

# **Quality and the Reference Model**

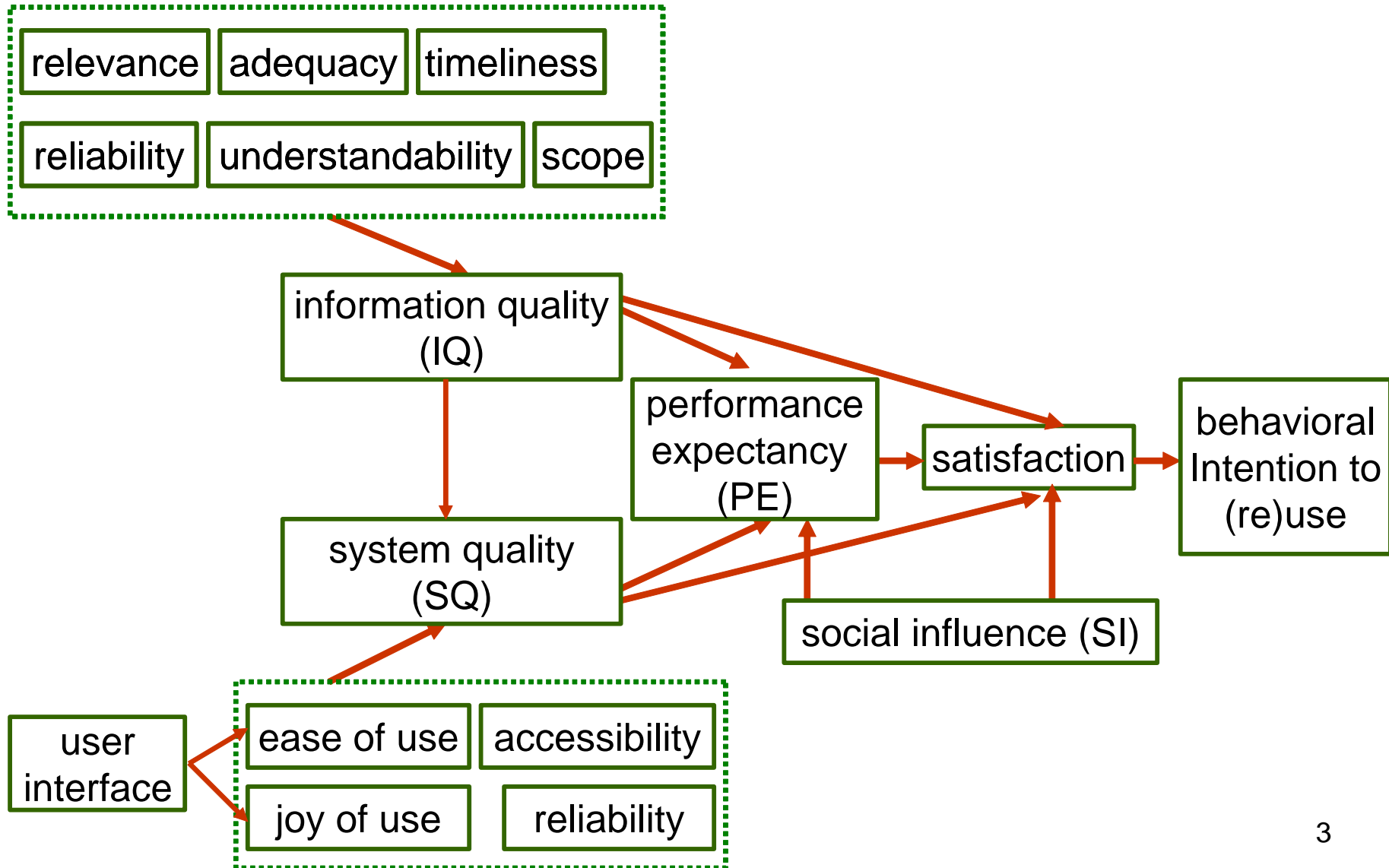
**DELOS Reference Model  
Workshop**

**Frascati-Rome, June 1-2, 2006**

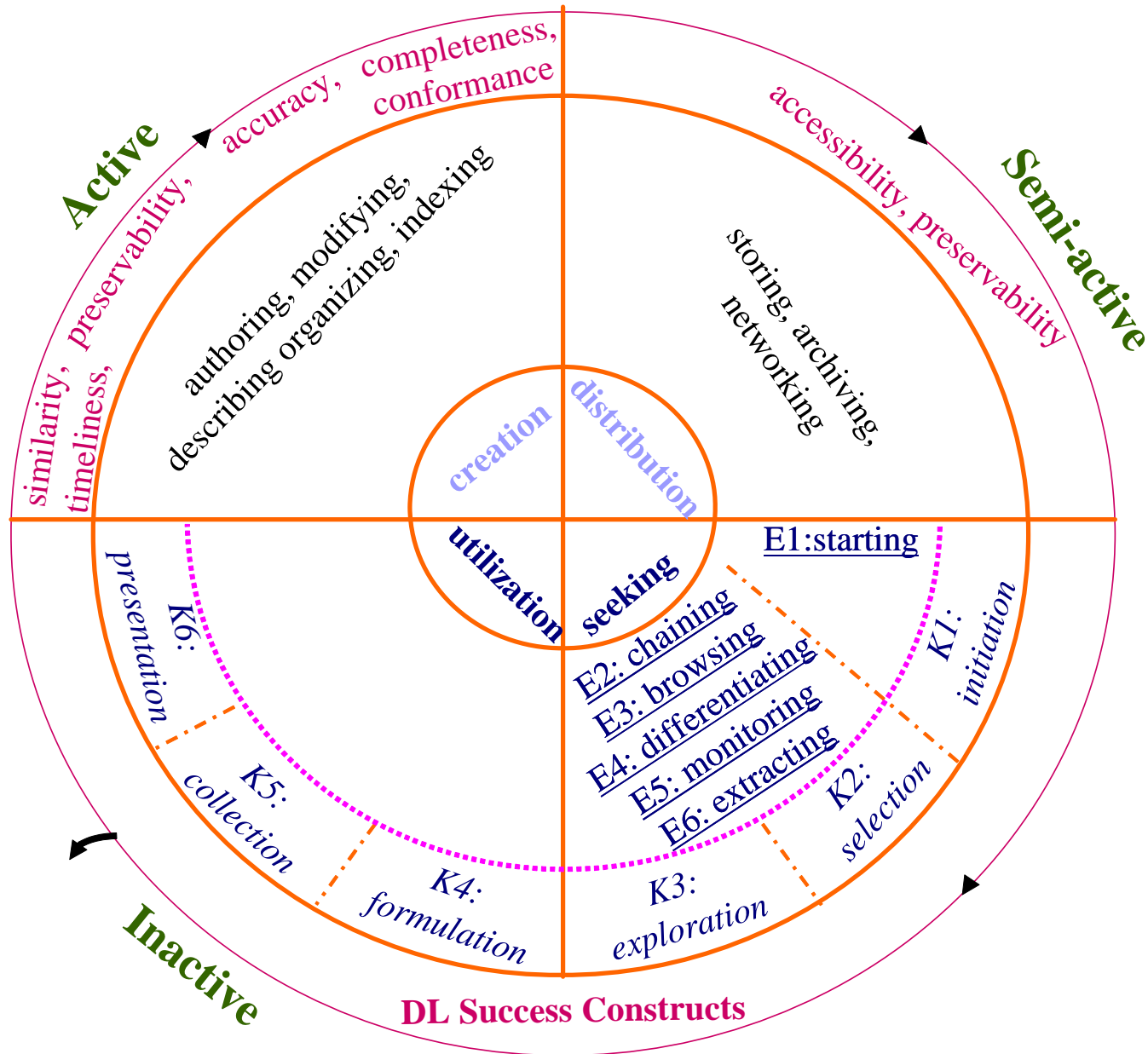
# Prior Related Work

- Information System Literature -> DL Success
- Information Life Cycle work from DL Workshop at UCLA led by Borgman
- Information Seeking Behavior Research by Ellis and Kuhlthau
- Information Seeking Phases Integrated with DL Success Constructs

# DL Success Model



# Ellis & Kuhlthau's Models Mapped to Info. Life Cycle



# DL success constructs associated with seeking and utilization phases

<b><i>DL success Construct</i></b>	<b><i>seeking phrase</i></b>		<b><i>utilization phrase</i></b>		
	<i>starting (E1/K1)</i>	<i>selection exploration (E2-E6)/(K2-K3)</i>	<i>formulation (K4)</i>	<i>collection (K5)</i>	<i>presentation (K6)</i>
<i>social influence</i>	<i>DL visibility</i>				
<i>information quality</i>		<i>adequacy, scope</i>	<i>accuracy</i>		
<i>system quality</i>		<i>ease of use joy of use (interface)</i>	<i>accessibility</i>	<i>accessibility</i>	<i>accessibility</i>
<i>performance expectancy</i>		<i>usefulness (interface)</i>			

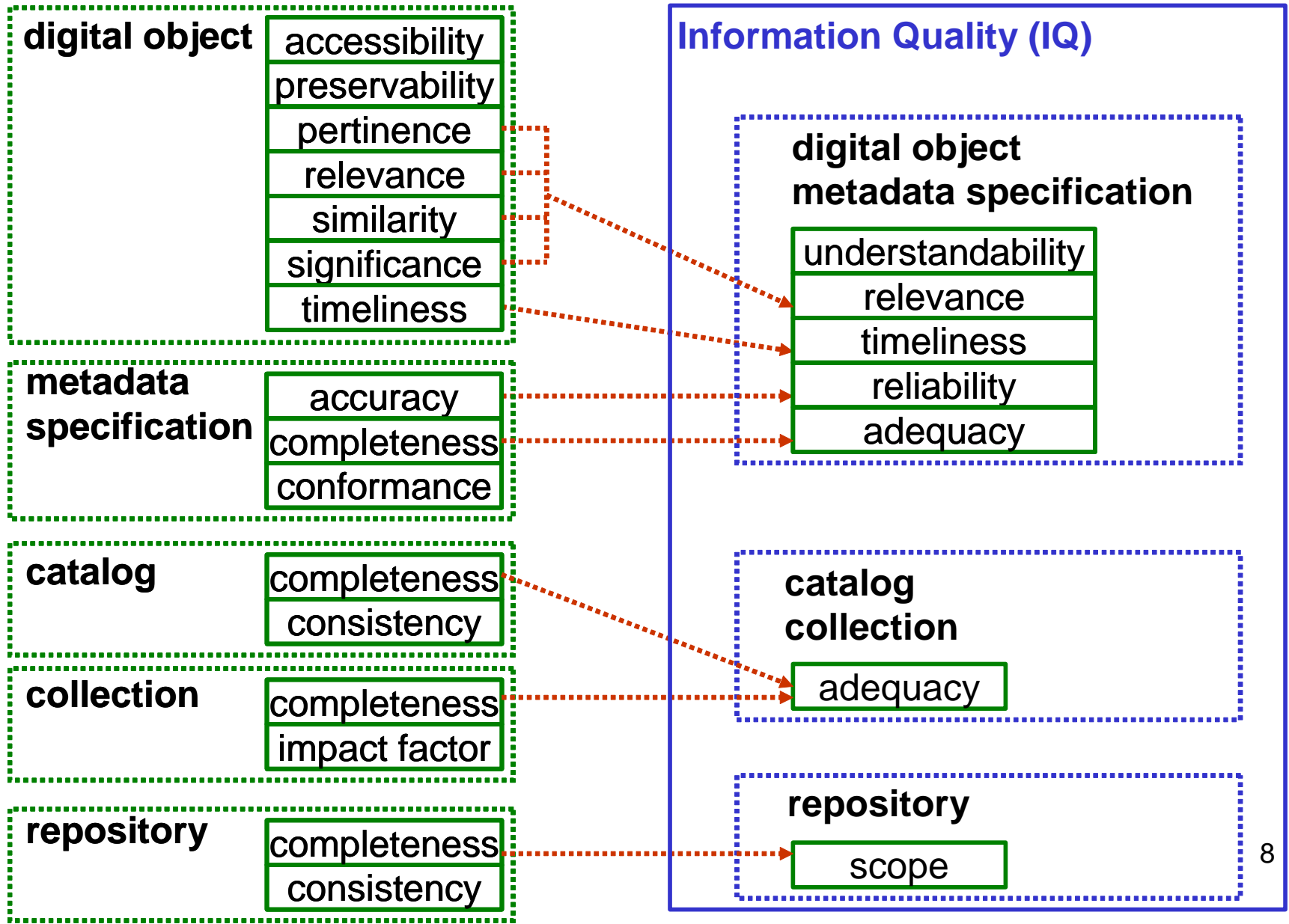
# Quality and the 5S Ref. Model

- 5S Quality Dimensions
- Measuring Information Quality (IQ)
- Measuring Service Quality (SQ)
- 5S with Quality and Success (IQ, SQ)

# 5S Quality Dimensions

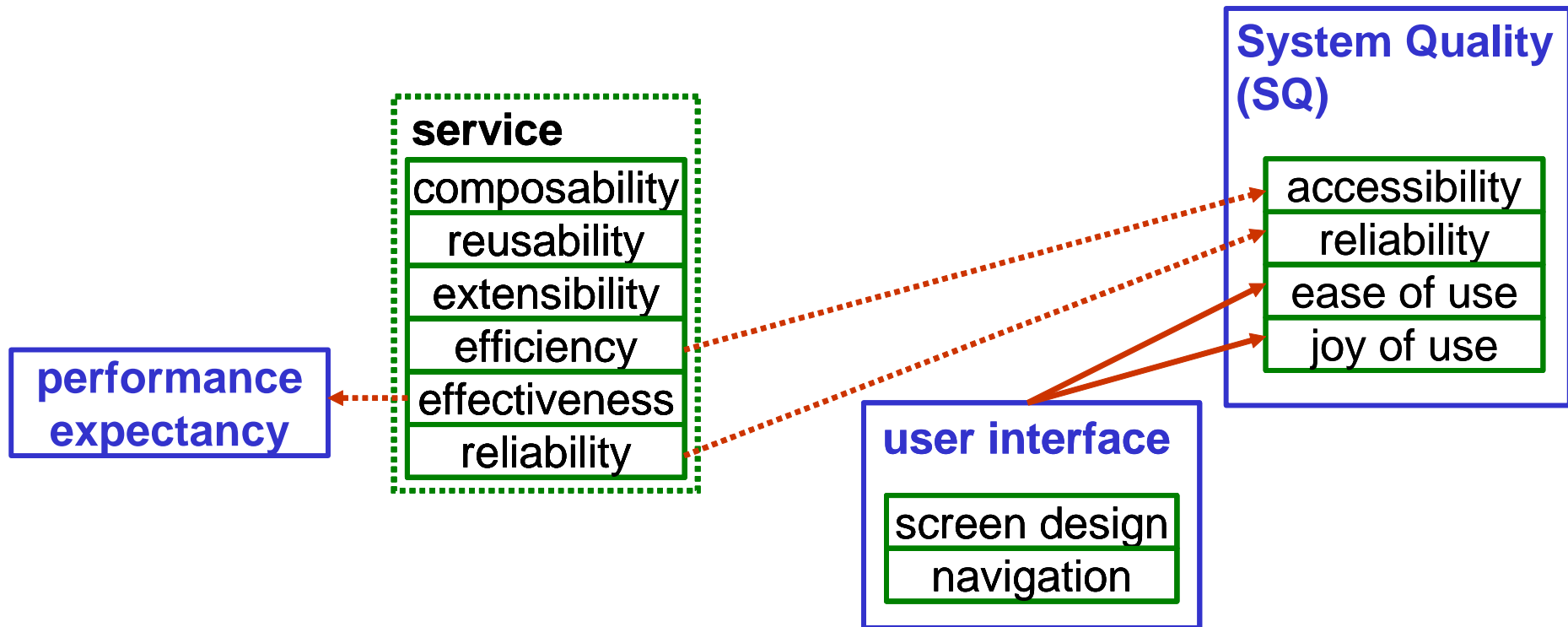
DL Concept	Dimensions of Quality
Digital object	Accessibility Pertinence Preservability Relevance Similarity Significance Timeliness
Metadata specification	Accuracy Completeness Conformance
Collection	Completeness Impact Factor
Catalog	Completeness Consistency
Repository	Completeness Consistency
Services	Composability Efficiency Effectiveness Extensibility Reusability Reliability

# Info. Quality Measurement





# Service Quality Measurement



<i><b>DL quality dimension</b></i>	<i><b>DL success manifest variable</b></i>	<i><b>5S and DL concept</b></i>	<i><b>DL success construct</b></i>
<i>accessibility</i> <i>accuracy</i> <i>completeness</i> <i>consistence</i> <i>conformance</i> <i>pertinence</i> <i>preservability</i> <i>relevance</i> <i>significance</i> <i>similarity</i> <i>timeliness</i>	<i>adequacy</i> <i>relevance</i> <i>reliability</i> <i>scope</i> <i>timeliness</i> <i>understandability</i>	<u><i>stream, structure</i></u> <i>digital object</i> <i>metadata</i> <i>collection</i> <i>catalog</i> <i>repository</i>	<i>information quality (IQ)</i>
<i>composability</i> <i>efficiency</i> <i>effectiveness</i> <i>extensibility</i> <i>reusability</i> <i>reliability</i>	<i>accessibility</i> <i>reliability</i> <i>ease of use</i> <i>joy of use</i>	<u><i>society, scenario,</i></u> <u><i>space</i></u> <i>service</i>	<i>system quality (SQ)</i> <i>performance expectancy (PE)</i>
	<i>DL visibility</i>	<u><i>society</i></u>	<i>social influence (SI)<sup>0</sup></i>

# Quality and the Frascati Ref. Model

Separate quality reference model from  
architecture reference model?

- Frascati Quality Dimensions
- Measuring Information Quality
- Measuring Service Quality

# Frascati quality parameters

- Robustness (system, service)
- Capacity (system, service)
- Scalability (system, service)
- Integrity (other definition) (system)
- Authentication (not a quality parameter but service)
- Authenticity (system)
- Data protection : becomes privacy (system)
- Message protection : becomes privacy (system)
- Latency : becomes performance (system, service)