Digital Curation Roadmaps: a Policy Instrument in the Making

Milena Dobreva Raivo Ruusalepp Krassimira Ivanova Why roadmaps?

Extinction timeline* 1950-2050

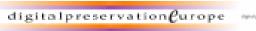
* Existence insignificant beyond this date Sit down breakfasts POST OFFICES John F Kennedy **SMALLPOX** Repair shops Great Barrier Reef DEATH **BERLIN WALL** PHYSICAL NEWSPAPERS Direct marketing Phone boxes Communism KEYS Butchers Soviet Union MENDING THINGS Childhood **GOOGLE** Free parking Exchange controls (UK) Reality TV WW1 survivors Czar Nicholas II Libraries Manned moon landings Primitive forms of money Trade Union Static ads George Bush II Secretaries Vacuum tubes **CFCs** Secrets National currencies Keynesian economics Lindsay Lohan A good night's sleep DVD Lunch Low doc mortgages Betama Village shops Bank notes FM radio Passenger airships **LETTER WRITING** Russian democracy Wallets Crafts people Space Invaders Tony Blair Kingdom of Greece Text-based search Free public spaces NATION STATE Kurt Cobain Studio 54 Inheritance tax Carbon emissions **BRITISH EMPIRE** Sinclair C5 Affordable house Deafness **BlackBerrie** Barings Bank Milkmen Real handkerchiefs Pluto Persio Tower Records 8-track Wrinkles Wire records RETIREMENT Prussin Cheap pil Disco PRIVACY Kim Jong European Union The next big thing Futurists Normal weather Apartheid Big political ideas "SORRY" WW2 survivors Ottoman Engire Public intellectual Vladimir Putir Green screen Customer service Free roads Punch cards Computer mouse Wooden tows 78-rpm records PEACE & QUIET AM radio Cosmetic surgery Issac Asimov Telephone directorie Sunday lunch **DESKTOP COMPUTERS** State pensions **GLACIERS** Receptionists Philip K. Dick Concorde PHYSICAL PAIN East Pakint Work free wee **Polaroids** Yugoslavii Natural childbirth Paris Hitton DOT **UGLYNESS** Bone phone Jim Morrison John Lennon Careers Open borden **GETTING LOST** Gold Standard (US) Imperial measurement (UK) WEB 2.0 PETROL ENGINED VEHICLES Chemobyl The Maldiv Beven European cum Addiction Pacman Lists of predictions Paternity dispetes Video rental stores SPELLING Manual typewrit Fax machines Aral sea Internal EU passport contr BLOGGING Low-cost trave Bangladesh Buckteet Jimi Hendris Manchu Dynasty OIL Janis Joolin NATIONAL SOVEREIGNTY Microsoft Get Smart Habeas corpus CRT television The Middle d TWA Household chore COPYRIGHT "Thank you" Spam Douglas Adams Steam locomotivo Aboriginal culture Enron Corporation DIAL-UP Rocky films Arthur Anderson Chinese Imperial fam EMAIL The family room INNOCENCE Buggy COINS Love bites Swiss Army knive John Howard **BBW** television Telex 35mm projectors 1950 1960 1970 1980 1990 2000 2010 2020 2030 2040 2050







Roadmap as a self-organisation tool







Open research challenges and research roadmap for





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Issues in Digital Preservation: Towards a New Research Agenda

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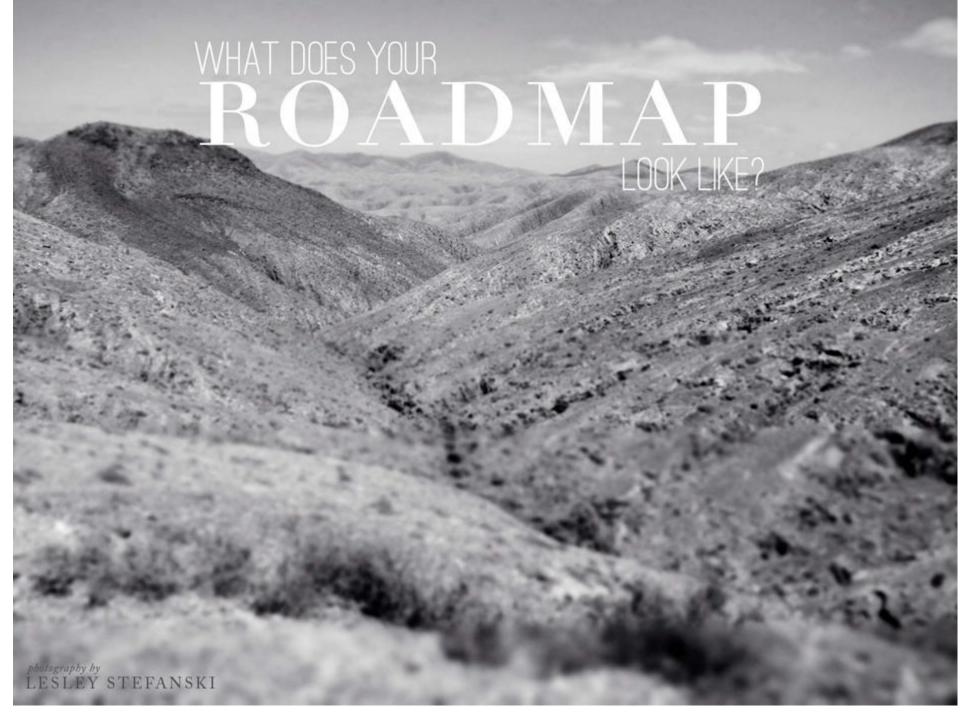
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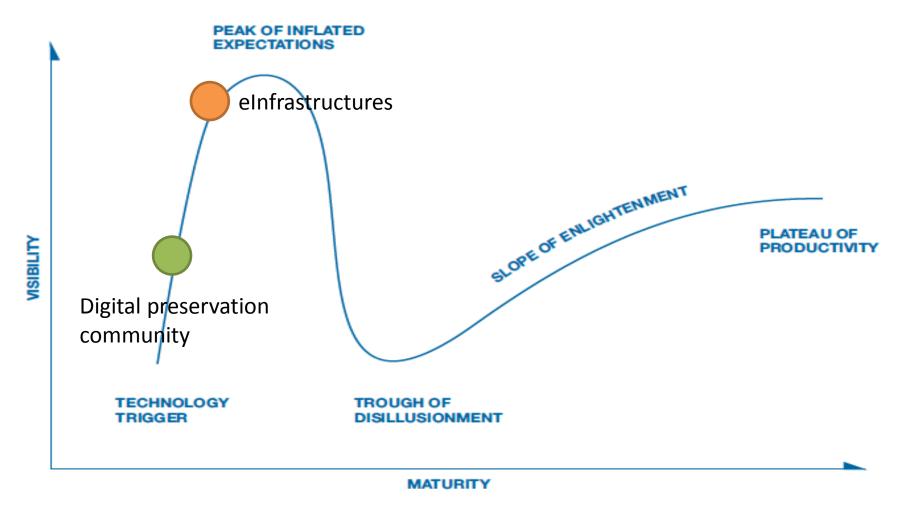
⁵ ISTI-CNR, Pisa, IT

DPE Research Roadmap (2007)

	UEI	PDI	DPNU	SoDP	IAT	I2S	eScienc e	Cyber	DigiCul t	Erpane t	Warwic k	DRR
	1991	1996	1998	2002	2003	2003	2003	2003	2004	2001- 2004	2005	2000
Digital Object Level												
Migration		+		+	++	+						
Emulation				++	+						+	
Experimentat ion		+				+						
Registries and repositories					+++	++++				+	++	
Complex Objects	+			+	++	+		+	++	++	++	
Significant properties			+	+	++	+	+					
Authenticity				++	+++++					+	+	
Acceptable loss					+			+				

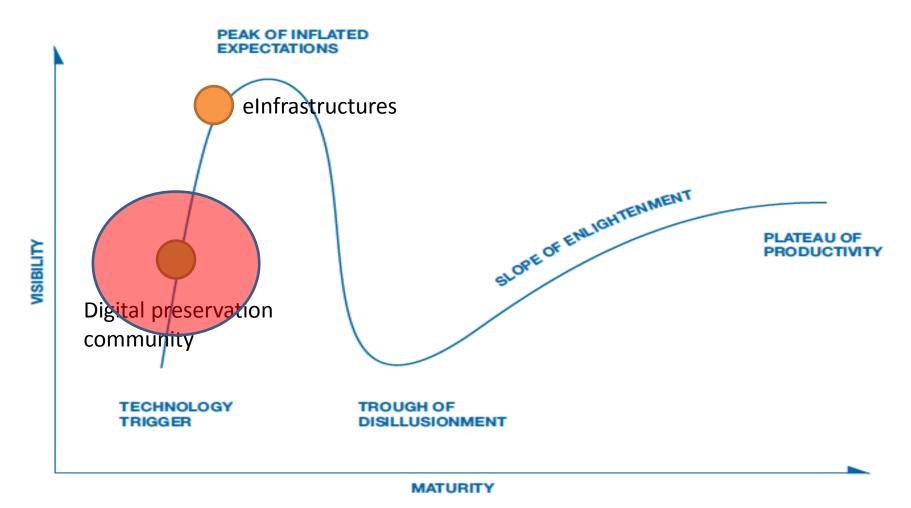


Where are we now?



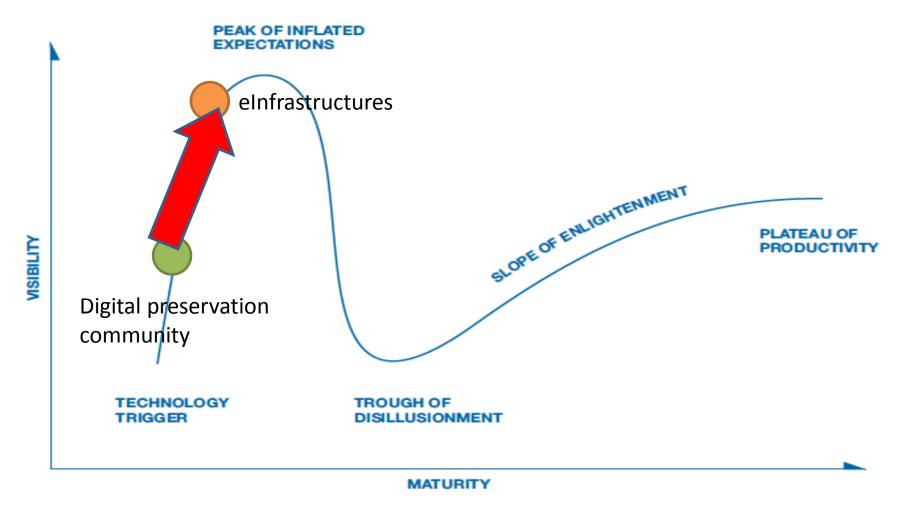
Based on: Gartner Hype Cycle

What should roadmaps help us to do? The digital preservation perspective



Based on: Gartner Hype Cycle

What should roadmaps help us to do? The eInfrastrutures perspective



Based on: Gartner Hype Cycle

Roadmap – crossing the community boundary

DCH RP 2012

	Harmonisation of data storage and	Progress for inter-organisational	Establishment of conditions for cross-	Governance models for
	preservation	communication	sector integration	infrastructure integration
Short term (2014)	Test existing technical solutions in DCH environment Define an initial set of critical system requirements Analyse the needs and conditions for infrastructure federation – e.g. NGIs, NRENs, EGI, EUDAT, CLARIN, DARIAH, DASISH, PLATON and commercial infrastructures Summarise ongoing experience with grids and cloud solutions applied in cultural institutions Identify examples of use of PaaS – and promote the benefits offered by virtualisation	Analyse interoperability issues including the following aspects: Technical Semantic Organisational and intercommunity Legal Political/human Cross-border	Analyse what impact do emerging and established standards have on grid and cloud preservation architectures Establish and update a registry of preservation tools and services Analyse which PAAS composition of services best matches digital preservation requirements Identify gaps in provision and establish a plan for medium-and long-term developments to address the gaps	Analyse major information governance patterns and windows of opportunities Explore the issues of trust-building through pilot systems Suggest possible business models for typical scenarios
Medium term (2016)	Test technical solutions in DCH environment Long-term storage, bit-level preservation Multiple entry points Operational benefits VRE development Support framework Middleware services Authentication and authorisation infrastructure Sharing of other services	Develop and test tools facilitating interoperability addressing the following aspects: Technical Semantic	Fill in gaps in provision [plan for medium-term work needs to be made in the end of the short-term stage]	Analyse needs for redesign of existing local (institutional) infrastructures Define a set of governance principles for digital preservation in DCH
Long term (2018 and	Consolidate mature requirements for preservation in the DCH environment	Implement tools in selected elofrastructures facilitating interoperability aspects: Technical Semantic	Fill in gaps in provision [plan for long- term work needs to be made in the end of the short-term stage]	Offer mature business model for preservation services for different types of institutional settings