

Designing a Sustainable Future

An approach to the Assessment, Archiving and Preservation of Digital Projects



We are

James Smithies

Director, King's Digital Lab
King's College London

Email: james.smithies@kcl.ac.uk

Twitter: [@jamessmithies](https://twitter.com/jamessmithies)
[@kingsdigitallab](https://twitter.com/kingsdigitallab)

Anna-Maria Sichani

DiXiT fellow-Huygens ING
Research Associate, King's Digital Lab

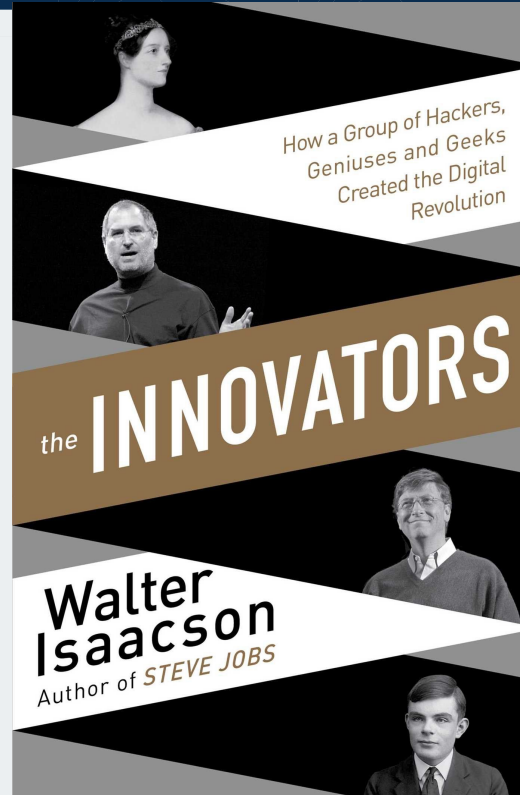
Email: anna-maria.sichani@huygens.knaw.nl

Twitter: [@amsichani](https://twitter.com/amsichani)
[@HuygensING](https://twitter.com/HuygensING)

How do we conceptualize the relation between society and technology?

[culture
scholarship
everyday life]

From innovation



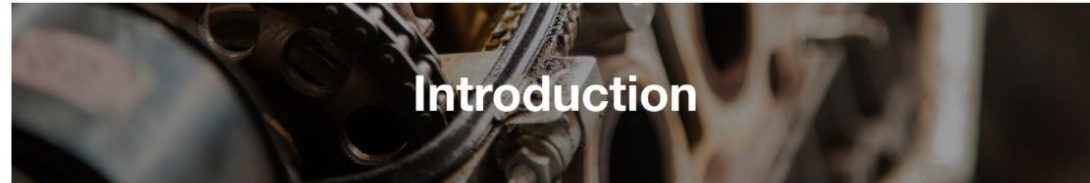
Walter Isaacson, *The Innovators: How a Group of Hackers, Geniuses, and Geeks Created the Digital Revolution*, Simon & Schuster, 2014

To maintenance

The Maintainers: A Conference

APRIL 7-9, 2016 · STEVENS INSTITUTE OF TECHNOLOGY · HOBOKEN, NEW JERSEY, USA

[WELCOME](#) [2016 PROGRAM](#) [MAINTAINERS II CFP](#) [BLOG](#) [MAILING LIST](#)



[potential title of unpublished manifesto]

“The Maintainers: How a Group of Bureaucrats, Standards Engineers, and Introverts Made Digital Infrastructures That Kind of Work Most of the Time”

themaintainers.org



Hail the maintainers

Capitalism excels at innovation but is failing at maintenance, and for most lives it is maintenance that matters more

Andrew L. Russell & Lee Vinsel, *Hail the Maintainers*, *Aeon* (April 7, 2016)

“ What happens **after** innovation is more important. Maintenance and repair, the building of infrastructures, the mundane labour that goes into sustaining functioning and efficient infrastructures, simply has more impact on people’s daily lives than the vast majority of technological innovations.”

Andrew L. Russell & Lee Vinsel, *Hail the Maintainers*, Aeon (April 7, 2016)

Making the case for Sustainability and Maintenance of Digital Humanities Projects

A fight worth fighting

*“to create, to endure and continue to provide **value** well beyond the term of the grant, long-term success”*

Maron et al. (2009). *Sustaining Digital Resources: An On-the-Ground View of Projects Today*. *Ithaca Case Studies in Sustainability*

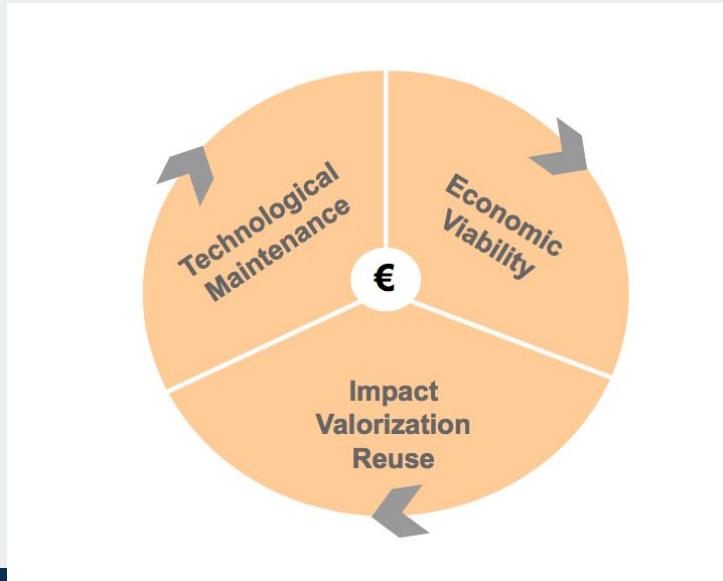
We are not alone in this.

JISC / Ithaka-Strategic Content Alliance

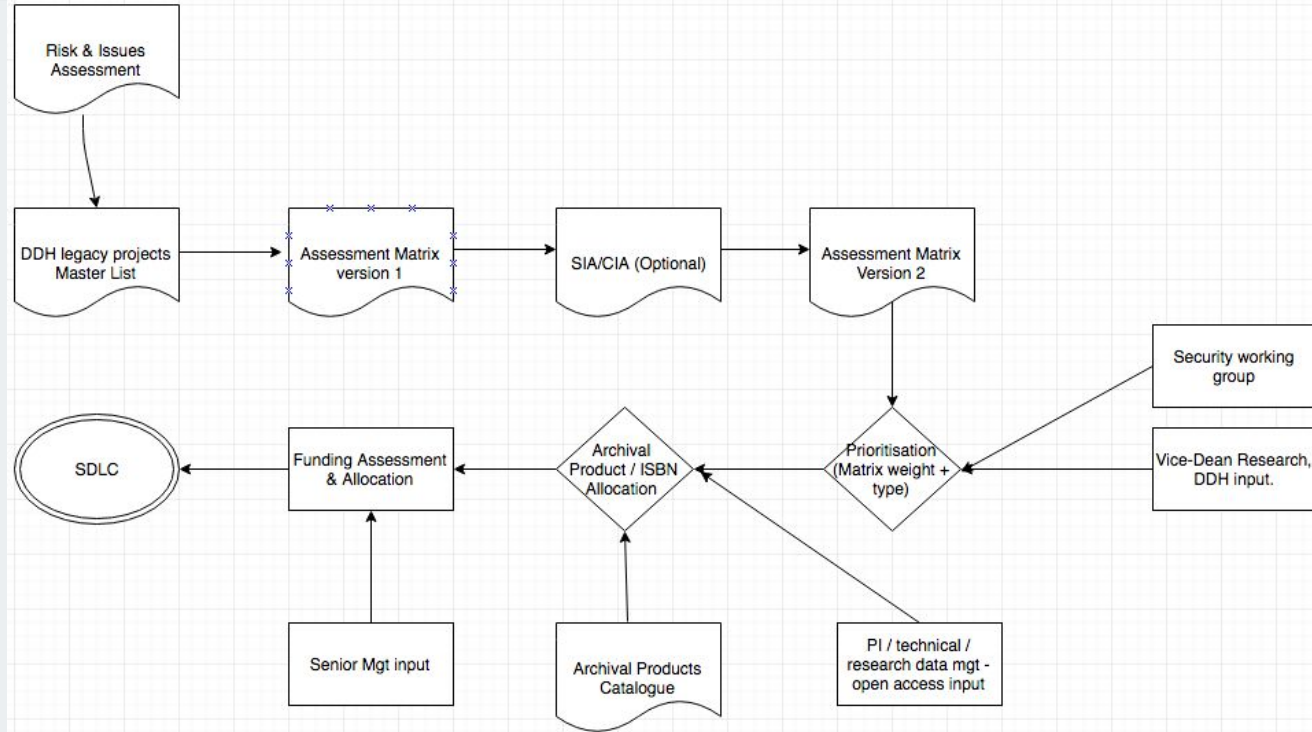
“We define ‘sustainability’ as having a mechanism in place for generating, or gaining access to, the economic resources necessary to keep the intellectual property or the service available on an ongoing basis”. (Guthrie et al., 2008: 10)

- Arts and Humanities Data Service (AHDS) <<http://www.ahds.ac.uk/>>
- Digital Preservation Coalition's < www.dpconline.org >
- Promoting and Enhancing Reuse of Information throughout the Content Lifecycle taking account of Evolving Semantics (PERICLES), <<http://www.pericles-project.eu/> >

KDL approach to Sustainability (in a nutshell)



Process workflow



Projects Master List

20 years

164 projects - and still counting

Assessment matrix

Institutional reputation (Brand impact)

Research impact

Research value

Web Traffic

Altmetrics

Linked data dependencies

Copyright / licencing

Costs of Publication

Bugs

Infrastructure costs

Development costs

Security risk

Archiving & preservation difficulty

grade	1	2	3
Institutional reputation			
research impact			
research value			
traffic			
altmetrics			
linked data dependencies			
copyright / licencing			
Costs of Publication			
bugs			
infrastructure costs			
development costs			
archiving & preservation costs			
security risk			
archiving & preservation difficulty			
SIA / CIA (ONLY in phase 2)			

Stakeholder Impact Assessment /Change Impact Assessment

1. Stakeholder Identification

To detail assumptions and other notes use the 'Insert Comment' function. All comments will print out automatically					Programme	Contract Mapping	
					Version:	0.1	
					Programme Phase:	Start up	
Stakeholder	Stakeholder's objectives	Stakeholder's degree of power and influence (Low, Medium, High)	Impact on Stakeholder (Low, Medium, High)	Stakeholder's level of interest in the programme/project (Low, Medium, High)	Stakeholder's level of awareness of the programme/project (Unaware, Aware, Active)	Stakeholder's level of support (Neutral, Supporter, Opposed)	Stakeholder capacity to participate (Low, Medium, High)

3. Change Activity

Please enter Change Activity that has not been captured in the individual change impact worksheets					Programme:	[Insert Name]		
To detail assumptions and other notes use the 'Insert Comment' function. All comments will print out automatically					Version:	[Insert Number]		
					Programme Phase:	[Insert Phase]		
Change activity	Activity objectives	Participants	Resource requirements	Timetable activities	Cost (\$,000)	Responsibility	Due Date	Status
						?		

4. Engagement Activity (Stakeholder Specific)

Should be completed in consultation with the Business Owner and external subject matter experts i.e. Training, HR, Sector Communication staff					Programme:	[Insert Name]
To detail assumptions and other notes use the 'Insert Comment' function. All comments will print out automatically.					Version:	[Insert Number]
					Programme Stage:	[Insert Stage]

Overall Engagement objective (including metrics of success):

Engagement Activity (Activities to achieve the engagement objective)	Stakeholder(s)	Engagement Objective (What will the activity achieve i.e. change notification, call to action)	Key Messages (What messages need to be delivered)	Due Date	Responsibility	Resource requirements	Cost (\$,000)	Status	Evaluation (Did the activity achieve the objective)	Comments

2. Key Stakeholder Change Impact

1 Sheet per key stakeholder

To detail assumptions and other notes use the 'Insert Comment' function. All comments will print out automatically

At minimum, complete for those with an impact rating of medium or high (refer the Stakeholder Identification Sheet)

Programme: [Insert Name]

Version: [Insert Number]

Programme Phase: [Insert Phase]

Programme/Project Name:

Stakeholder (organisation type of functional unit impacted):

Change Impact Ratings

Level of impact (on the stakeholder):

None – No change impact

Low – Minimal or low levels of change that can be accommodated within business as usual activity

Medium – Requires changes to how the organisation/unit operates requiring additional investment of time and resources to achieve

High – Requires significant change to how the organisation/unit operates (involving a significant investment of time and resources)

Difficulty to achieve

None – No change impact

Easy –Support for the change and change can be meet within available resources

Medium –Variable support for the change and there is variable capacity to accommodate the change within available resources

Hard – Low support for the change and/or change can not be met within available resources

Contribution to benefit realisation

None or limited contribution to the achievement of benefits
Moderate contribution to the achievement of benefits

Substantial contribution to the achievement of benefits

Critical contribution to the achievement of benefits

	Future environment	Current environment (Only include points of difference to the future environment)	Level of impact	Difficulty to achieve	Contribution to benefit realisation	Required actions	Due Date	Status	Cost project (\$,000)	Annual cost ongoing (\$,000)	Funder
Business model: e.g. Governance, Cost Structure, Organisation's Core Capabilities, Business operating model											
Culture/behaviours: e.g. Relationship (internal and external), Leadership, Knowledge sharing, Culture											
People: e.g. Capability, capacity, accountabilities, organisation design											
Processes: e.g. Clinical and business delivery processes, reporting processes, policies and procedures											
Interfacing technology: e.g. hardware, software, information standards											
Government policy and legislation											
Patients/individuals: e.g. use of patient information, behaviours and activities, privacy*											

Archiving solutions catalogue

1. Data only
2. Web connector / backend support
3. Maintained VM
4. Offline or Unmaintained VM
5. Cloud hosting
6. Static website
7. “Active” maintenance
8. ISBN/ISSN allocation

Challenges

Risks and Issues ?

Is it feasible ?

Built-in or Add-on Sustainability ?

Thank you !

James Smithies

Director, King's Digital Lab
King's College London

Email: james.smithies@kcl.ac.uk

Twitter: [@jamessmithies](https://twitter.com/jamessmithies)
[@kingsdigitallab](https://twitter.com/kingsdigitallab)

Anna-Maria Sichani

DiXiT fellow-Huygens ING
Research Associate, King's Digital Lab

Email: anna-maria.sichani@huygens.knaw.nl

Twitter: [@amsichani](https://twitter.com/amsichani)
[@HuygensING](https://twitter.com/HuygensING)