COIN, FP7-216256 IP

"COllaboration and INteroperability for networked enterprises"

Standardisation

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Standards

Compilation of Problem Statements

- It takes too long
- “Fat” standards
- Too many choices in some, none in others
- Overlapping purposes and functionality
- “The market decides” vs. Public authority intervention (incl. mandates)
- Competition: positional good v. common good
- Creating needs versus serving needs
- Stakeholdership and stakeholder balance
- From “Complex communication & coordination” to “There are no rules”
- Regional vs. International
- Versioning and Maintenance

Harmonization: Three General Approaches

- An overarching solution: whose?
- Building interfaces: but Nx(N-1)
- Federation - sharing of a common core: but what constitutes the common core and how do the parts link to the core?
- All cases: management, coordination and resourcing issues

Example Standards Fora

Diffuse 1999-2002

- ANEC
- CEI
- CEI
- CEI
- CIE
- DA
- DC
- DIS
- DV
- EA
- EB
- E-B
- EC
- EC
- EE
- EIC
- ET
- FIP
- HL
- HL
- ICC
- ICT
- IEC
- IEEE

SOA related

- IETF (Internet)
- W3C (XML and core Web Services)
- OASIS (Web Services)
- WS-I (Web Service profiling and interoperability)
- OSOA (SOA)
- JCP (Java and Middleware Technologies)
- OMG (Middleware)
- WfMC (Workflow)

Source: F. Kudorfer, NESSI COSTA

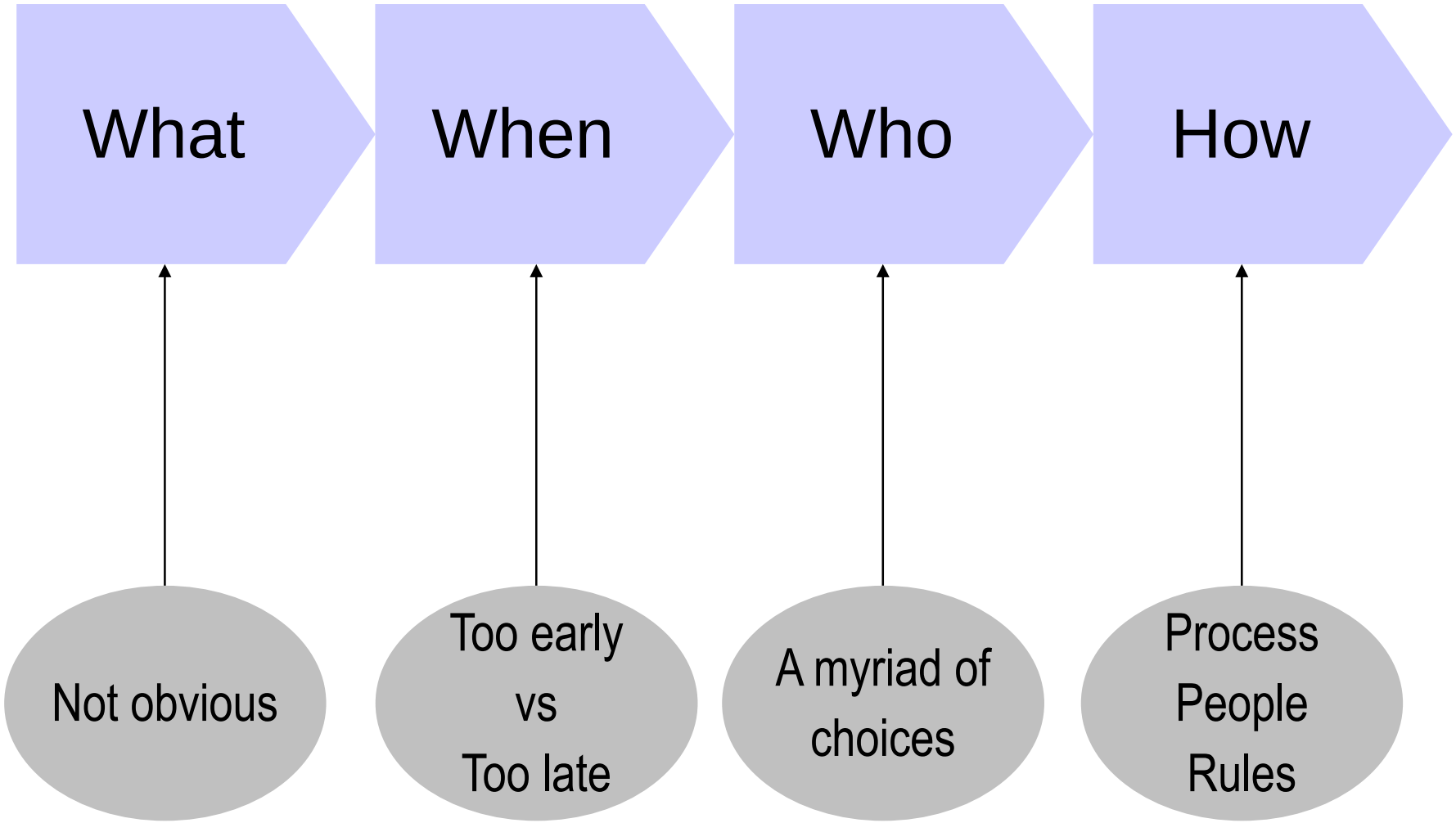
“Standards” for SOA

- Messaging: SOAP 1.1 and SOAP messages with attachments
- Service interface definition: WSDL 1.1
- Interoperability: WS-I basic profiles 1.0 and 1.1
- Security: WS-Security and WS-I basic security profile
- Orchestration: BPEL4WS
- Registry/metadata: UDDI, WS-Policy, WS-Metadata
- Advanced security: Kerberos (combined with SOAP with attachments), WS-SecureExchange, WS-SecurityPolicy, WS-SecureConversation
- Workflow: BPEL4WS extended for people, WS Choreography, WS Eventing
- Management: WS-Distributed Management, WS-Management
- Reliable messaging: WS-ReliableMessaging, WS-RM Policy
- Service Bus/Middleware: JBI, SCA
- ….

Example Industry sector consortia

Organisation	Sector	Main Deliverables
AECMA	Aerospace & Defence	Specifications for products, quality systems & product support
AIAG, ODETTE, JAMA	Automotive	B2B semantics & specifications for automotive value chain, data transmission protocols (notably OFTP)
APME	Plastics	Product classification
CEC	Footwear	FINET Specs
CECED	White Goods	EDIWhite, EDI Service, IRIS Coding
CIDX	Chemical	Chem eStandards
EAN / UCC	Retail & Distribution	Bar codes, location codes, XML schemas, EDI messages
EDIFICE	Electronics	B2B specifications
ETIS	Telecoms	Guidelines and benchmarks for information exchange using ICT
EURATEX	Textile	B2B specifications
EUROFER	Steel	Steels and steel product standardisation
GHX	Healthcare	SCM specifications
HL7	Healthcare	RIM and other messaging specs for healthcare organisations
IAI	“Smart Building”	Industry Foundation Classes (IFC) information model & specs
IATA	Airlines	EDI messaging
OTA	Travel	B2B and B2C specifications for integrating travel services
PAPINET	Paper	SCM specifications
PIDX	Petroleum	B2B specifications
RosettaNet	IT, Semiconductor, Logistics, Telecoms	PIPs, RNIF, dictionaries, product & partner codes
SWIFT	Banking	Framework, messages, partner codes
TTI	Travel	B2B travel booking specs: Unicorn, REScon & TOPAS EDI messaging, & XML specs
UIC	Railway	Data transmission protocols & messaging formats for passenger & freight applications, PKI, country codes

Some basic questions



Role of Standards

- Making market: new opportunities and competitiveness
  - e.g. GSM, MPEG, HTML/HTPP, DTV/MHP, DVB …
- Regulatory requirement
  - EC Directives: 87/95, 98/34, New Approach
- Public interest issues
  - e.g. eSignature, eInvoicing, Privacy & Data Protection
- Consensus building
- Balancing of stakeholder interests, especially SMEs & Consumers
- Support for Industrial Policy

Standards failure criteria

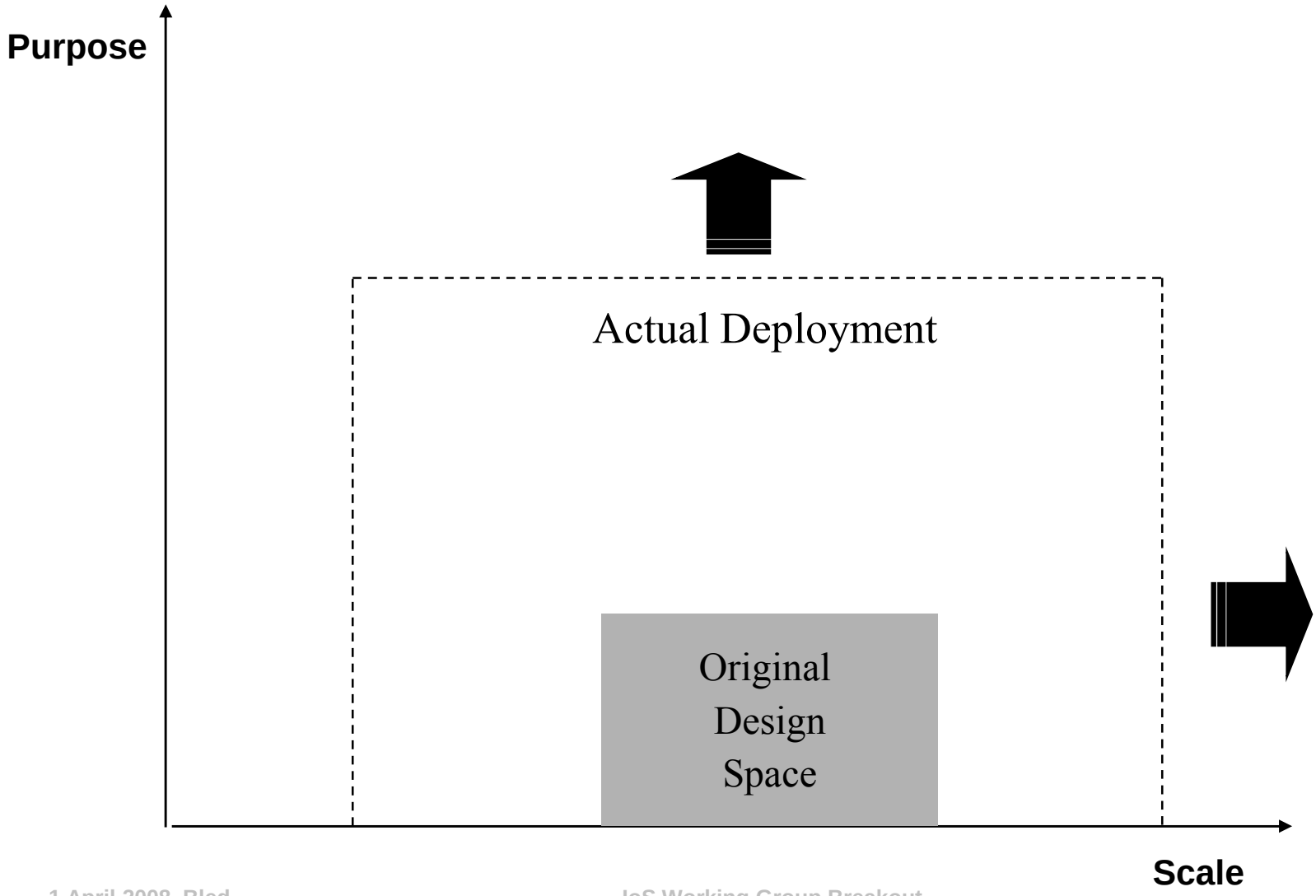
- No mainstream implementation
- No deployment
- No use

Strategies to mitigate standards failure

- Address a critical and imminent problem
- Provide a killer app with low deployment cost
- Provide value for existing applications
- Narrow the purpose to “easy area”

What makes a successful standard

adapted from draft-iab-protocol-success-03.txt, March 2008



Success factors for standards

- Positive net value - addressing a “demonstrable”, “real” need
- (Incremental) deployability
- Open code availability
- Minimal/no usage restrictions
- Open specification availability
- Effective maintenance
- (Extensibility)
- (Scalability)
- **Good Technical Design**

Conclusions

Standardisation is **an important route** for RTD exploitation, but:

- Requires
  - A clear answer to motivation
  - Credentials and credibility
  - Balance of actors and technology “mix”
  - Strategy, not an after thought
  - Long term commitment
  - Time to assess! (5 – 20 years?)
- Not decoupled from Vision or Policy
- Is there an “obvious” Future Internet standardisation body?
- The Cathedrals and Bazaar of standardisation