



EPCglobal Overview

HUG Meeting

Chris Adcock – President, EPCglobal Inc

Paris 22nd September 2006

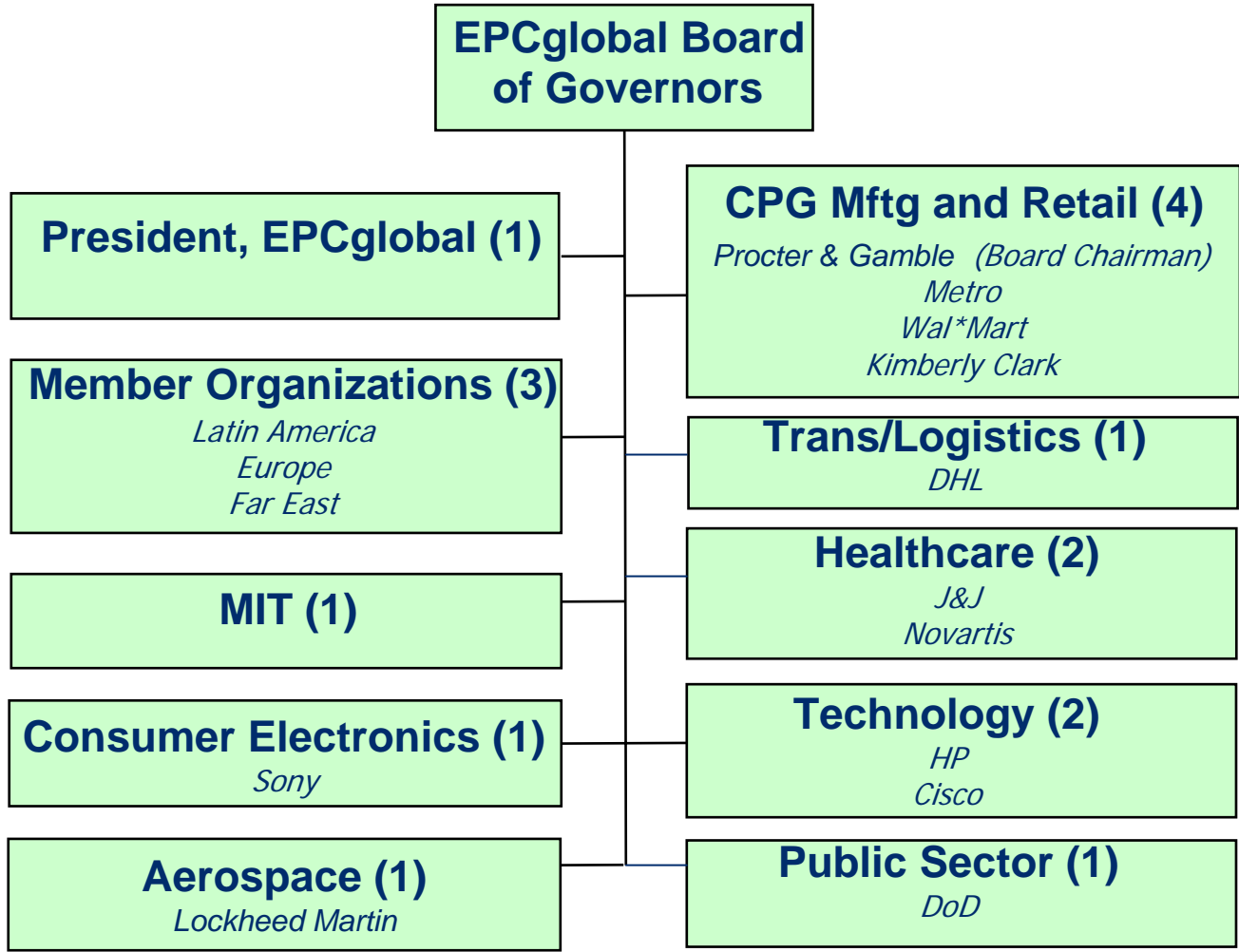
- EPCglobal Overview – Chris Adcock
 - Broad perspective across the whole EPCglobal community
- EPCglobal Healthcare and Life Sciences – Ron Bone
 - Focus specifically on HLS activities and patient safety

- Purpose and membership
- EPCglobal Organization
- Global standards update
- Business case perspective
- Industry Development

- ***Global*** leadership in developing and promoting ***multi-industry, user driven standards*** for ***collaborative commerce*** utilising the ***EPC***
- Deliver added value to our customers and stakeholders
- Drive the global, multi-industry adoption of EPC via the GS1 Member Organizations
- Recognized as the trusted authority on technical standards relating to the use of the EPC

(EPCglobal - neutral, not for profit, committed to royalty free standards)

EPCglobal Board of Governors



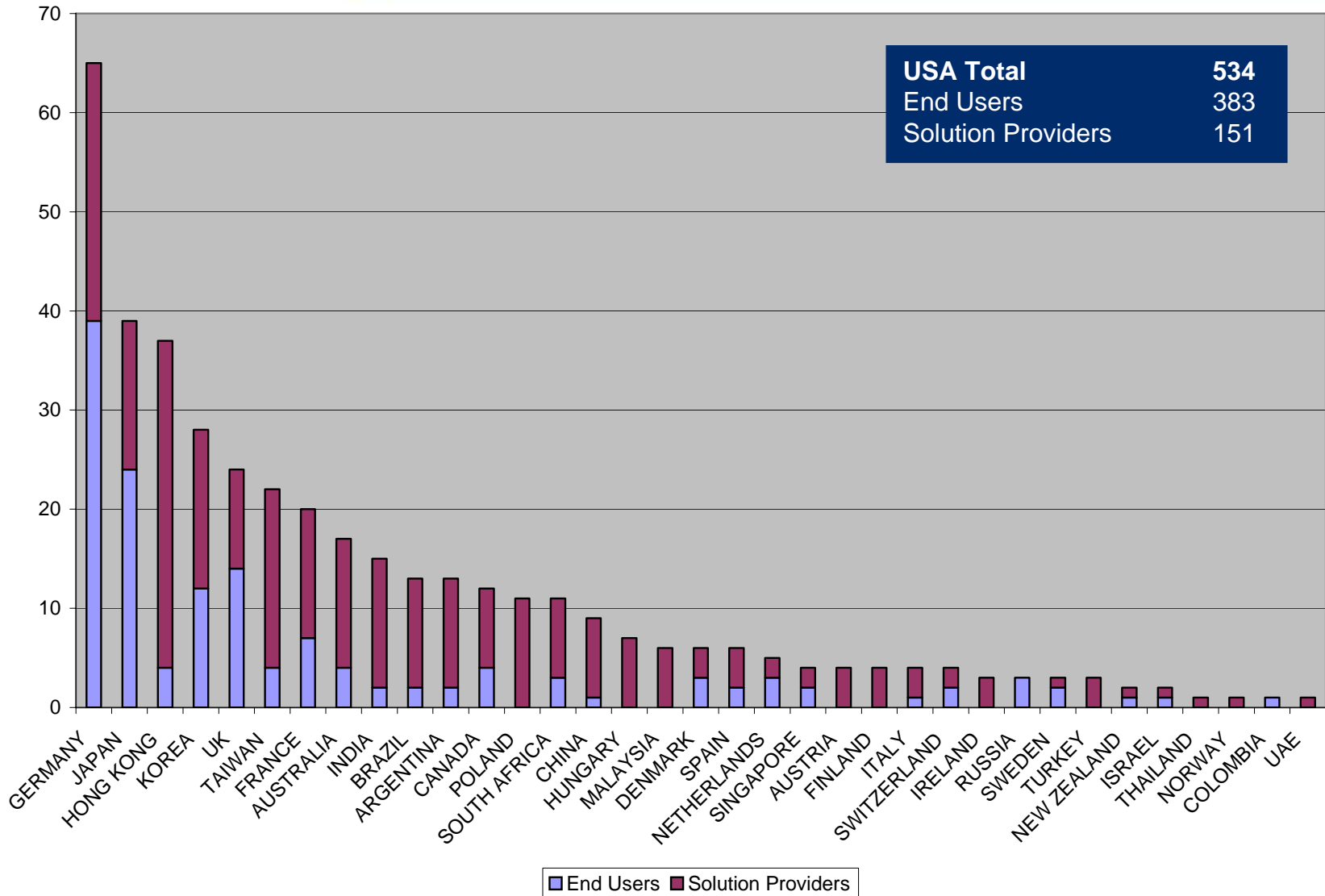
	June 2004	June 2005	June 2006
Asia Pacific	21	117	173
Europe	36	87	166
Latin America	0	5	24
ME & Africa	2	3	13
North America	132	372	499
Total	191	584	875

- Each EPCglobal member joins once in the location of their head office

Rapid growth continues

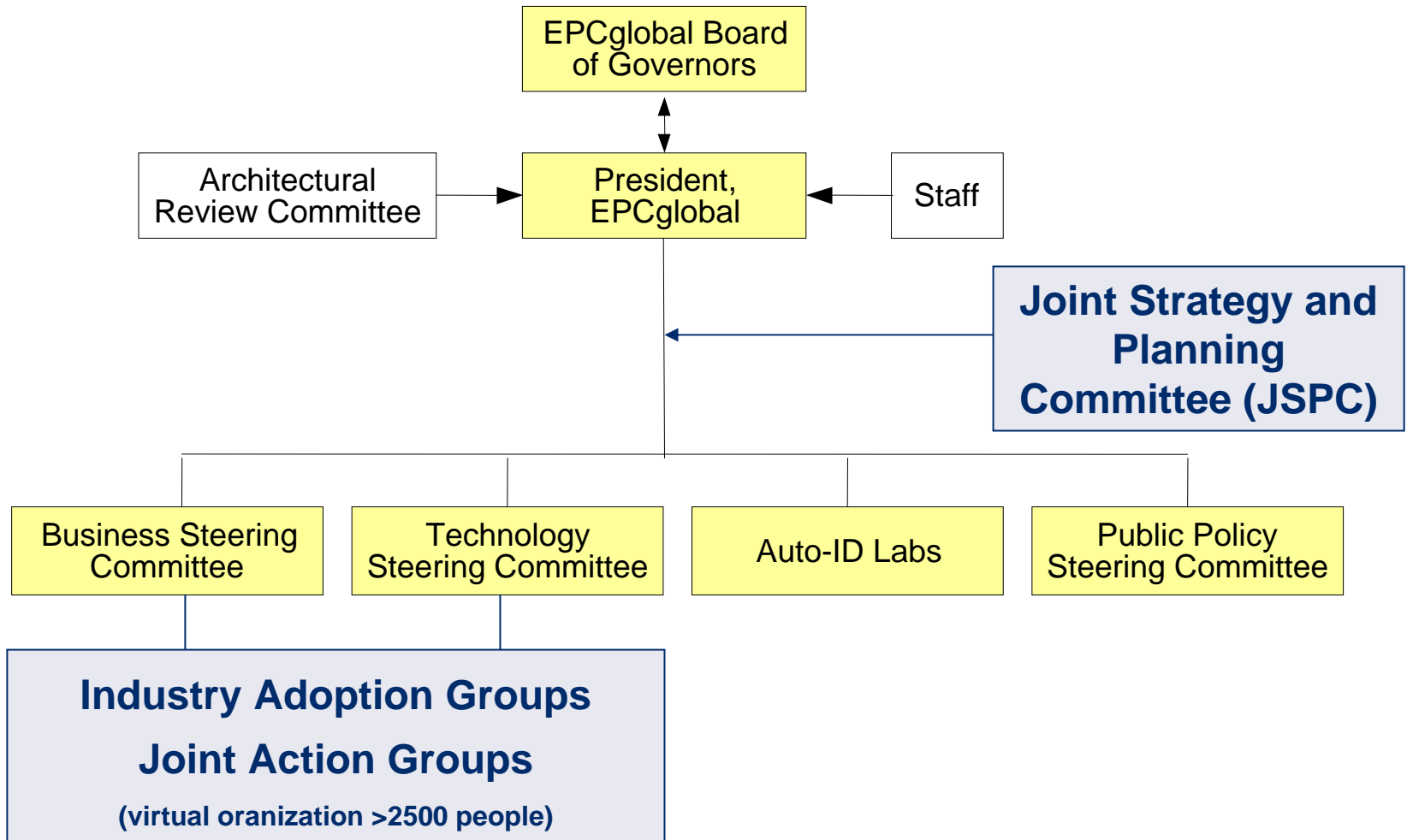
	August 2006	% Total
Asia Pacific	180	19%
Europe	174	18%
Latin America	27	3%
ME & Africa	14	1%
North America	546	58%
Total	941	100%

Global expansion now covering 36 countries

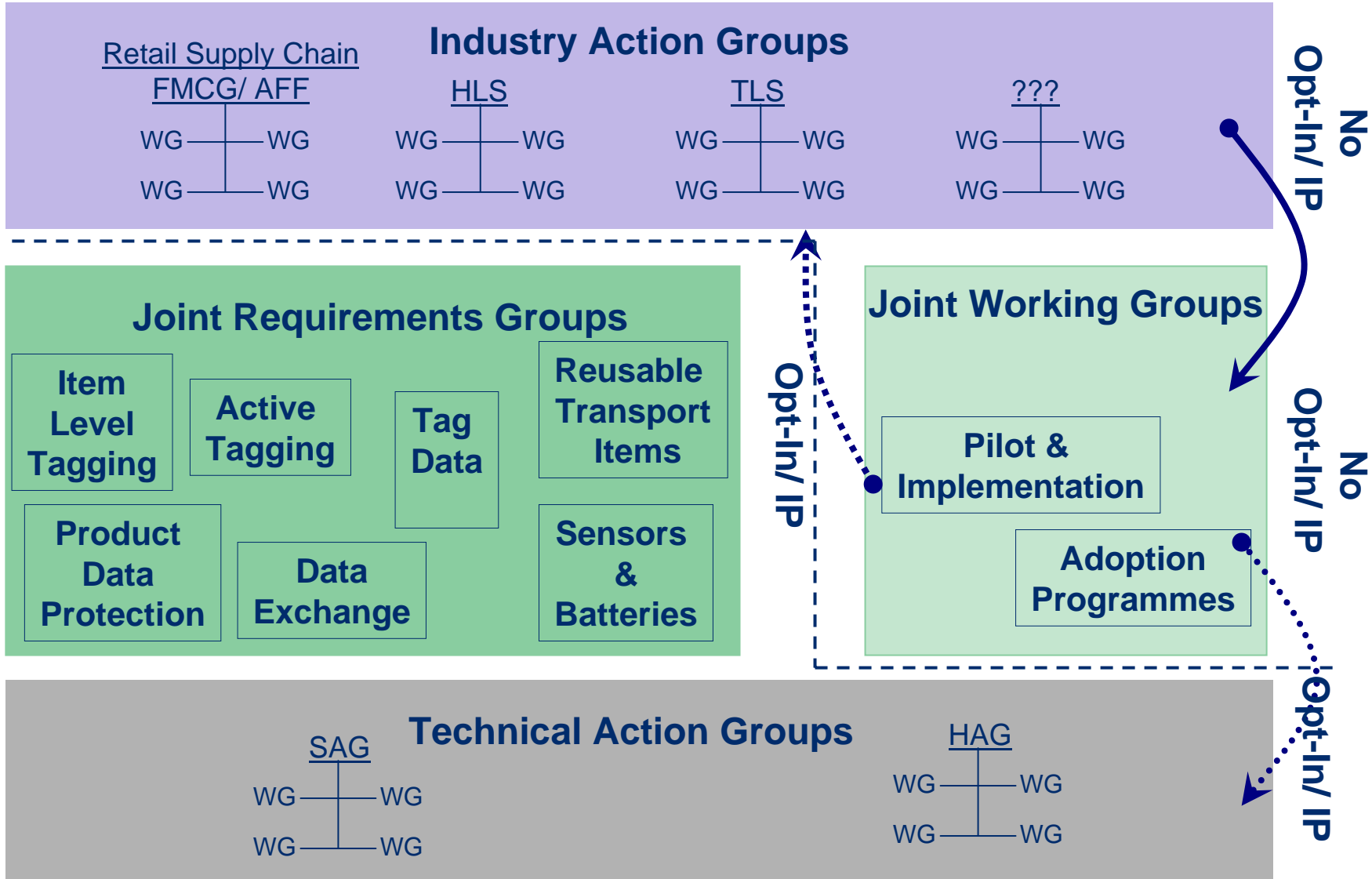
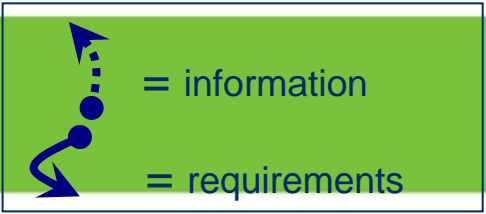


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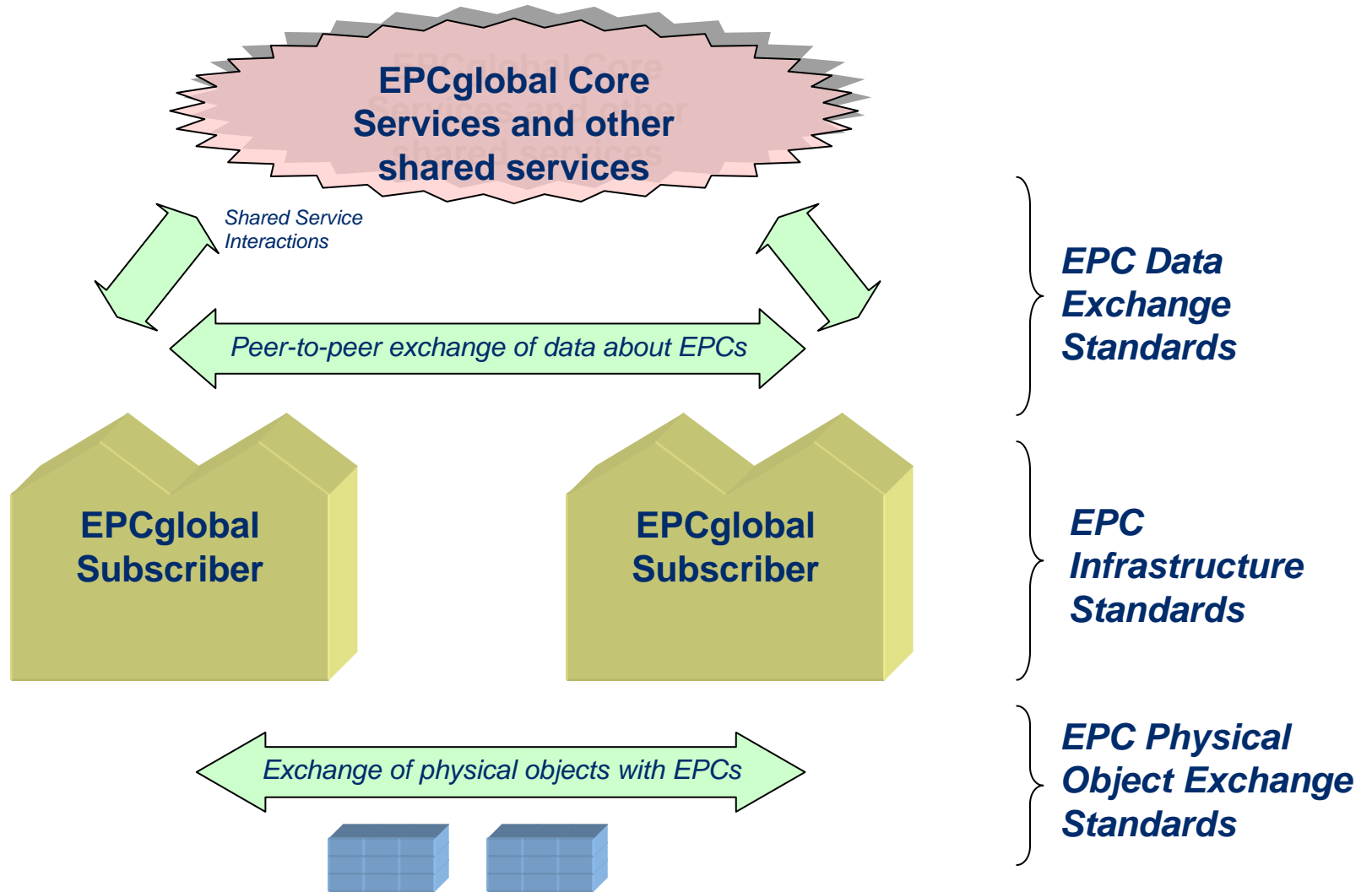
Evolving organization



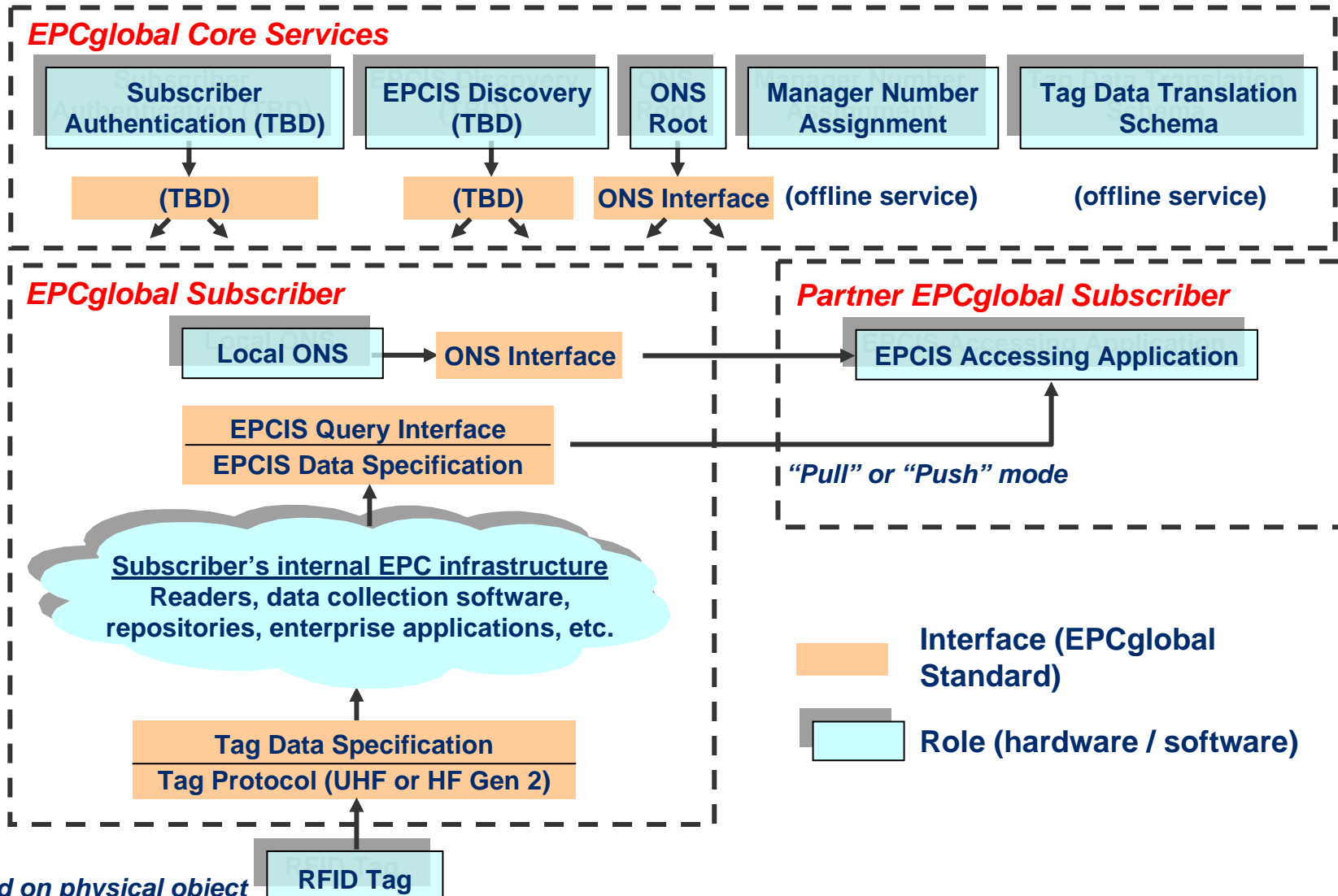
Proposed Structure



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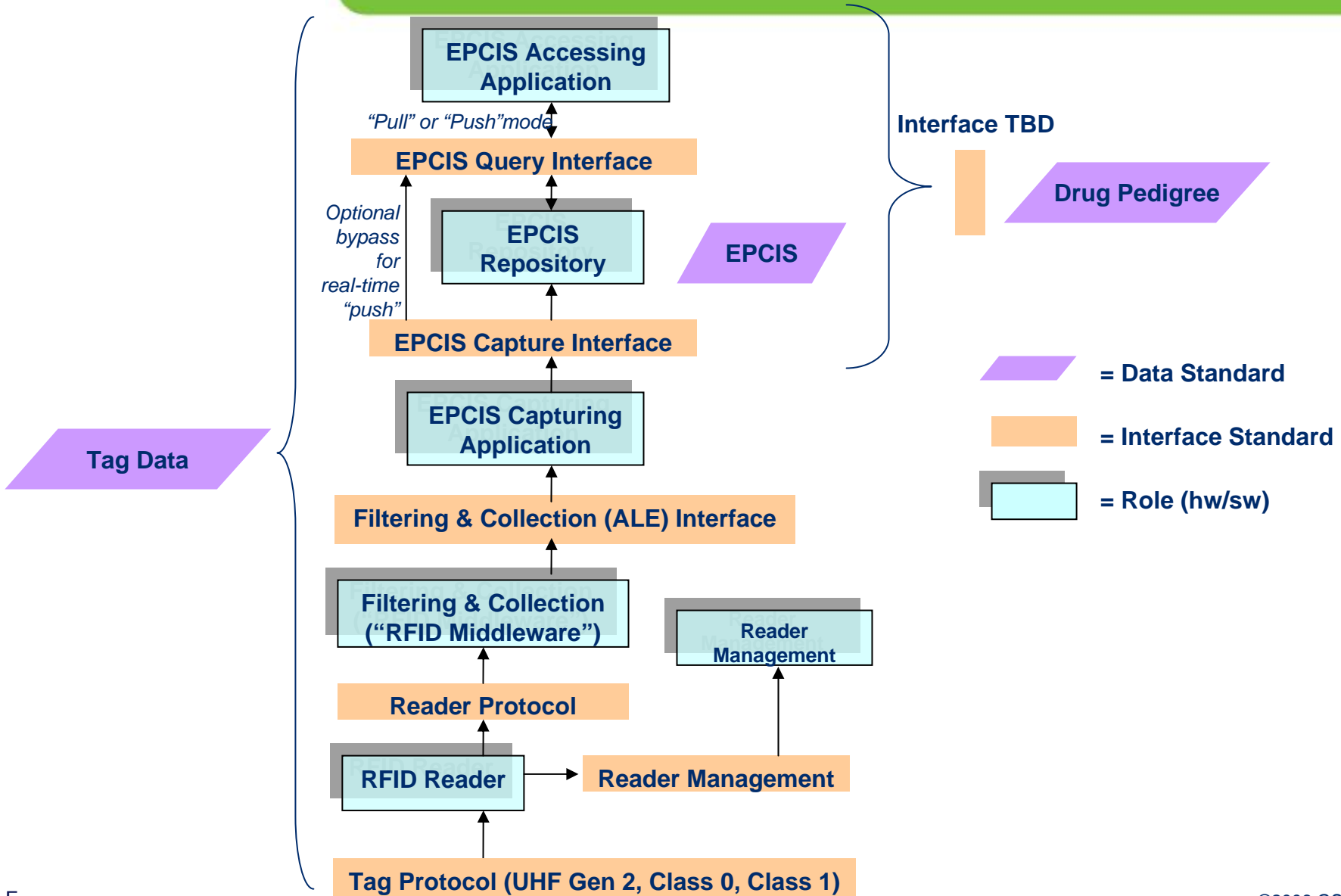


Inter-Enterprise EPCglobal Standards



Carried on physical object delivered to EPCglobal subscriber

Intra-enterprise Standards

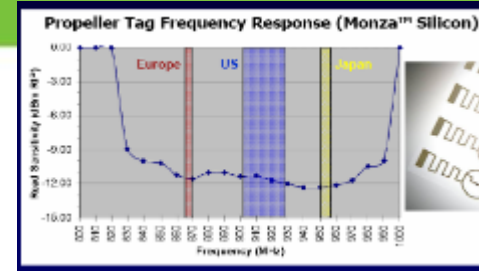


Standards and Technology

- **7 ratified global standards**
- **Network and security standards** (supported by Architectural Review Committee Guidelines)
- **Item level tagging** – UHF and HF work groups
 - Other tag types to follow (EPCglobal is tag “neutral”)
- **Certification services** - confident technology use



Meeting users needs:



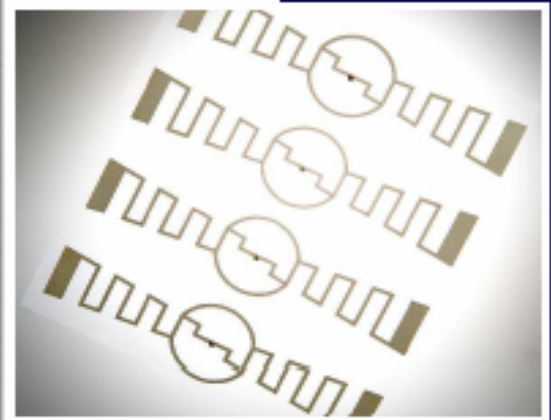
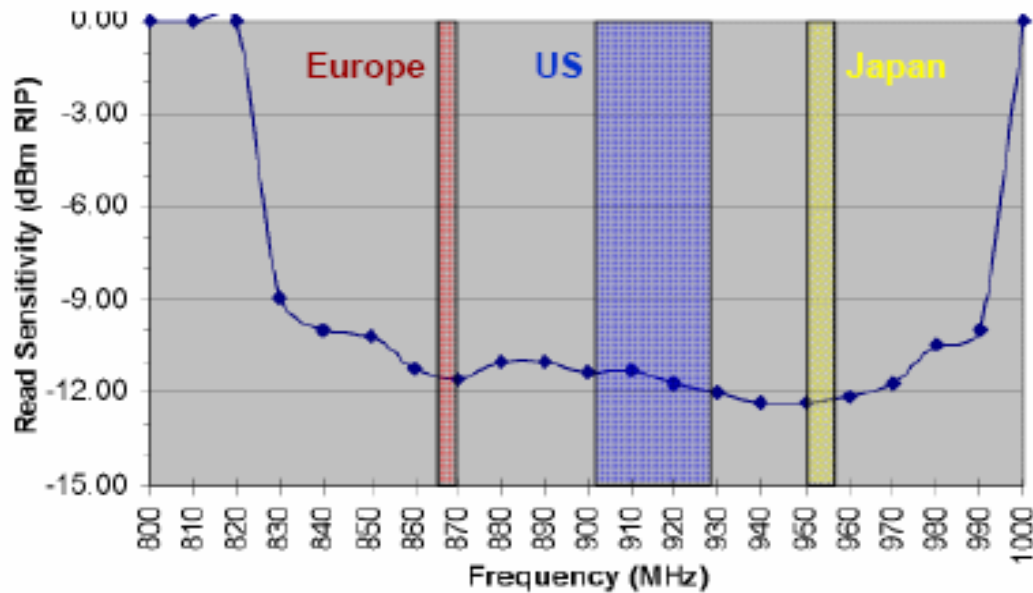
- **Costs** ↓ **Performance** ↑
- **Regulatory issues** (China, Europe) **close to resolution**
- **Wide ranging positive feedback**
 - Gen 2 has exceeded expectations
 - Gen2 is rapidly becoming the implemented global standard (UHF)
- **ISO – 18000-6 Type C (Gen2)** now a published standard

Standards and Technology

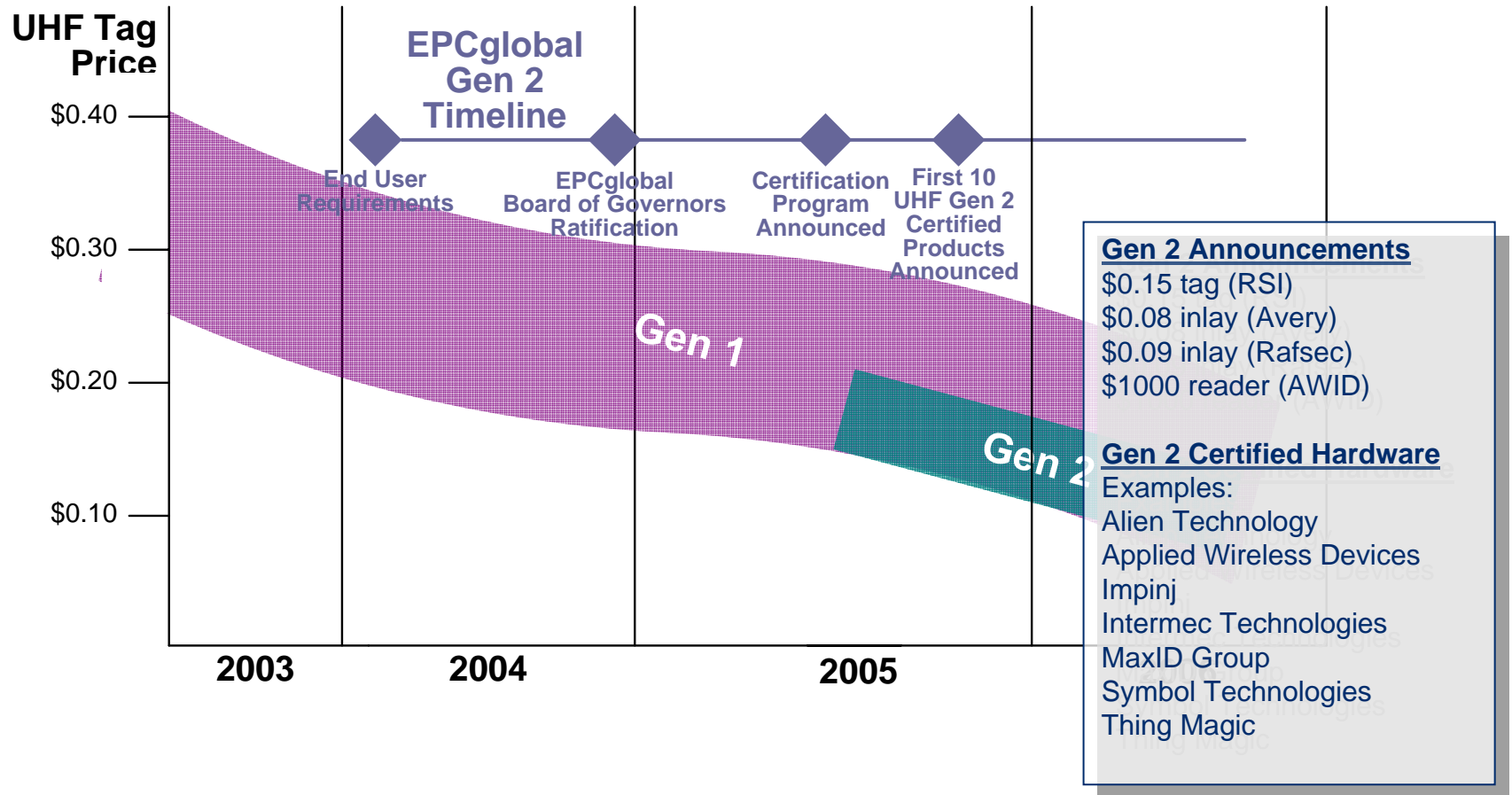
- **Gen 2 expectations....the “user needs”**
 - Global regulatory compliance
 - Fast read speed (>1000 tags/sec)
 - Memory write (>7tags/sec)
 - Dense reader operations
 - Kill security (32 bit password)
 - Low cost potential

- **Gen2 tags can operate worldwide**
 - Same tag operates in Asia/Europe/US
 - Have exceptional sensitivity across all regions
 - No need to use different tags for different locations

Propeller Tag Frequency Response (Monza™ Silicon)



EPC Gen 2 example



How do global standards help companies?



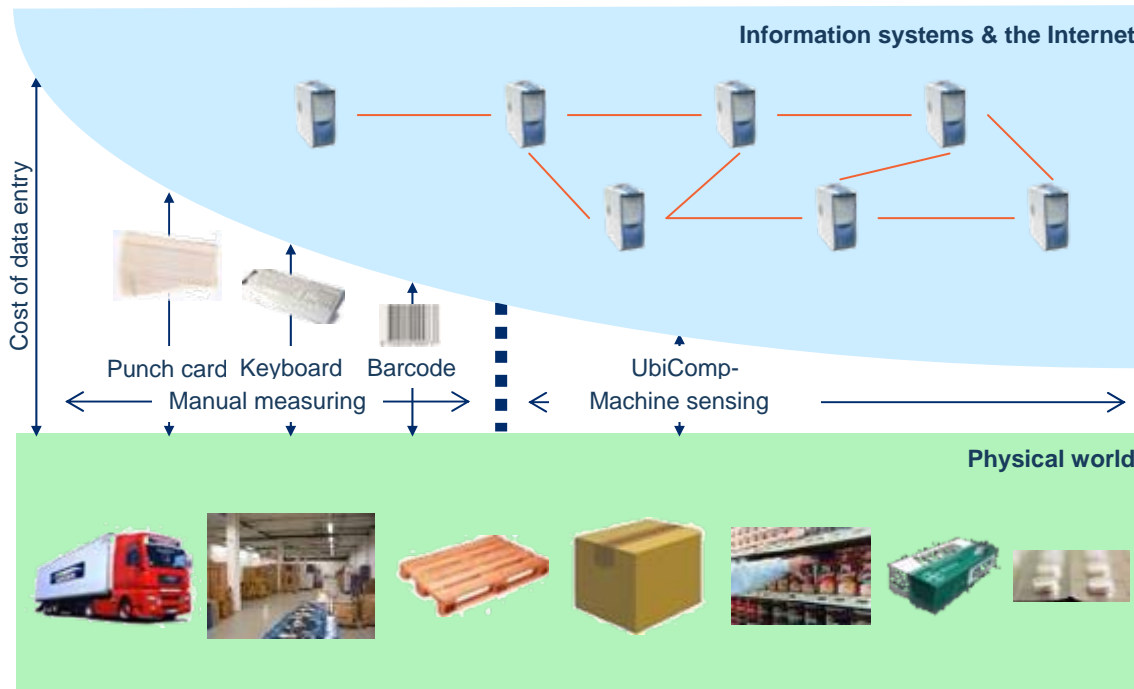
- Reduce complexity
- Reduce cost
- Facilitate trading partner collaboration
- Its about “solutions” not “technology”

➔ *some of the solutions.....*

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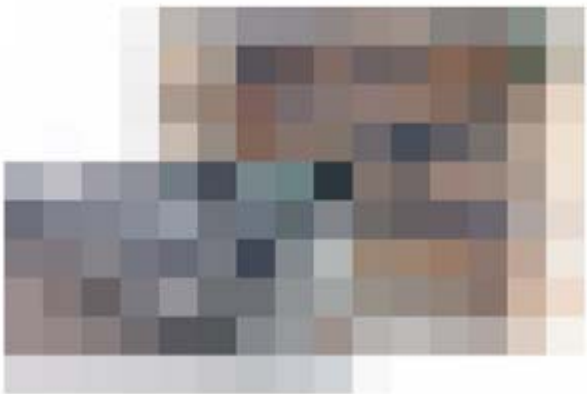
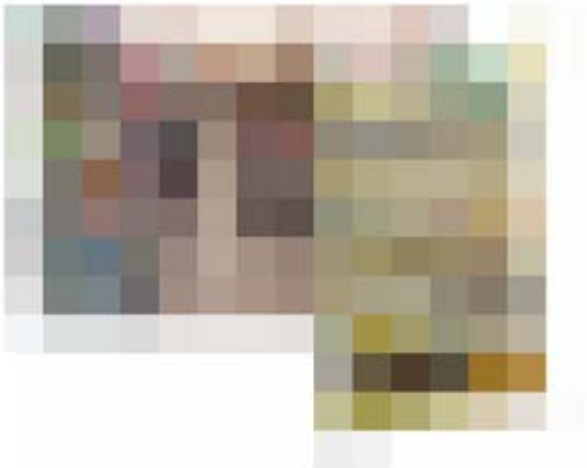
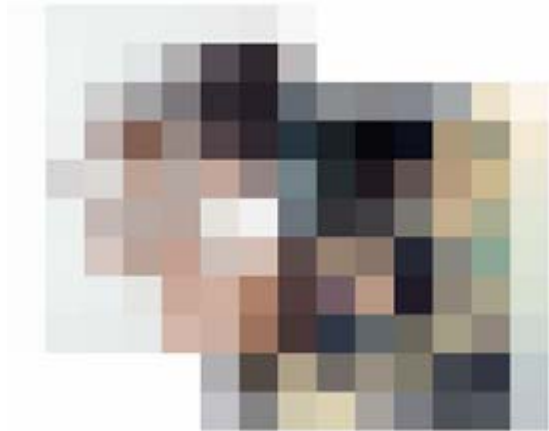
We can only manage what we can measure.

- The lack of automatic measurement of the real world causes many business challenges



Source: Professor Elgar Fleisch, St Gallen University

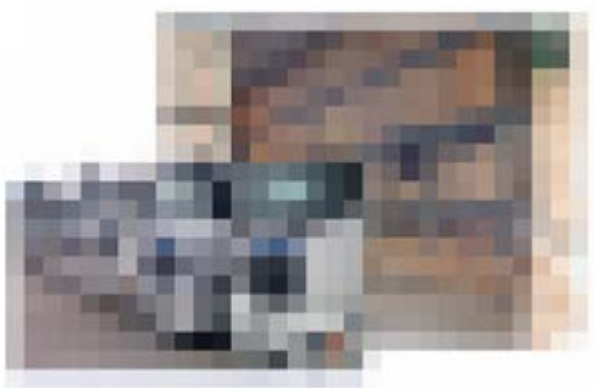
Today's computers have no eyes and ears - blurred mapping of the physical world



Source: Professor Elgar Fleisch, St Gallen University



Better measuring tools change the way we can manage



Source: Professor Elgar Fleisch, St Gallen University

Source: Professor Elgar Fleisch, St Gallen University



New technology improves the focus further



Source: Professor Elgar Fleisch, St Gallen University

...machine sensing significantly advances the way we can do business.



Source: Professor Elgar Fleisch, St Gallen University

- Potential to transform business process
- The power of event related information - examples
 - Improved customer availability
 - Demand driven supply chain with increased velocity
 - Reduced inventory, Reduced errors, Electronic Proof of Delivery
 - Safer supply chain for consumers and patients
 - Reduced counterfeit
 - Improved ability to track and trace
 - Shrinkage
 - Returnable Assets
- Transformation of commercial relationships

“I don’t skate to where the puck is but to where it’s going to be” Wayne Gretzky



Inventory Accuracy

1-3% error rate on shipments to store¹
 10-15% of vendor shipments are disputed²
 65% of 370,000 records wrong at one retailer⁵

Inventory Integrity

1.7% shrinkage³:
 ■ Un-measurable backroom losses
 Counterfeit: \$500B worldwide⁷
 Fresh items: Up to \$400,000 lost per store due to temp. man.⁶

Operational Timeliness

55% of OOS take >24hrs to remediate⁴
 20-60% of promotions executed too early or late^{8,9}
 Perfect order performance difficult to measure

Excess Inventory¹⁰

\$1.1 trillion in inventory supports
 \$3.2 trillion in US retail sales
 Inventory

- \$400 billion at Retail
- \$450 billion at Suppliers

The Stakes are High

Billions in sales: \$50B-\$285B
 Low margins: 1-10%
 Trade-spend: 10-20% revenues

x

*Anderson & Gruen:
 Demand uncertainty
 only contributes 13%
 to the problem*

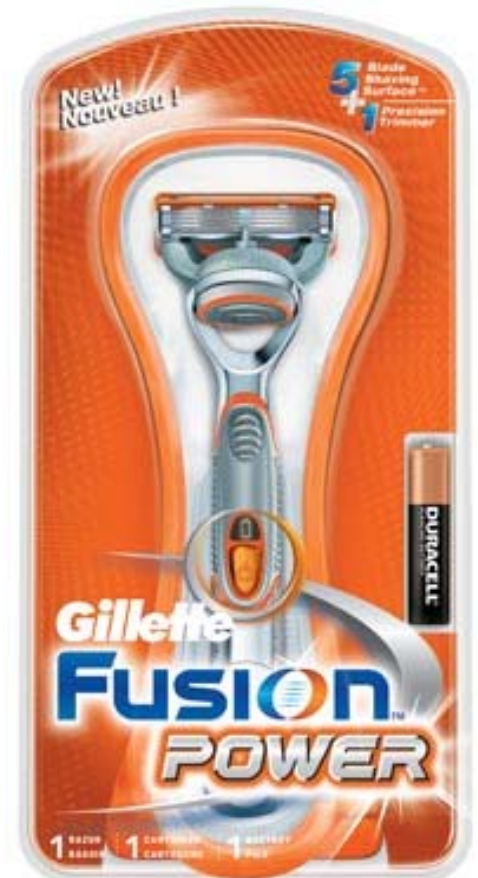


Out-of-stocks⁴

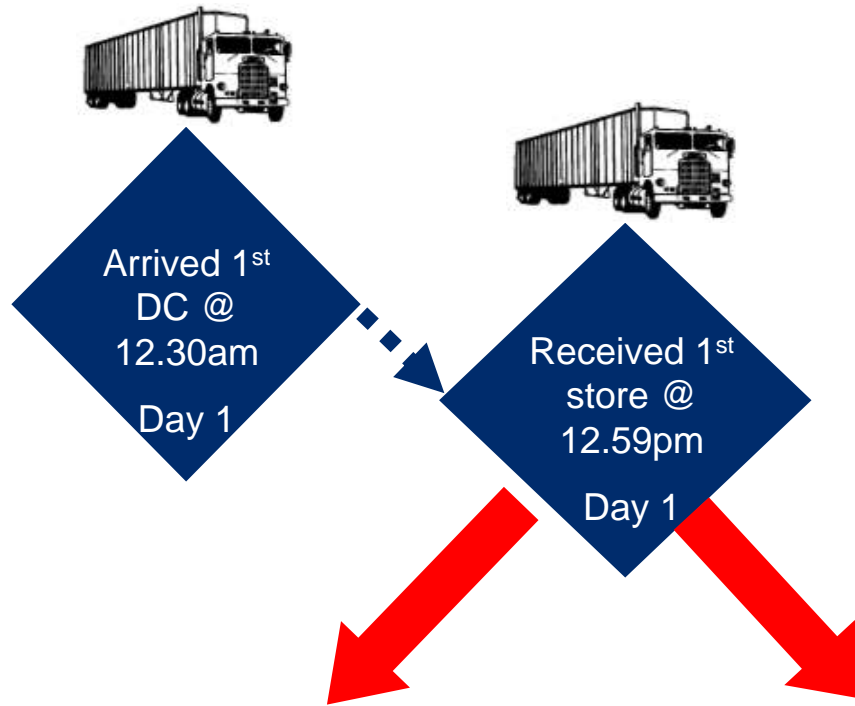
8.3% global average
 4% lost sales to retailer
 72% due to store execution –
 replenishment, ordering,
 forecasting

Gillette Fusion Launch

- EPC used in EPC-enabled stores to help ensure perfect retail execution to coincide with 2006 Super Bowl launch
 - The first new product packaging designed to be 'EPC-friendly'
 - EPC used on Fusion cases, sidekicks, PDQ trays and pallets
 - Two retail partners, four DC's and over 400 stores



Gillette Fusion Launch – “Actionable Visibility”

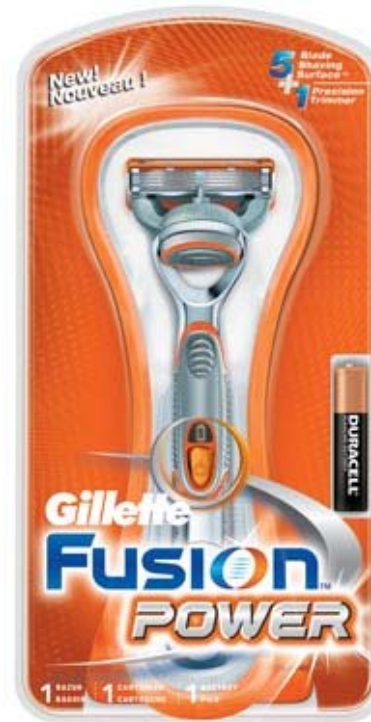


Identified/Alerted stores that were under or over shipped

Visibility from back room to selling floor



Exception alerts when Fusion received but not available for sale



Pilot Test



**Ind. Benchmark
60%-80% avail.
in 30+ days**



**Results
Exceeded
Benchmark after
3 days**

University of Arkansas study (May 2006)

- 24 Wal Mart stores (12 test, 12 control), 4000+ SKUs
- **32% reduction** in out of stocks at the shelf (62% for faster moving items)
- Automated pick lists
 - OOS for EPC tagged products replenished **3x faster**
 - Manual orders **reduced by 10%** - inventory savings

Future plans and rollout

- Embracing user driven standards
- 600+ suppliers by Jan 2007
- 1000 stores end 2006

“This is no longer a ‘take it on faith’ initiative” Linda Dillman (Oct 05)

“We are only touching the tip of the iceberg when it comes to the benefits of this technology” Rollin Ford (Sept 06)

■ Electronic proof of delivery

- Avoiding waste of resources.
- EPC data was able to refute received amount 80% of occasions



■ DoD

- Reduced order backlog from 92k to 11k orders
- \$1.7bn ROI over 7 years
- Improving “confidence” in the supply chain

■ Baggage tracking

- Improving control and accuracy
- 99% read rate helping to solve a \$1.6bn problem
(Significant transport and logistics project now starting)



■ Apparel

- Improving customer availability
- 20% improvement in accuracy (size and colours)

■ **Prompt movement of promotional items to sales floor**

- Retailer 19% sales lift
- Supplier 26% sales increase



■ **Metro**

- Process efficiency – 12% to 17% (incoming merch. and shelving)
- Loss/theft – 11% to 18% (depends on category)
- Goods availability – 9% to 14% (reduction OOS)
- Incoming goods - € 8.5mio (German est. only)

■ **Lemmi Fashion** (SME – 1 mio garments per year)

- Stock turnover before tagging – 5,000 to 10,000 items per day
- Stock turnover after tagging – 20,000 items per day
- Increase of 250%-300% in receipt and shipment of goods



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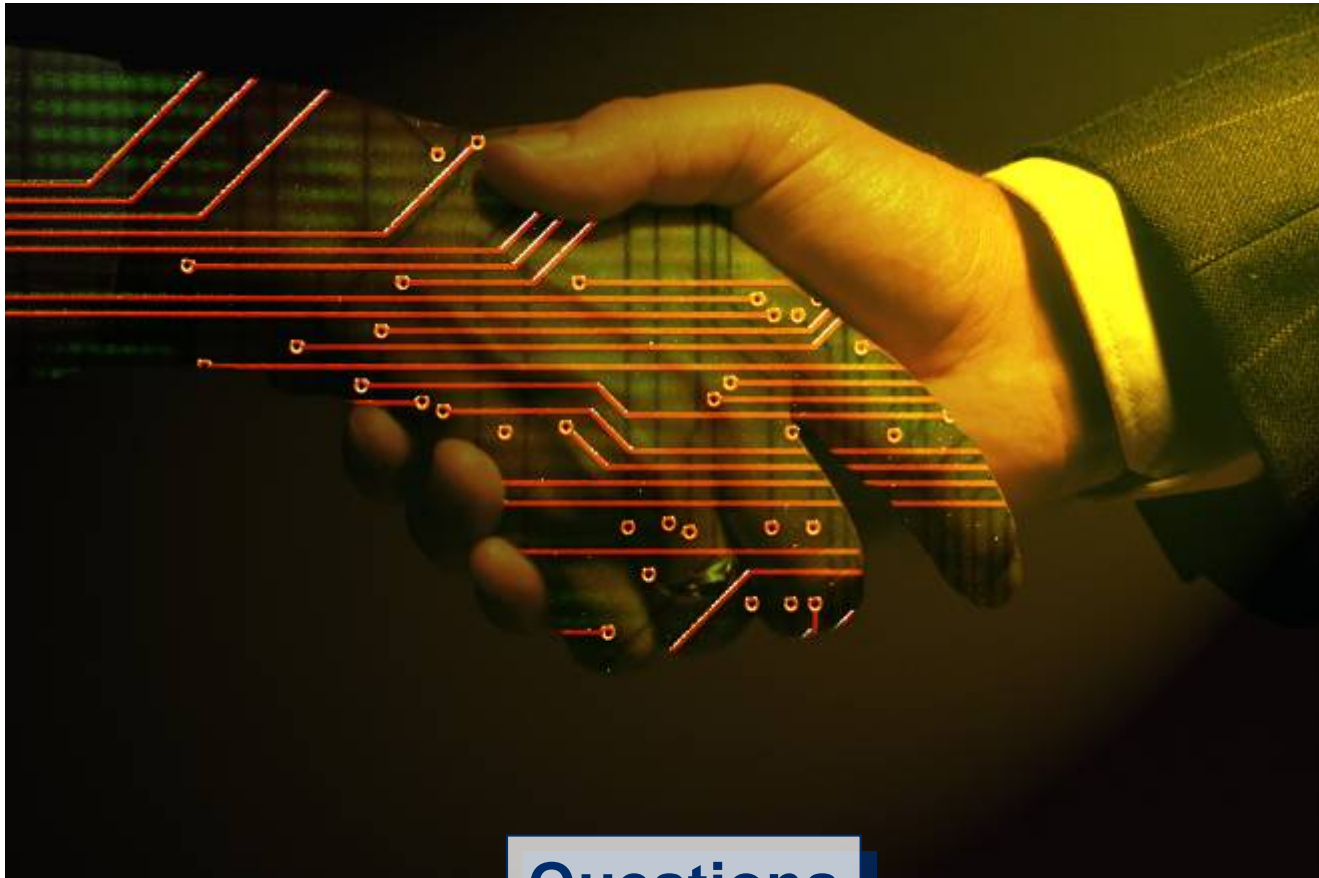
- **Aerospace** (led by EPCglobal US)
 - Discussion group Q4 2006
- **Chemical** (led by EPCglobal US)
 - Relatively concentrated industry
 - First meeting Oct/Nov in Germany
- **Apparel Footwear and Fashion**
 - 3 work groups integrated as part of Retail Supply Chain Industry Action Group

- Automotive
 - Steady progress.
 - Global discussion group unlikely before 2007
- Consumer Electronics
 - Rapid development with strong support from Japan
 - Second meeting October
- Others in future
 - F&B, Postal, Oil & Gas, Livestock.....

In summary...



- EPCglobal evolving effectively to meet expanding membership
- Standards - it's about the “solutions” not “technology”
- Incredible commitment/drive within the EPCglobal community
- Closer integration of activity across GS1
- Clear change over last 12 months as organizations have:
 - Moved from preparation to implementation
 - Understood the potential to transform their competitiveness



Questions