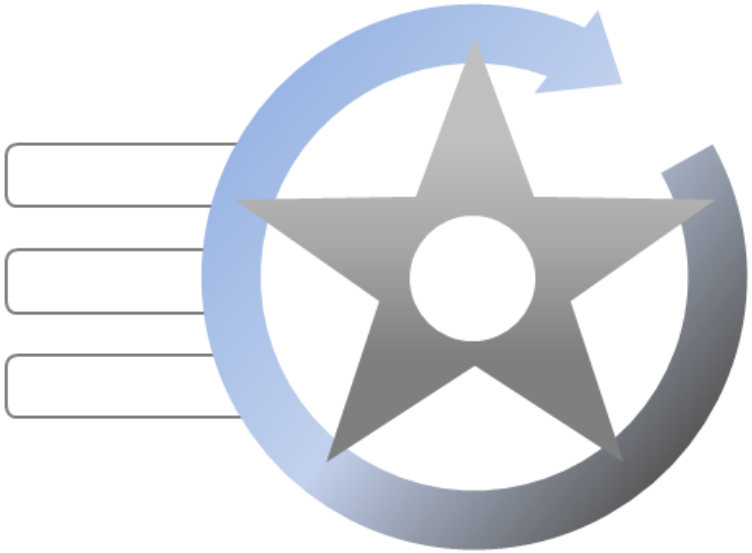
iPRES2013

The Cost of Curation - Workshop

Introduction to the Economic Sustainability Reference Model



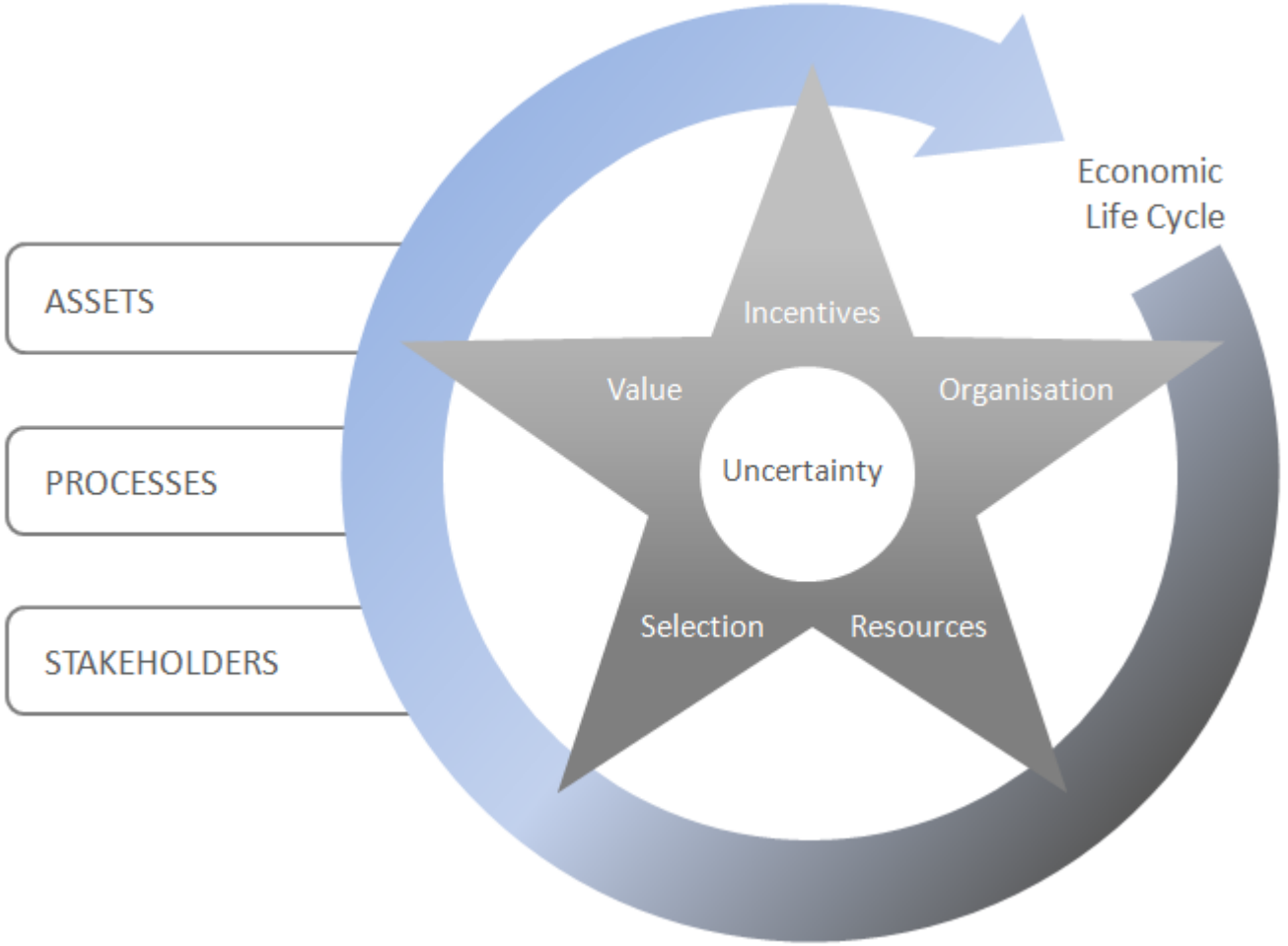
The ESRM as it appears within the 4C Report on this topic ...

Table of Contents

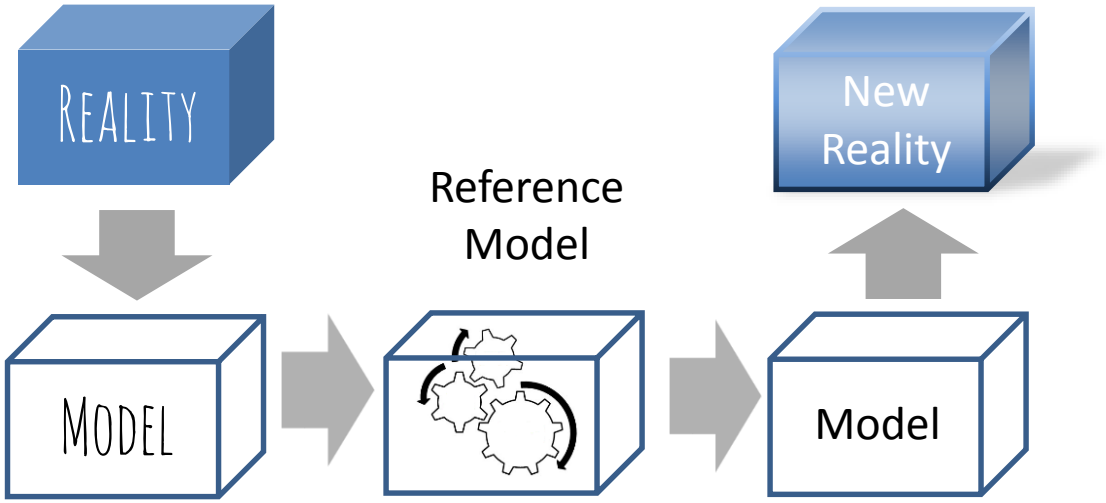
http://4cproject.eu/community-resources

A DRAFT Economic Sustainability Reference Model (ESRM)

1. What is the purpose?
2. How is it structured?
3. How can it be used?
4. What next?



What is the point of a Reference Model?

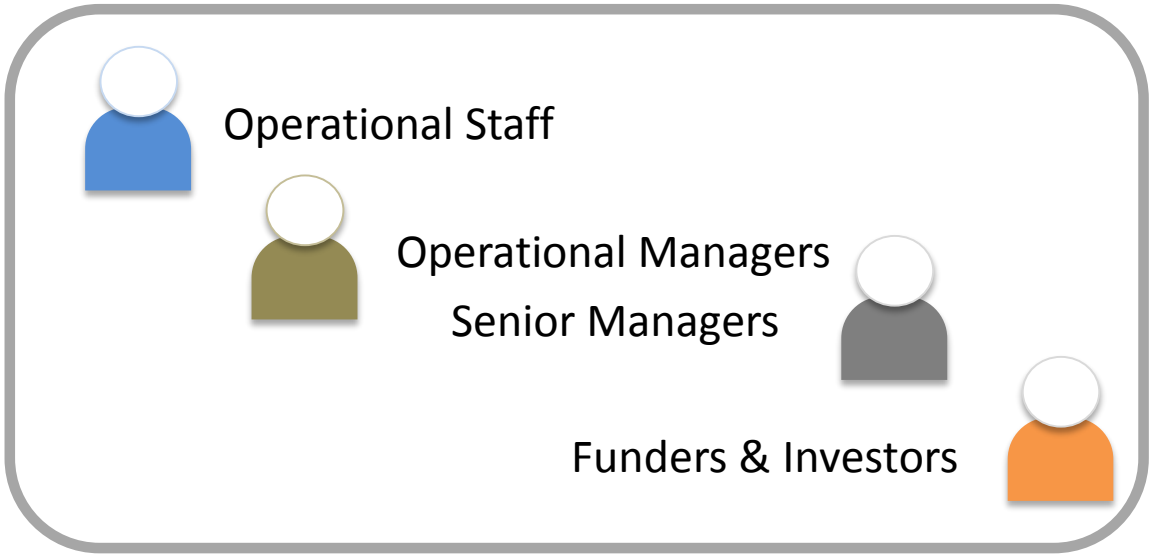


The purpose of the ESRM

... is to provide a foundation for progress in the development of successful sustainability strategies for digital curation.

It does this by organizing the problem space; providing a common reference point of concepts and vocabulary; and introducing a layer of abstraction that hides the complexities and idiosyncrasies of individual implementations and contexts, while at the same time embodying sufficient detail to support substantive discussions of shared issues.

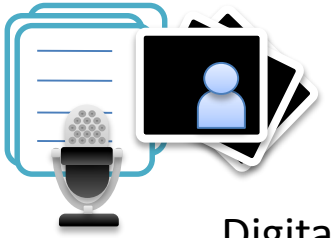
And who is it for ...?



Perspective ...

- Operational Staff
- Operational Managers
- Senior Managers
- Funders & Investors

Focusing on ...

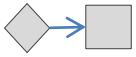


- Digital Assets

- Value & Benefits

Curation as ...

- Activity and Process



- Time and Effort

- Black Box

COSTS MODEL

Digital Assets

Activity and Process

Time and Effort

BENEFITS MODEL

Value & Benefits

Time and Effort

Curation as Black Box

Operational Managers

Senior Managers

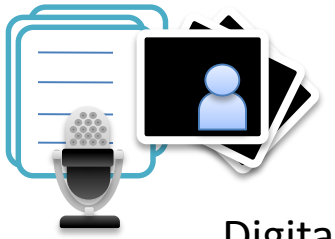
Funders & Investors

ECONOMIC MODEL

Maintaining stakeholder incentives and the flow of resources to sustain assets

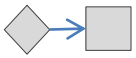
Economic Sustainability Reference Model

COSTS MODEL



Digital Assets

Activity and Process



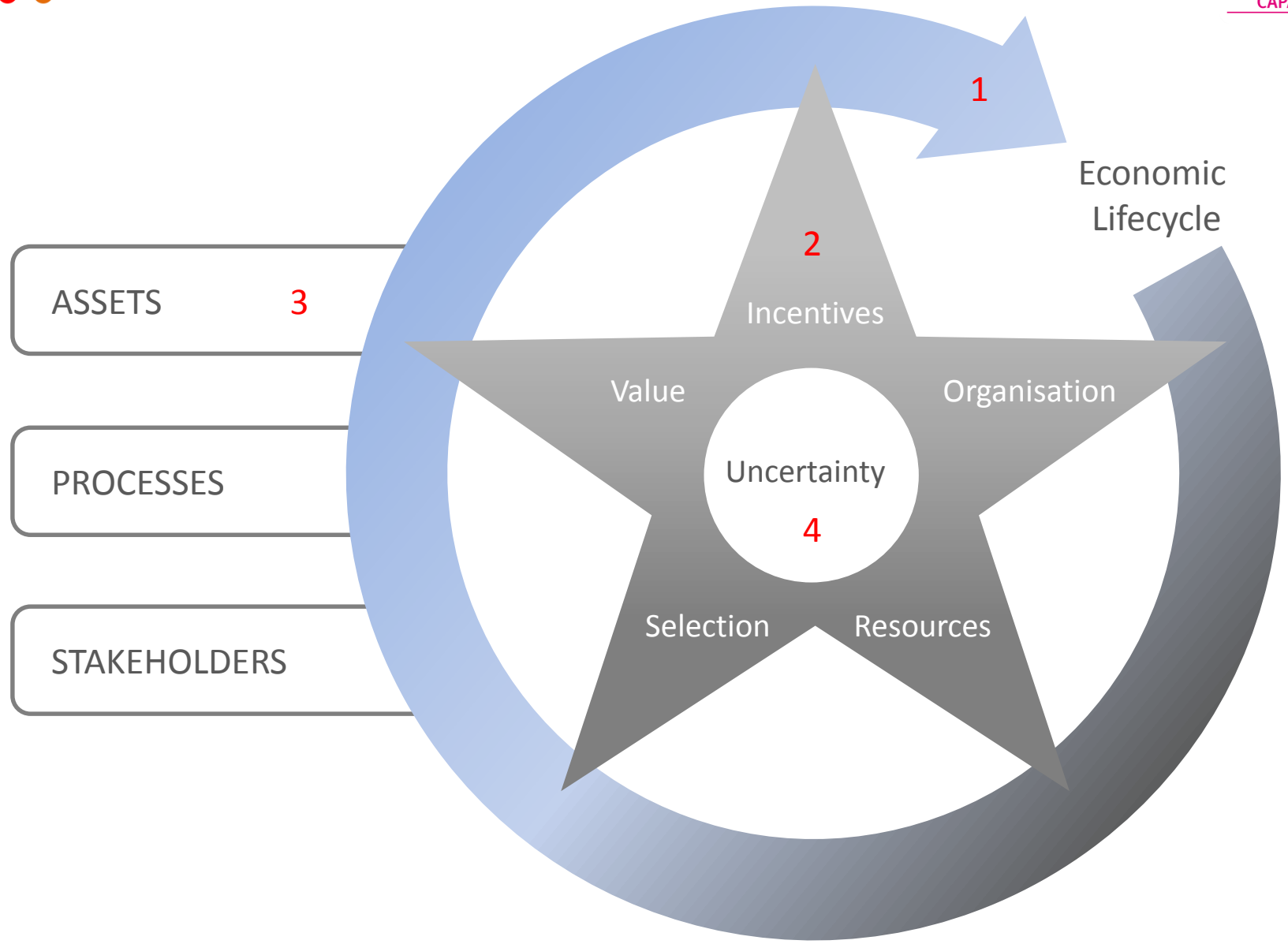
Time and Effort

BENEFITS MODEL

Value & Benefits

Time and Effort

Curation as Black Box


1
Economic
Lifecycle
2
Incentives
Value
Organisation
Uncertainty
4
Selection
Resources
ASSETS
3
PROCESSES
STAKEHOLDERS

Components of a Sustainability Strategy

1. Economic lifecycle: the *dynamic pattern*, or sequence of events, against which the sustainability strategy operates;

2. Sustainability conditions: the *conditions* the sustainability strategy must address in order to achieve sustainability;

3. Key entities: the key elements of the economic *environment* – digital assets, the curation process, and stakeholders – whose properties and relationships shape the circumstances in which the sustainability strategy operates;

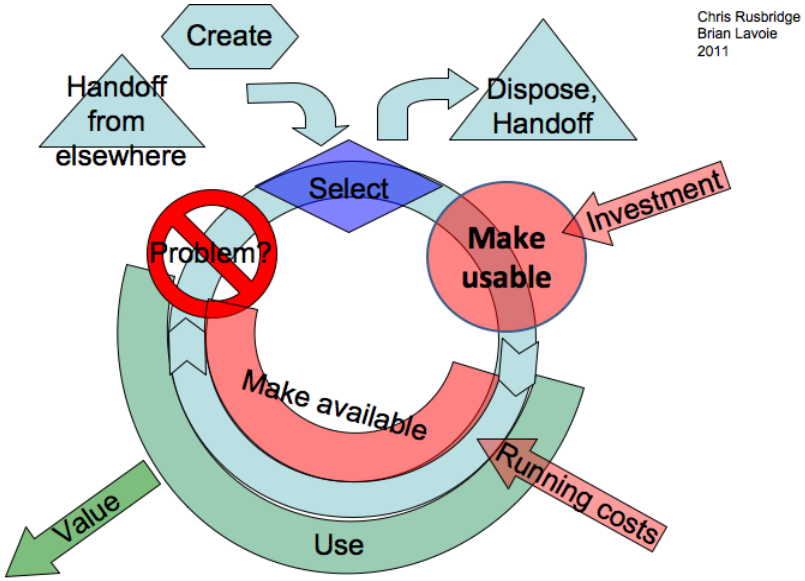
4. Economic uncertainties: *frictions and obstacles* that may potentially act to impede the ability of a repository to achieve economic sustainability; the sustainability strategy must anticipate these uncertainties and if necessary, mitigate them.

Sustainability Strategy Takeaways:

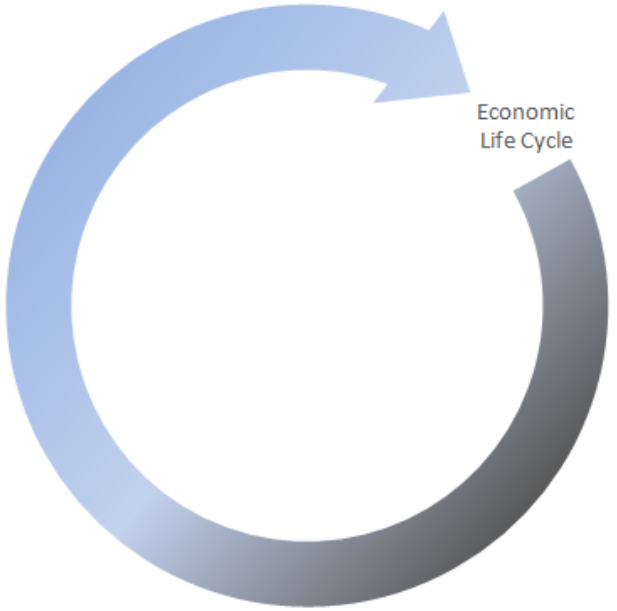
- A sustainability strategy orchestrates economic factors to ensure a curation activity has sufficient resources to meet its long-term goals over the entire economic lifecycle.
- Achieving sustainability means meeting the BRTF's five sustainability conditions.
- To design a successful sustainability strategy, planners must understand the properties of the key entities; identify significant economic uncertainties associated with the properties; and identify appropriate remedies to address the uncertainties.
- No sustainability strategy is perfect; it can only maximize the prospects of achieving sustainability, not guarantee it.
- A sustainability strategy must evolve as conditions evolve.

The Economic Lifecycle

This general pattern of economic decision-making includes two endpoints – the point where digital assets are ingested into the repository, and the point where they are removed from archival retention. There is a cyclical period of investment in between where the digital assets are made available until some interruption to the cycle – a decision point or trigger event – occurs



An economic lifecycle for data archives and services



Economic Lifecycle Takeaways:

- Economic decision-making for digital curation is a dynamic, sequential process unfolding over time, rather than a once-and-for-all event.
- Curation decisions, especially as they bear on sustainability, must be regularly revisited, re-evaluated, and if necessary, revised.
- An economic lifecycle model highlights the major economic decision-points which typically occur over the “life” of digital assets, from creation to possible disposal.
- The general pattern of economic decision-making for digital curation includes two endpoints – when digital assets are ingested, and when they are removed from archival retention – with a cyclical period in between where the digital assets are made available on an ongoing basis, until an interruption to the cycle occurs.
- Disruptions to the regular cycle of ongoing availability can be anticipated or unanticipated.

Sustainability Conditions

Value

A digital curation activity is unlikely to attract funding – and thereby sustain itself – if no one sees value in the digital materials it is curating

Selection

One of the fundamental principles of economics is that resources are scarce; we usually cannot achieve everything that we might like with the resources available to us.

Incentives

Sustainable digital curation requires stakeholders who not only recognize the value of curation, but who are also willing to sponsor or carry out the curation process.

Resources

Curation activities, like any other activity, require sufficient resources to achieve long-term goals

Organisation

To the degree there is discretion to choose, an organizational form for curation should be appropriate given the conditions prevailing in a particular context

Key Entities

- Assets
- Processes
- Stakeholders

Digital Assets

To qualify as a digital asset the object must be judged to have a value that will persist over some period of time (*not all digital objects are digital assets!)*

Takeaways:

- Digital assets are digital objects that are *judged to have a value that will persist over some period of time*.
- Digital assets share several core properties that impact sustainability planning.
- Because digital assets are durable but depreciable, planners must consider the "total cost of ownership" associated with maintaining them in a usable condition for an extended period of time. Rather than *one-time chunks of funding, sustainable curation activities require flows of funding.*
- A digital assets can be curated by one stakeholder, but used by many users simultaneously. This *free-rider problem* can make it difficult to collect sufficient resources among beneficiaries to sustain curation.

Curation Processes

Long-term accessibility to digital assets is achieved through the *curation process*, which is the set of activities involved in maintaining digital assets in a usable form for an extended period of time.

Takeaways:

- The *curation process* is the set of activities involved in maintaining digital assets in a usable form for an extended period of time.
- The value of the curation process derives from its ability to deliver the value of the digital asset. In economic terms the demand for the curation process is a derived demand – in this case, derived from the demand for curated digital assets.
- Curation decision-making is path-dependent. Decisions made at one stage of the economic lifecycle shape the choices available to decision-makers at later stages.

Stakeholders

The organization of stakeholders, and in particular, the distribution of curation roles across them, heavily impacts the prospects for achieving sustainability, and by extension, the shape of the sustainability strategy best suited for those circumstances

Takeaways:

- A stakeholder eco-system designates the key stakeholder roles in long-term digital curation, and articulates important relationships between them as they relate to sustainability.
- Stakeholders fall into three general categories: **Supply-side (**Creators; Rights Holders); **Demand-side (**Current Beneficiaries; Future Beneficiaries); **Lifecycle management (**Managing Agencies; Representatives of the Long-Term Public Interest; Resource Providers).
- The distribution of curation roles across the network of stakeholders is *critical for identifying economic uncertainties* inherent in a particular configuration of the stakeholder ecosystem.

Economic Uncertainties

While it is impossible to completely eliminate the potential effects of these uncertainties, anticipating as many of them as possible, and incorporating appropriate plans and contingencies to mitigate their impact, is an essential part of any sustainability strategy

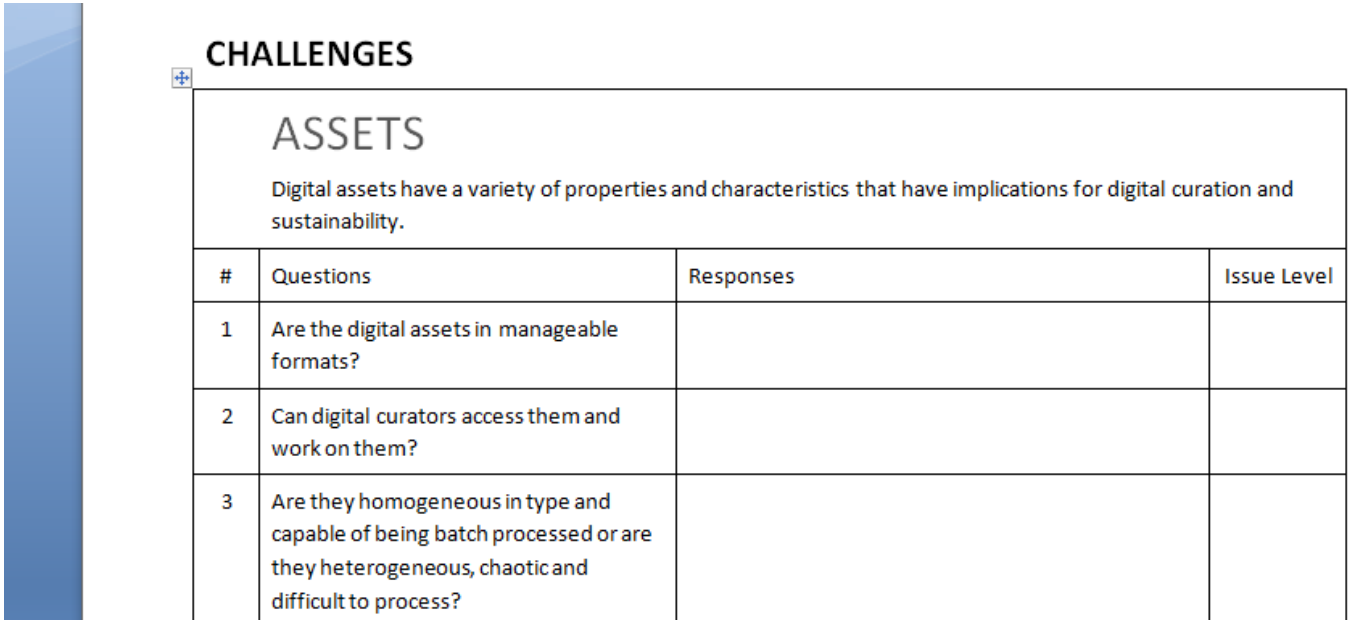
Takeaways:

- There are four general ways to respond to a perceived uncertainty:
    - *avoidance* (stop the activity with the uncertainty);
    - *mitigation* (lower probability of uncertainty occurring, or reduce its impact if it does occur);
    - *transfer* (pass uncertainty to another party (e.g., insurance));
    - *acceptance* (recognize the uncertainty but choose to “ignore” it).
- Risk-averse organizations may be unwilling to expose themselves to any significant risks. But a significant trade-off usually resides in avoidance strategies, in the form of a reduction in capacity and/or benefits, in return for avoiding uncertainty.

How can the ESRM be used ...?

As a textual resource
http://4cproject.eu/community-resources/outputs-and-deliverables/ms9-draft-economic-sustainability-reference-model

Or in the form of a 4C developed questionnaire (Appendix 1)



CHALLENGES

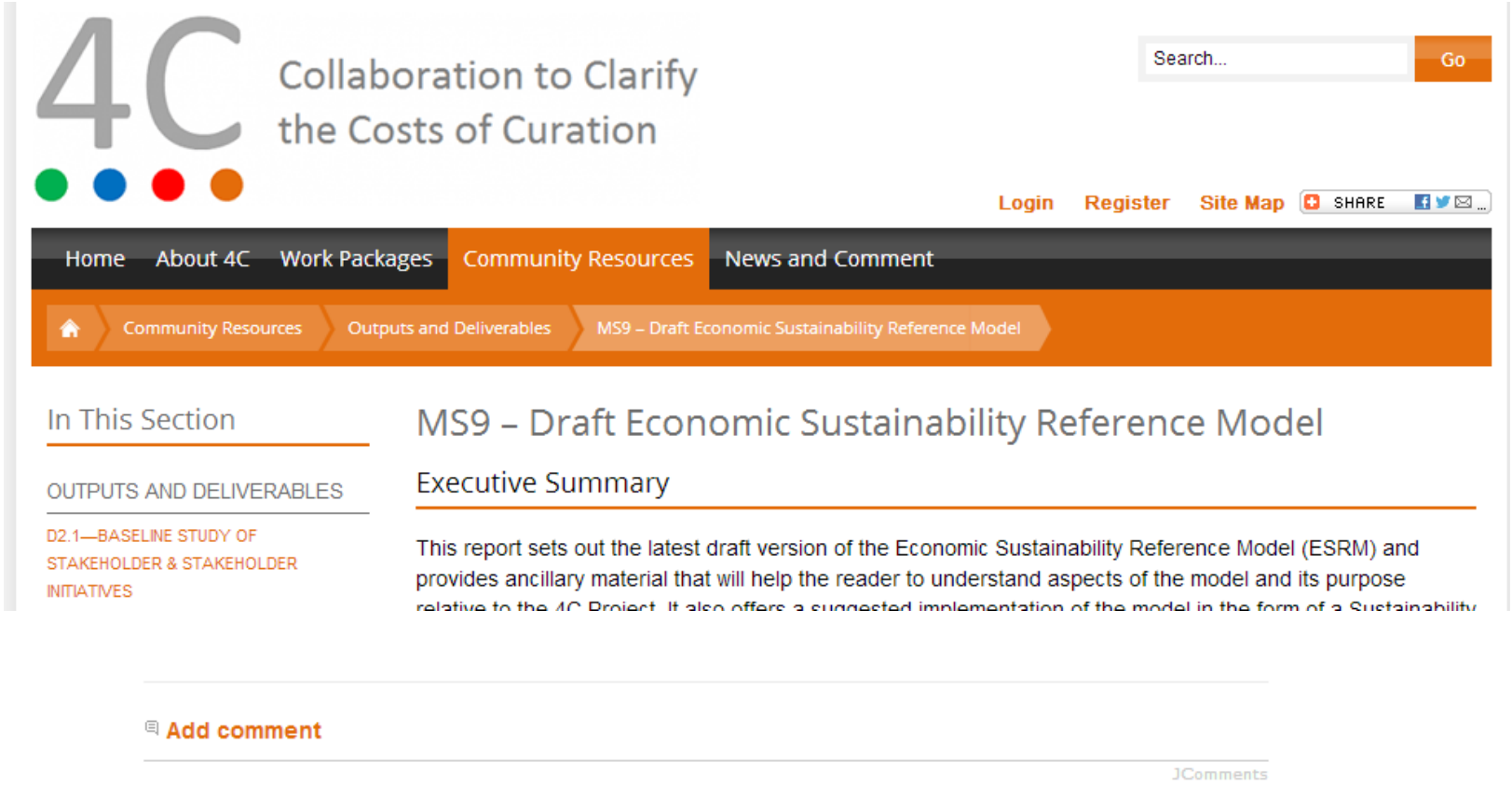
ASSETS

Digital assets have a variety of properties and characteristics that have implications for digital curation and sustainability.

#	Questions	Responses	Issue Level
1	Are the digital assets in manageable formats?		
2	Can digital curators access them and work on them?		
3	Are they homogeneous in type and capable of being batch processed or are they heterogeneous, chaotic and difficult to process?		

What Next...?

Over to you (and the rest of the community)



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