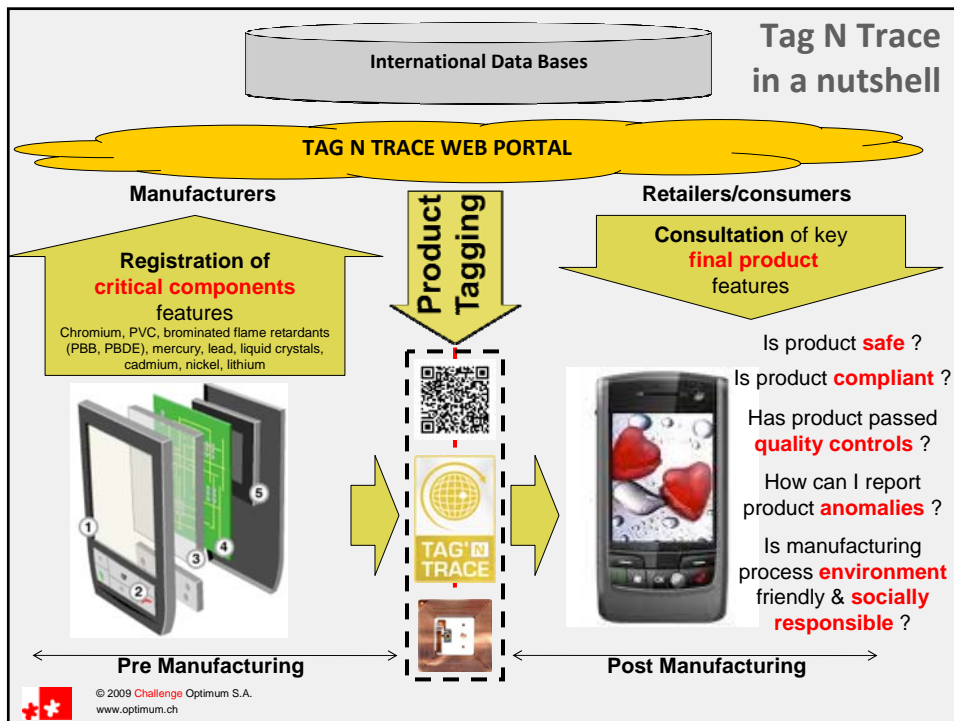


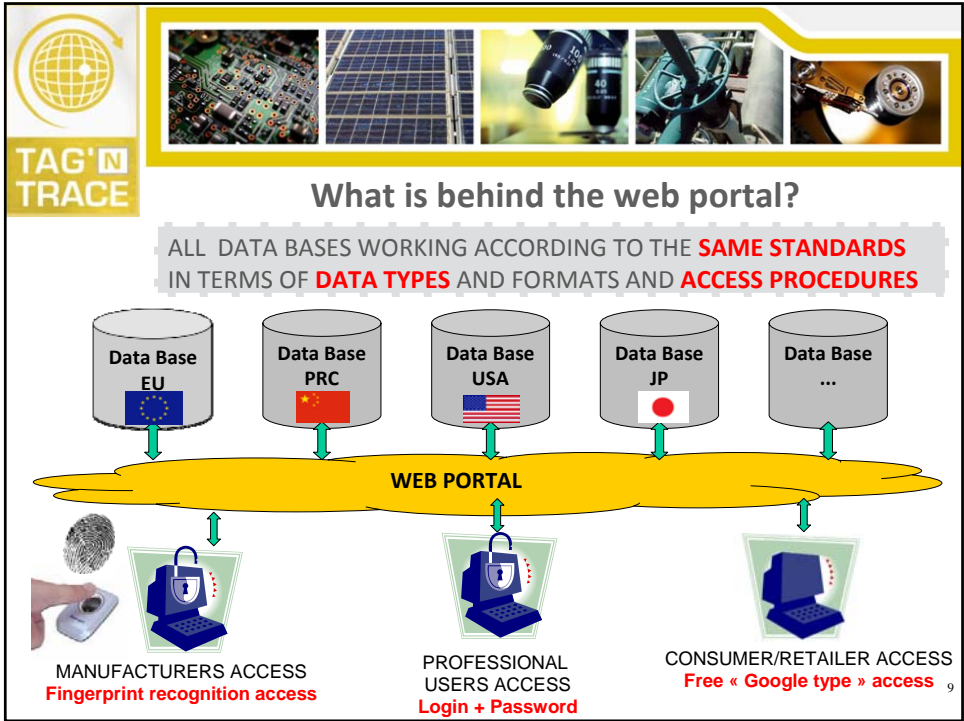
Key conclusions from feasibility study

Analysis	Needs	Suggested action plan for the Regulation authorities
1) Post manufacturing traceability has become a must but no real sensus yet on the data to be traced	→ Need to select and standardize : -key traceability data - EDI	→ Fund a standardization committee involving regulators, manufacturers, retailers & consumers
2) The market will not move on a voluntary basis	→ Need for a regulation that requires an individual tagging of all products as per the new US regulation on toys	→ Set up a legal framework together with the USA, Japan, China, Korea, Canada & Australia
3) The technology to implement a traceability system is now available and its price is affordable 0.05-0.5 USD/unit	→ Need to train key actors of the supply chain of the added value of a traceability system based on harmonized legal framework	→ Fund awareness sessions on the requirements of the forthcoming regulation (buyers and consumers associations)
4) The ultimate barriers are political or protect corporate interests	→ Need to negotiate a gradual implementation through pilot projects	→ Fund pilot projects

Tracking of **chemicals in products** requires :

- ✓ a careful **selection of the data** to be traced : e.g. quality, authenticity, safety and conformance of **products**
- ✓ an agreement of international authorities on an **EDI standard**
- ✓ a **network of databases** which store key batch information : Manufacturer ID, AQL, critical components, 3rd party certificates
- ✓ a **WEB portal** accessible to final consumers and every stakeholder of the supply chain





Search result Example

EPC NUMBER ...

The Tag Identification Number is a batch production number composed of 24 digits which is affixed on the product under the Tag. It is also embedded into the RFID chip or part of the bar code.

→ **FIRST: Product ID Card**

Product Information

Product ID #:	9
Product Name:	Teddy Bear
Product Type:	Toy
Description:	Teddy Bear 30 cm existing in 3 different materials
In Market since:	2006
Designer Name:	Frankie Nge



→ Second : Batch information

+ Ability to report any anomaly on the product

Production Batch Information

Batch ID #: 27
Batch Quantity: 12000
Batch Production Date: 04-15-2008
Date of Final QC: 04-14-2008
Name of Inspector Final QC: Mrs Wang
Comments: Final QC OK as per client specifications (AQL 0,65%) Sampling plan ISO 2859-1 normal mode

Certifications

Cert #	Scheme	Std #	CoC #	Valid from	Name of Certification Body
2	European Union Mech.+ Phys.properties:	EN 71:2005		10-05-2009	SGS ICS
3	Toy Safety Coordination Initiative	US-TSCI 2008		01-15-2007	UL
4	CE Marking	EN 71-1:2005		04-26-2007	SGS SSC
6	Quality management systems	ISO 9001:2008		05-02-2009	SGS ICS
7	Climat impact management	ISO 14064:2006		05-02-2009	SGS ICS
8	Environmental management systems	ISO 14001:2004		05-02-2009	SGS ICS
9	Social accountability	SA 8000		02-02-2008	SGS ICS

Criticals components

QC ID	Date CCQC	CC ID	CC Supplier	CC Quantity	CC Method	Inspector's Name	Comment
156	04-10-2008	7	Shanghai Chemicals Co	50	100% QC	Mrs Wang	Paint accepted QC OK 100%
155	04-08-2008	7	SiNuo Chemicals Co., Ltd.	50	Sampling	Mrs Wang	Batch rejected. Lead found in paint
154	04-11-2008	6	Hangzhou Xcolor Imp./Exp. Co., Ltd.	100	Sampling	Mrs Wang	Fur QC OK AQL 0,65%



For **regulation authorities**, such a system allows to:

- ✓ Comply with *traceability regulations*
- ✓ Identify on-line the *incriminated batches*
- ✓ Build *knowledge* of potentially *hazardous substances* that may affect health
- ✓ Guarantee *full transparency on products contents*





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How to
comply
with
traceability
regulations ?

- ✓ By **tagging individually every product**
- ✓ Through free **on-line access to quality related information** to the retail market (on line database)
- ✓ By **unique identification of the product** (Authentication)



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How to
Identify
**Incriminated
Batches** ?

- ✓ Through **systematic batch registration** of all tagged products
- ✓ Through **centralized and « smart » web portal** to investigate all databases contents
- ✓ Through the **embedded anomaly reporting feature**



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How to
Build knowledge
of *potentially
hazardous
substances*?

- ✓ Through *network of databases* aligned on *same data format* regarding quality features
- ✓ Through *embedded « smart » type database* connected with REACH database
- ✓ Through the *embedded anomaly reporting feature*



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How to
Guarantee
*Transparency of
product contents* ?

- ✓ Through personalized biometrics based access of production manager to register *critical quality data*
- ✓ By *continuously updating the chemical contents* of a specific product based on its ID card
- ✓ Through independent *lab testing*




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How Tag-N-Trace meets international regulations ?				
Manufacturers obligations According to US/EU new reg.	Main Beneficiary	US CPSIA 	EU Directive 2009/48/CE 	
« Put permanent, distinguishing marks on the product »	Ultimate purchaser	✓		✓
« Ascertain manufacturer, location, date of production, cohort information (including the batch, run number, or other identifying characteristic) »	Ultimate purchaser	✓	✓	✓
« Carry out an analysis of the chemical, physical, mechanical, electrical, flammability, hygiene and radioactivity hazards that the toy may present »	Regulation authority		✓	✓
« Product safety 3rd party certification »	Regulation authority	✓		✓
« Retailer's requirement to inquire »	Retailer or private labeler	✓		✓
« Facilitate market surveillance »	Regulation authority		✓	✓

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Conclusion
<p>1 - Traceability of chemicals in products is feasible (technically and commercially speaking)</p> <p>2 – There is no volunteer approach except if there is a strong pressure from regulation bodies (ex. CPSIA)</p> <p>3 - Coordination between traceability specialists is required to :</p> <ul style="list-style-type: none"> - Standardize quality related data - Select the appropriate EDI to ensure communication between different databases - Prove the concept through pilot projects <p>This action plan budget was submitted to AQSIQ, DG SANCO & CPSC : can UNEP trigger a joint decision for implementation in 2010 ?</p>

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**Thank you for your attention!
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