

Records Management Maturity Model Assessment

DLM-Forum Members Meeting Luxembourg

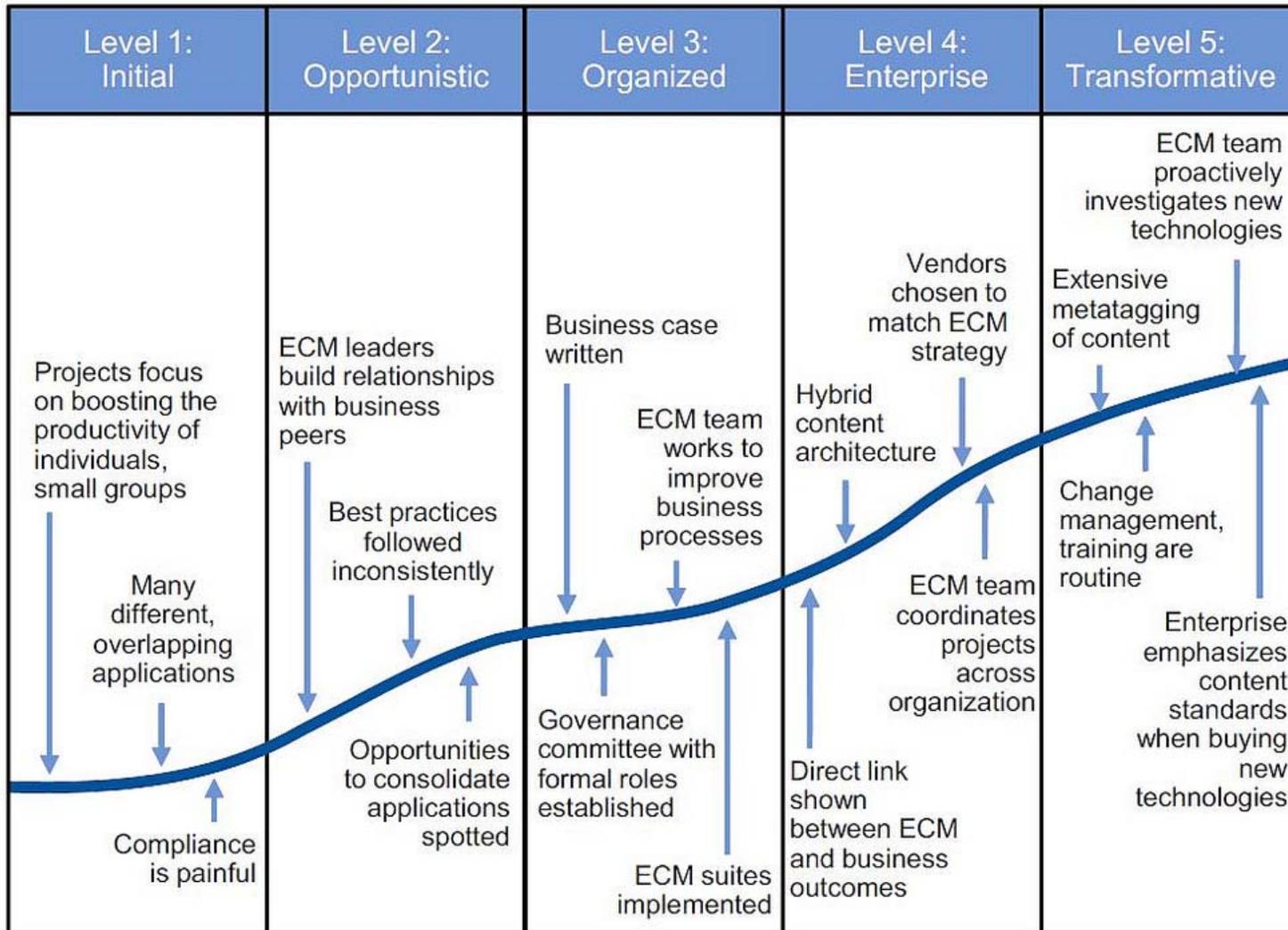


Maturity Model - Concept

- A **Maturity Model** is a technique that is proved to be valuable to measure a certain aspect of an organization. It represents a path towards increasingly organized and systematic way of “doing things” in organizations.



Figure 1. The Gartner ECM Maturity Model



Source: Gartner (January 2013)



Dimension:		Level: 1) Unmanaged	2) Incipient	3) Formative	4) Operational	5) Proactive
HUMAN	IT Expertise	No experience managing formal repository and workflow systems	Struggling 1.0 implementations of some systems	More advanced version 2.0+ implementations of systems, with focus on business-critical content	Managing repository and workflow systems is a core IT skill	Pro-active experimentation and learning about emerging content technologies
	Business Expertise	Ignorance about value and role of ECM	Growing sense of awareness about lack of management services	Communication plans include updates to key stakeholders about ECM business value	Executive sponsorship of ECM as a practice; process and content analysis are core skills	Content management designated a core employee skill and part of their HR reviews
	Process	Few or no standardized procedures around content	Basic process analysis leads to some ad-hoc workflows	Initial modeling of inter-departmental processes to prep for automation	Automated processes span systems and departments	Robust exception-handling and experimentation within framework
	Alignment	Key business drivers are not well understood by IT strategists, resulting in ECM gaps in IT portfolio	Gaps still exist between technology and core business processes; IT-metrics not evaluated by business outcomes	IT and Business both understand their information management roles and their respective strategies are no longer developed in a vacuum	Execution of IT & Business strategies become more cohesive, but still follow push-pull model	Strategy development between IT and the Business is done in collaborative and concurrent manner with frequent reviews using proper metrics
INFORMATION	Content/metadata	No formal inventory; no formal classification	Departmental inventories and initial content tagging	Enterprise inventory underway; controlled vocabularies (CVs) initiated	All new repositories and content types registered; global taxonomies created	Pervasive ROT elimination; Folksonomy development; Ongoing metadata reviews
	Depth	No lifecycle management	Most content archived haphazardly; some departmental RM efforts	Development of formal electronic retention, RM, and disposition schemes	Implementation of electronic and paper-based RM across the enterprise	All content types go through formal lifecycles.
	Governance	No policies and procedures	Scattered policies; few or no formal procedures	Development of information governance structure and codification of procedures	Policies and procedures widely disseminated; Enterprise ownership in place	Active review and adaptation; Voice of Customer key to feedback process
	Re-use	Content routinely duplicated	Content still routinely duplicated	Initial content analysis and structuring	Documents repurposed across systems and channels	Content components re-used across systems and channels
	Findability	Employees spend excessive time searching using various internal search engines	Search indexes tuned and basic metadata applied	Rationalization of search technology; analysis of search logs and further tuning, leveraging CV terms	Development of specific enterprise and/or federated search applications	Search and classification become a central service, with business-driven variants
SYSTEMS	Scope	No understanding of core content types	Some basic DM implementations with ad hoc workflow	Identification of core content types, locales; pilot projects for DAM, BPM, etc.	Business-critical information systems prioritized	Broad availability of diverse management systems
	Breadth	No systems	Scattered departmental efforts	Initial attempts to combine or integrate systems across departments	Successful departmental initiatives have been scaled enterprise-wide	Encourage and adopt innovations from departmental levels
	Security	No security regime in place	Dependent on individual systems	Formal projects initiated to address gaps & redundancies due to multiple solutions	Standardized policies and procedures exist and are system enabled	Security is treated as a centralized shared service
	Usability	Lack of systems make end user usability considerations moot	Employee adoption rates measured, but dissatisfaction unanalyzed	Some initiatives use Scenario Analysis and User Persona techniques to guide design	User-centered design underpins all system designs, with formal collection of user feedback	Usability is a guiding principle in all system activity

Measurement / Monitoring and Feedback Processes



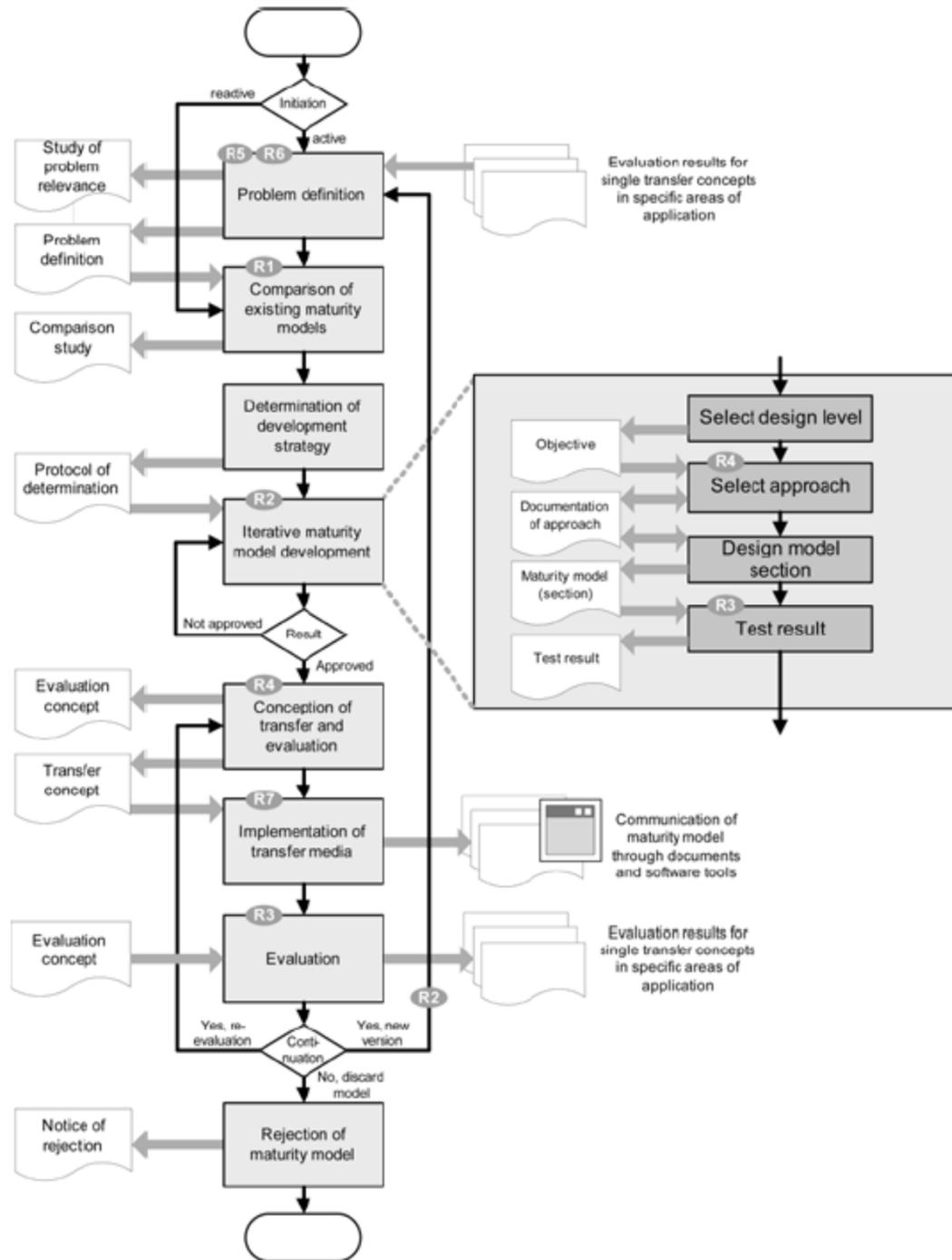
Maturity Model - Motivation

- Maturity Models supports:
 - Benchmark and internal auditing;
 - Measurement of progress;
 - Identification of strengths and weakness;
 - Identification of gaps between the as-is state and to-be state;



FROM:

Procedure model for developing maturity models [J. Becker, R. Knackstedt, J. Poppelbuß. "Developing Maturity Models for IT Management – A Procedure Model and its Application"]



Maturity Model – Development Method

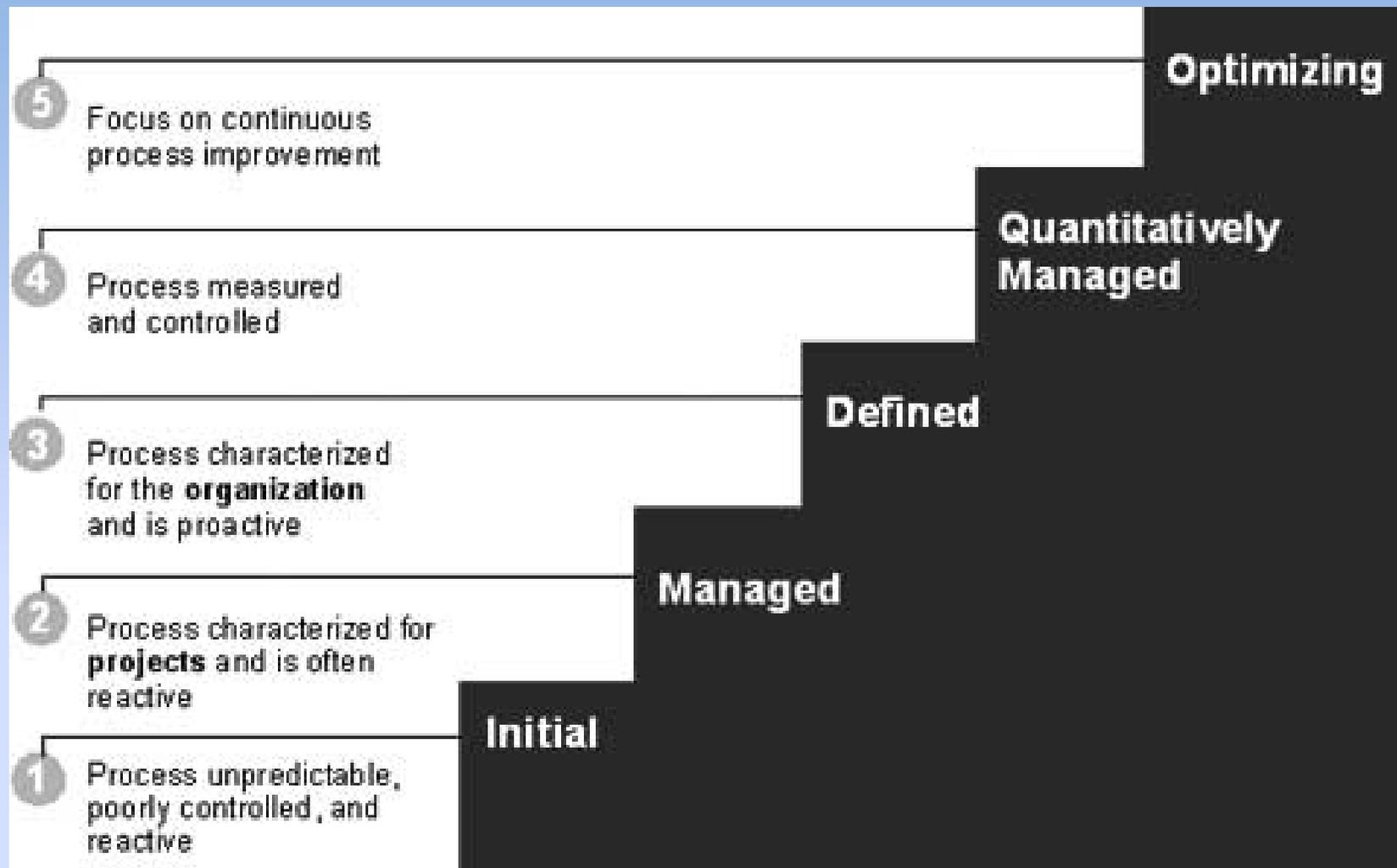
1. Problem Definition
2. Comparison of existing maturity models
3. Determination of the development strategy
4. Iterative maturity model development
5. Conception of transfer and evaluation
6. Implementation of transfer media
7. Evaluation
8. Repeat steps 4 to 7 until satisfaction



Maturity Model – Development Strategy

1. Create our maturity model architecture (i.e. define stages and dimensions)
2. Use literature analysis to populate our levels
 - ISO16363 (TRAC)
 - ISO14721 (OAIS)
 - ISO20652 (PAIMAS)
 - ISO15489
 - ISO30300/1
 - MoReq2010
 - ISO/IEC 38500
 - ISO11442
 - ISO13008
 - ISAACA – COBIT
 - ITIL
 - TOGAF
3. First iteration used three reference documents





(D. M. Ahern, A. Clouse, R. Turner. "CMMI Distilled: A Practical Introduction to Integrated Process Improvement, Third Edition". Addison Wesley Professional, 2008.)



Pilots Definition

- **Pilot 1:** SIP creation of relational databases
- **Pilot 2:** SIP creation and ingest of record
- **Pilot 3:** Ingest from government agencies
- **Pilot 4:** Business Archives
- **Pilot 5:** Preservation and access to records with geodata
- **Pilot 6:** Seamless integration between a live document management system and a long-term digital archiving and preservation service
- **Pilot 7:** Access to databases



Pilots Capability Model

- Based on Deliverable 2.1- General pilot model and use case definition

Capability	Ability	Pilots						
		1	2	3	4	5	6	7
Pre-Ingest	a) SIP Content Definition							
	b) Transformation of the Producer SIP to E-ARK SIP	F	F	F	F	F	F	F
	c) Local SIP Validation							
	d) Enhancement of the local SIP							
	e) Creation of the E-ARK SIP							
Ingest	f) Creation of fonds					T		
	g) Creation of the E-ARK AIP	F	F	F	F	T	F	F
	h) Validation of the E-ARK SIP							
	i) Validation of the E-ARK AIP							
Archival Storage and Preservation	j) Store E-ARK AIP		T	T	T	T	F	T
Data Management	k) Export E-ARK AIP and Descriptive metadata			T	F	T	T	
	l) Enhance E-ARK AIP and Descriptive metadata							
Access	m) Search Data							
	n) Provide Access to Ad-Hoc DIP							
	o) Creation of a Local DIP							
	p) Creation of a E-ARK DIP	T		F	F	F	F	F
	q) Creation of a Requested Local DIP							
	r) Creation of a Requested E-ARK DIP							

F	Focus of the pilot
T	Elements also used/tried within the pilot



Online Self-Assessment Questionnaire



INTRO QUESTIONS

Pre-Ingest: 0 / 4

Ingest: 0 / 14

Archival Storage and Preservation: 0 / 7

Data Management: 0 / 3

Access: 0 / 7

Total: 0 / 35

Finish

"The Pre-Ingest process covers the producer's and archivist's activities of creating Submission Information Packages (SIP)." In Deliverable 2.1 - General pilot model and use case definition.

1 - Is there a procedure to negotiate the terms of deposit between the Producer and the Archive?

Objective: Understand if the Archive is capable of negotiating the terms of deposit with Producers. Terms of deposit might include the specification of the metadata that must be included at the time of deposit, the schedule and method of deposit, the responsibilities of the Producer and the Archive regarding the information being ingested, etc.

- No: There is no procedure to negotiate the terms of deposit
- Ad-hoc: There is an ad-hoc procedure to negotiate the terms of deposit
- Defined: There is a defined procedure to negotiate the terms of deposit
- Defined and assessed ad-hoc: There is a defined, documented and ad-hoc assessed procedure to negotiate the terms of deposit
- Defined and assessed consistently: There is a defined, documented and consistently assessed procedure to negotiate the terms of deposit

Comment:

2 - Does the Archive validate if the Producer SIP complies with the defined format and structure specifications?

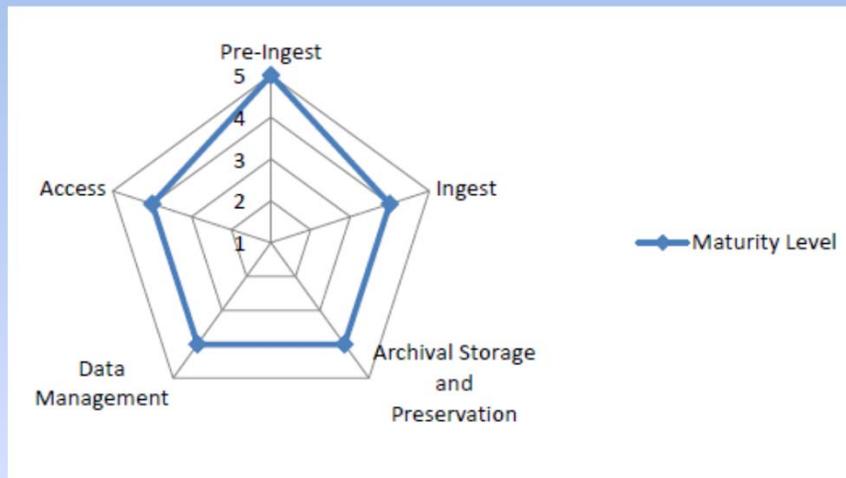
Objective: Understand if the Archive validates the Producer SIP regarding format and structure. If the SIP has deviations the Archive might reject the SIP and request the Producer to deliver a corrected SIP.

Terms: Producer SIP

- No: The Producer SIP is not validated.
- Ad-hoc: The Producer SIP is validated using ad-hoc procedures.
- Defined: The Producer SIP is validated using defined procedures.
- Defined and assessed ad-hoc: The Producer SIP is validated using defined, documented and ad-hoc assessed procedures.
- Defined and assessed consistently: The Producer SIP is validated using defined, documented and consistently assessed procedures.



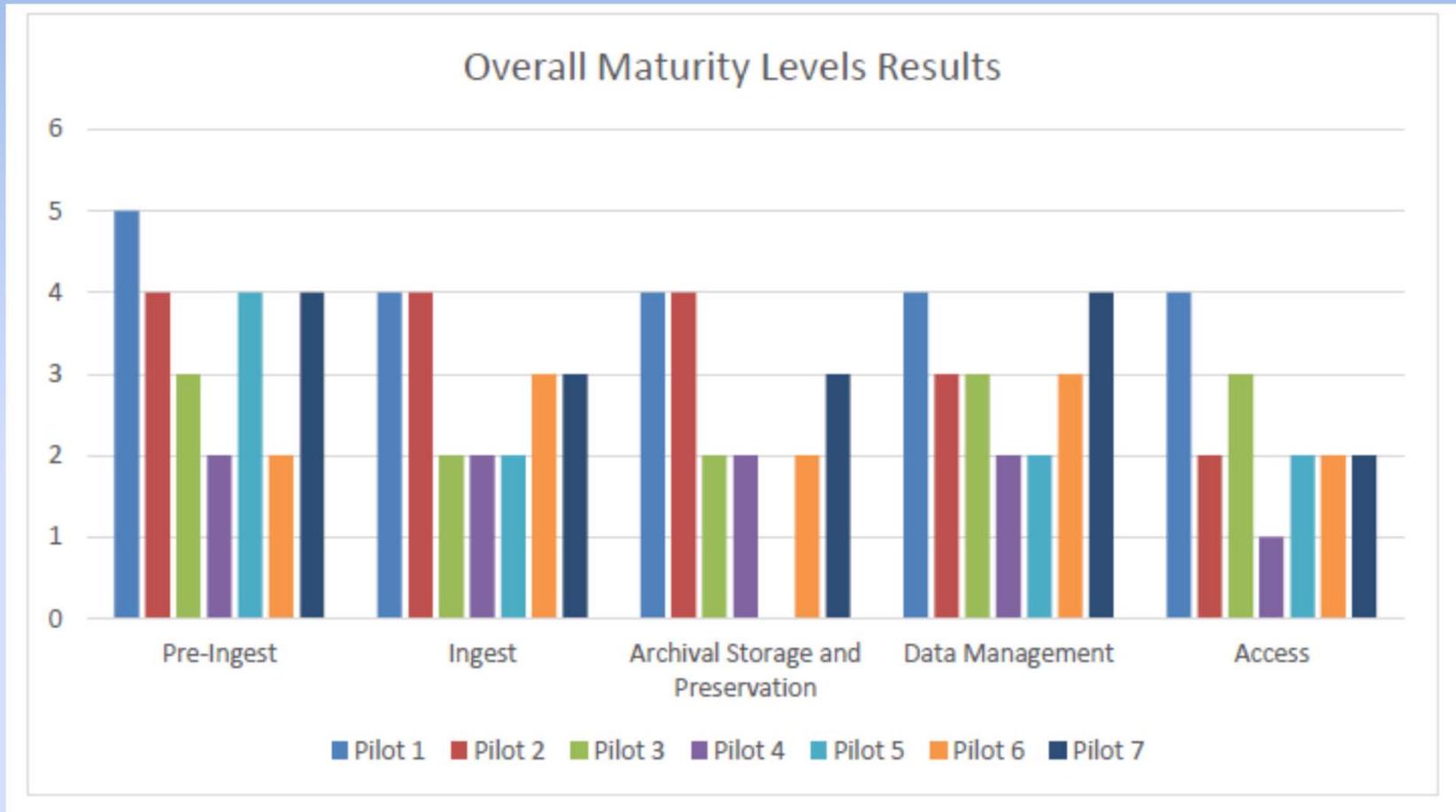
Pilots Individual Assessment



Capability	Maturity Level 1	Maturity Level 2	Maturity Level 3	Maturity Level 4	Maturity Level 5
Pre-Ingest					100%
Ingest	7%		7%	36%	50%
Archival Storage and Preservation		14%		14%	72%
Data Management				67%	33%
Access			14%	29%	57%



Overall Pilots Assessment



Future Work

1. Refine the self-assessment questionnaire based on pilots feedback
2. Publish the questionnaire as an output of the project
3. Refine and expand the E-ARK Maturity Model
4. Provide an Information Governance Maturity Model



Questions?

- Further Reading:
 - SEI CMMI:
 - Development: <http://www.sei.cmu.edu/reports/10tr033.pdf>
 - Acquisition: <http://www.sei.cmu.edu/reports/10tr032.pdf>
 - Service: <http://www.sei.cmu.edu/reports/10tr034.pdf>
 - E-ARK Deliverables
(<http://www.eark-project.com/resources/project-deliverables>)
 - D7.1 A Maturity Model for Information Governance – initial version
 - D7.2 Initial Assessment and Evaluation





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Digital **Preservation** Coalition



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