

Characterizing, Analyzing and Evaluating the Producer Information Environment

DigCCurr Professional Institute

June 4-8, 2012 – The Royal Library, Copenhagen, Denmark

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June 7, 2012



DigCCurr Professional Institute

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say: dij-seeker

We've already discussed resources
for assessing the current and
desired state of a **repository**.

Recall: Digital curation covers the whole lifecycle of digital resources.

This includes materials with continuing value that:

- have **not yet** been transferred to a repository or
- will **never** be transferred to a repository

Why should a digital curation
professional care about the details
of the producer information
environment?

Answer 1:

To better understand producer
warrant for creation and
management of information.

Warrant

- Derived from laws, regulations, case law, IT standards, auditing standards, best practices that suggest or mandate particular recordkeeping behavior*

*Duff, Wendy. "Harnessing the Power of Warrant." *American Archivist* 61 (1998): 88-105.

Importance of Producer Warrant for Digital Curation

Digital Curation Activity	Relevance of Producer Warrant
Advocacy and outreach	Making the best case to the producer for how and why digital curation is important
Acquisition planning	Predictor of what is likely to be produced and retained over time
Description	Providing documentation of why materials were created and retained
Preservation planning	Understanding why materials were created and retained is fundamental to identifying significant properties
Ensuring sustainability	Service offerings that can be directly mapped to producer's requirements/incentives can be much more likely to receive funding over time

Answer 2:

Character & structure of artifacts are often very closely tied to the character & structure of the organizations/systems that created and originally stored them.

Conway's Law*

“...the very act of organizing a design team means that certain design decisions have already been made, explicitly or otherwise. Given any design team organization, there is a class of design alternatives which cannot be effectively pursued by such an organization because the **necessary communication paths** do not exist. Therefore, there is no such thing as a design group which is both organized and unbiased.”

“...organizations which design systems (in the broad sense used here) are constrained to **produce designs which are copies of the communication structures** of these organizations.”

*Conway, Melvin E. "How Do Committees Invent?" *Datamation* 14, no. 4 (1968): 28-31. [emphasis added]

Likewise, recordkeeping systems
reflect organizational structures
and behaviors

See e.g.: Yates, JoAnne. *Control through Communication*. Baltimore: Johns Hopkins University Press, 1989.

Answer 3:

Digital curation professionals often need to provide guidance to Producers, which requires fairly detailed understanding of their information environments.

(In archives literature, this is part of the “post-custodial” perspective.)

Answer 4:

Provenance and Original Order (Origin and Arrangement of Materials by Producer)

If no one captures the information now, it may be impossible to reconstruct later.

Answer 5:

The Producer is your employer, and
curation of the Producer's information is
your direct responsibility.

Best Approach to Gaining Producer Information Environment Knowledge Depends Upon:

- How important a stakeholder the Producer is to your institution (e.g. member of main population served, frequent donor, parent institution)
- How complex the Producer's environment is (does it require considerable investigation?)
- How codified the behaviors/systems are
- Whether you can realistically expect access to relevant information
- What else?

Cases when Process is Likely to be Simplified or Limited

- Disk in a box
- Large-scale web archiving
- Others?

Reflecting the Producer's Workspace

Snapshots of Specific Renderings – Screen Capture

- Simplest method is “print screen” function built into the operating system
- Many free/cheap tools for screen capture that provide more options (e.g. capturing contents of a whole windows that fills more than one screen)
- More rich representation possible with screencasts, i.e. video capture of interaction with the system (also tools for this)

Representation of the Physical Workspace

- Images (static or moving) of the room
- Pictures of hardware

Reflecting Original Order – Copying/Exporting Directory Tree

- fiwalk – free, open-source utility for batch extraction of file tree information
- Tree (DOS command) – displays directories and their contents, which can be piped into a text file for use elsewhere
- DirPrinting – simple program for printing or exporting directory structures
- Karen's Directory Printer – for printing and exporting directory structures and associated attributes (more features than DirPrinting above)

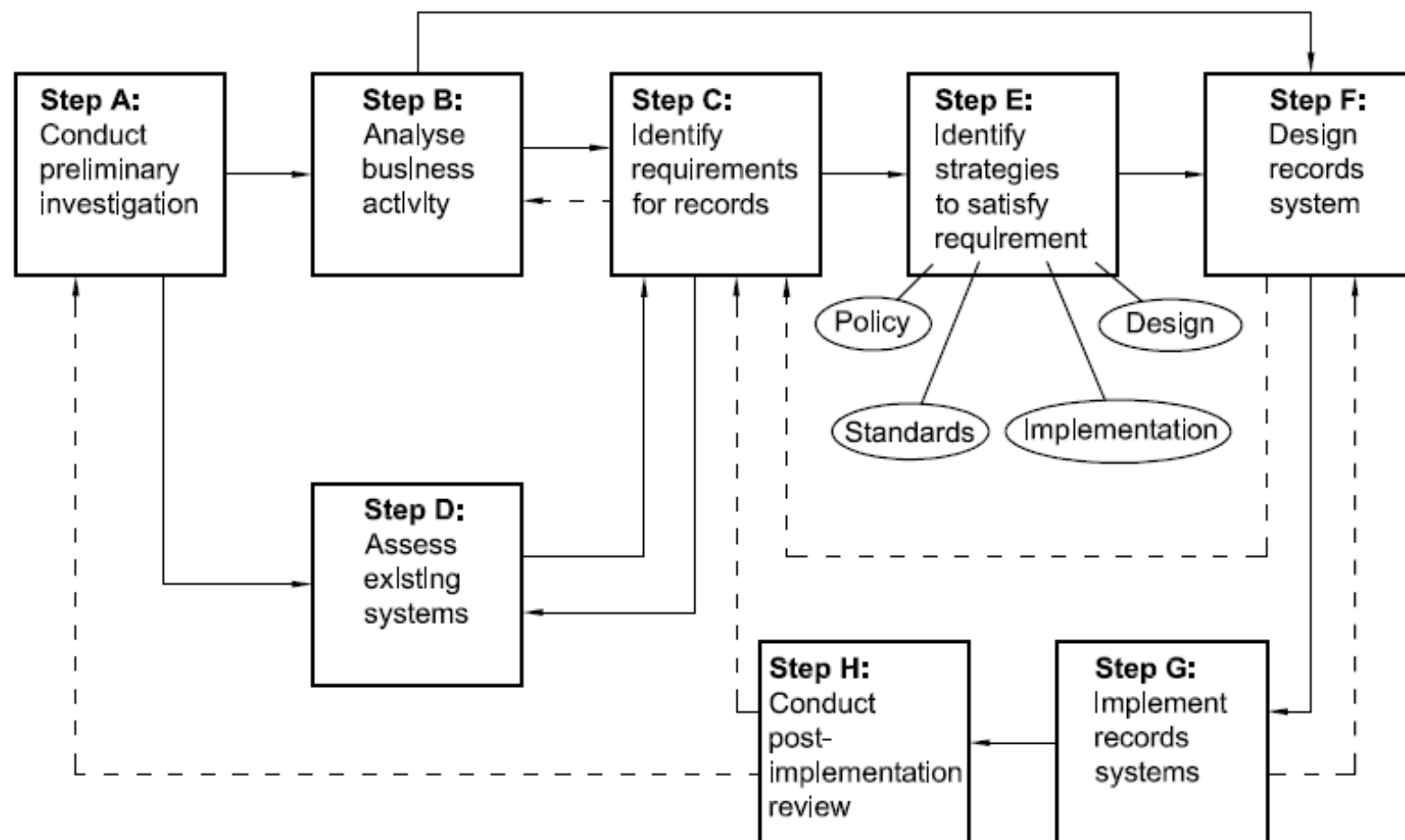
Bit-Level Copying of Storage Medium

- Getting an “image” of a storage medium involves working at a level below the file system
- Most commonly used tool is dd (or variant)
 - UNIX program for low-level copying and conversion of data from a storage device
 - Can get at file attributes & deleted files not visible through higher-level copy operations
- For example, treat the Producer’s entire hard drive as object to be captured
- More about this on Wednesday

Selected Registry (Windows) Information

- Devices recently attached
- User accounts on the computer
- Recently used files
- Applications installed

Steps in a more systematic
characterization, analysis and
evaluation of the producer
information environment



Key

- Primary
- - Feedback

(Source: National Archives of Australia and State Records New South Wales.)

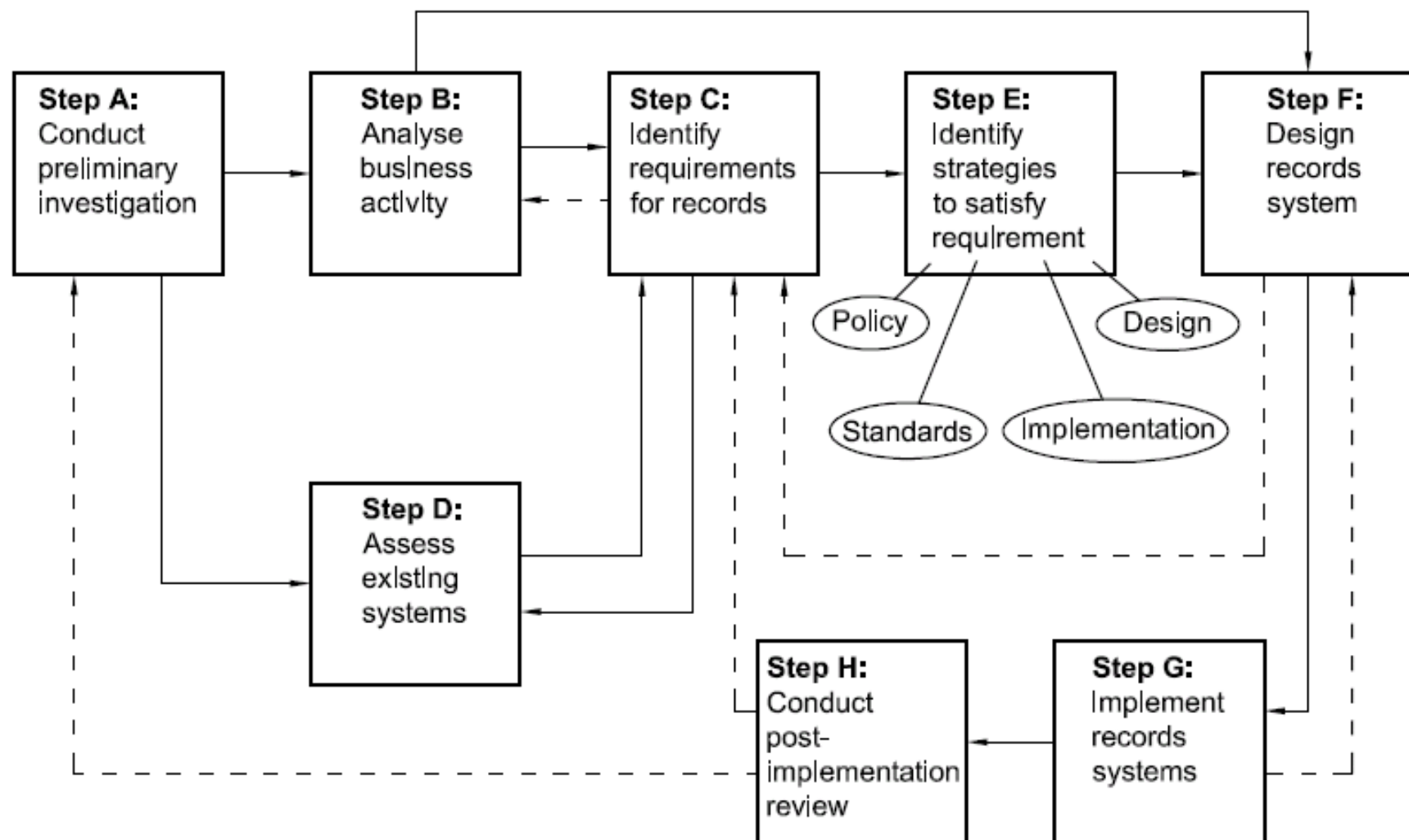
Figure 1 — Design and Implementation of Records Systems (DIRS)

Designing and Implementing Record Keeping Systems (DIRKS)

- “DIRKS: A Strategic Approach to Managing Business Information.” National Archives of Australia, 2001. (Updated in 2003)
- Basis for ISO 15489 figure on previous slide
- Elaborates each step in more detail

Two Translations for our Purposes:

- Your organization = Producer
- Record system = Producer Information Environment
- Business activity = activity being documented
- Recordkeeping requirements = appropriate digital curation activities

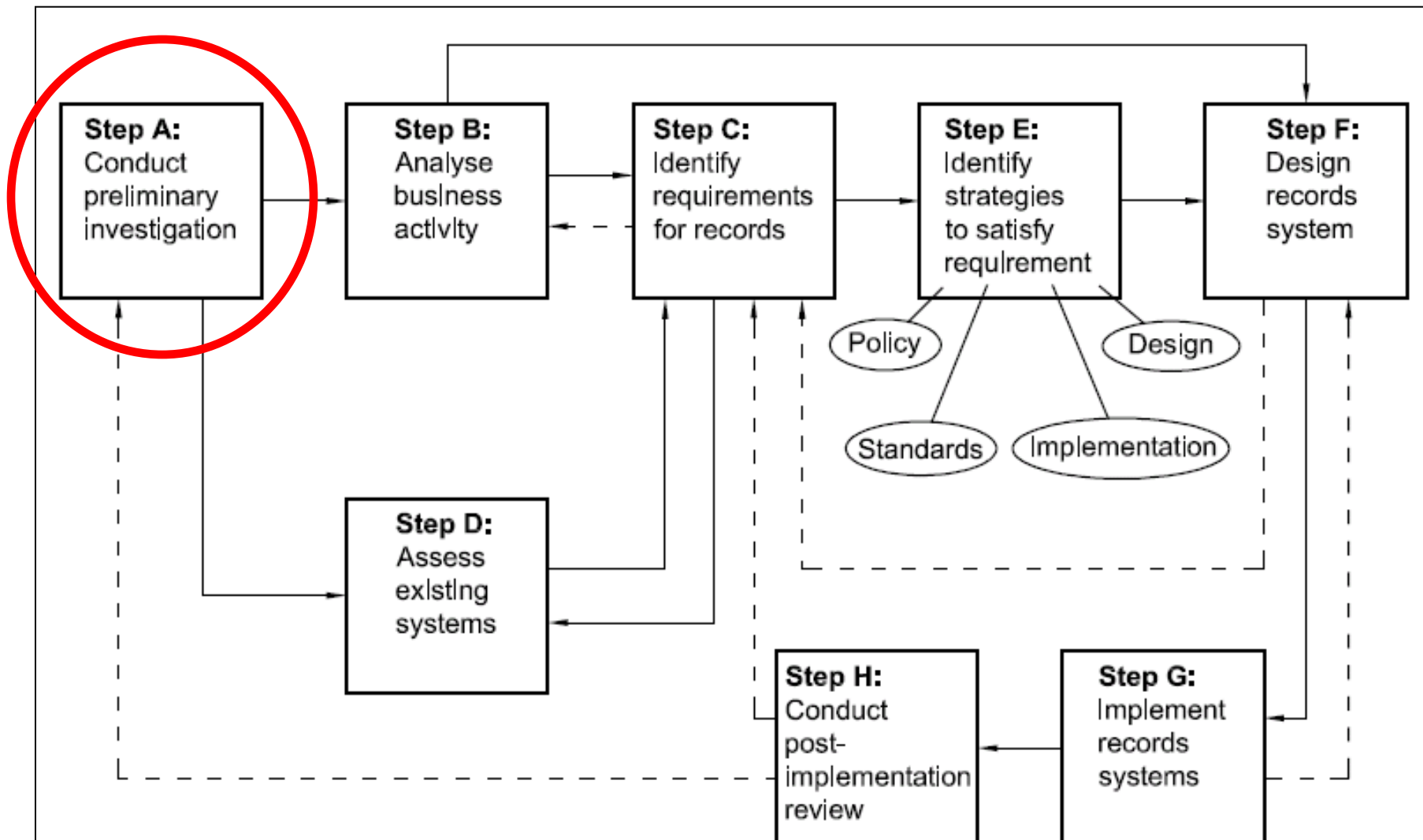


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Figure 1 — Design and Implementation of Records Systems (DIRS)



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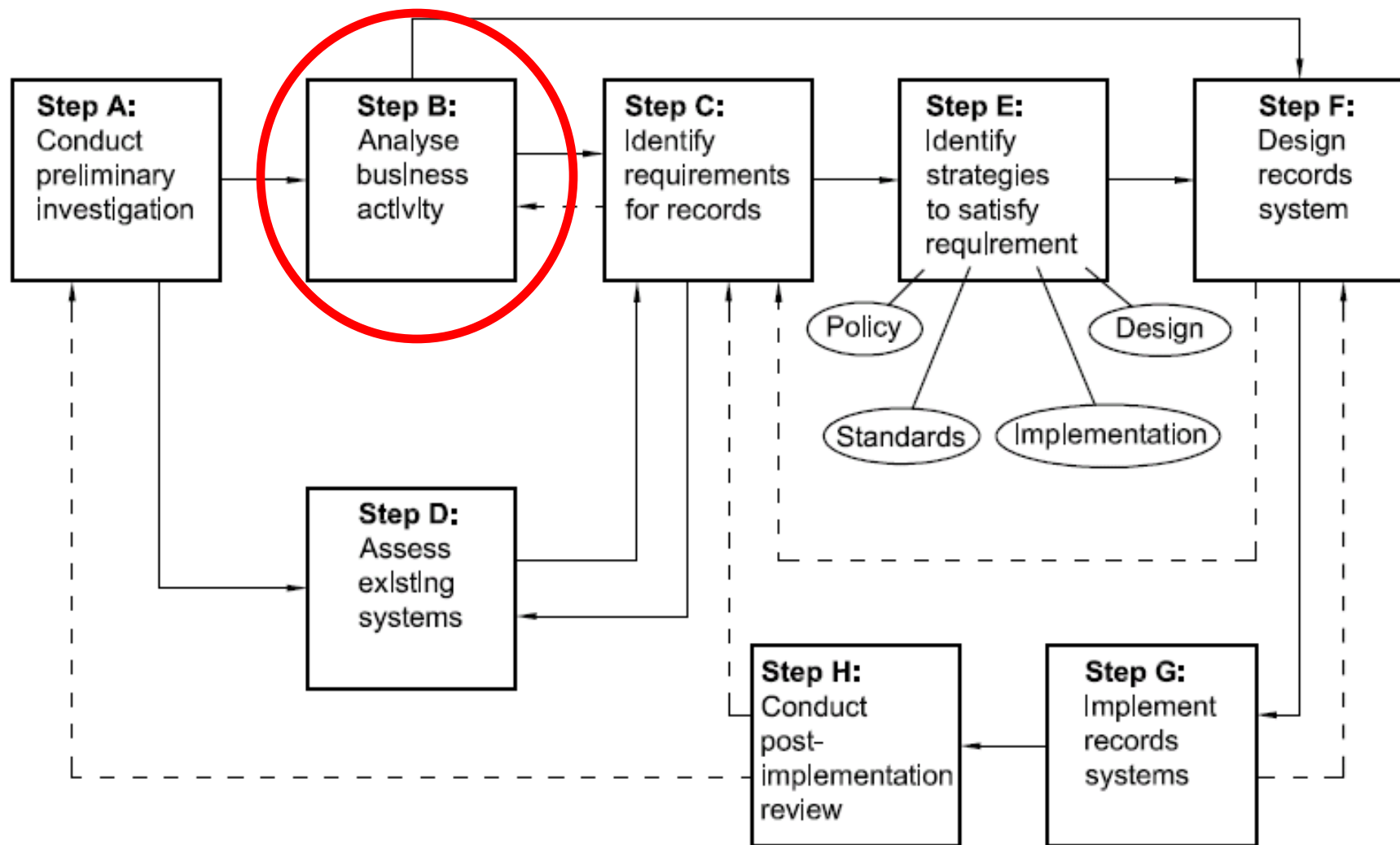
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Figure 1 — Design and Implementation of Records Systems (DIRS)

Preliminary Investigation

- “Identify and document the role of your organisation, its structure, the business, regulatory and sociopolitical environments in which it operates, and major factors affecting its recordkeeping practices”
- “Snapshot of your organisation’s business activity and major stakeholders”
- “Identify particular problem or risk areas”
- “Crucial contextual information about factors that influence your organisation’s need to create and maintain records”
- To do:
 - “determine the scope of the preliminary investigation”
 - “collect information from documentary sources and interviews”
 - “document your research”
 - “prepare a report”



Key

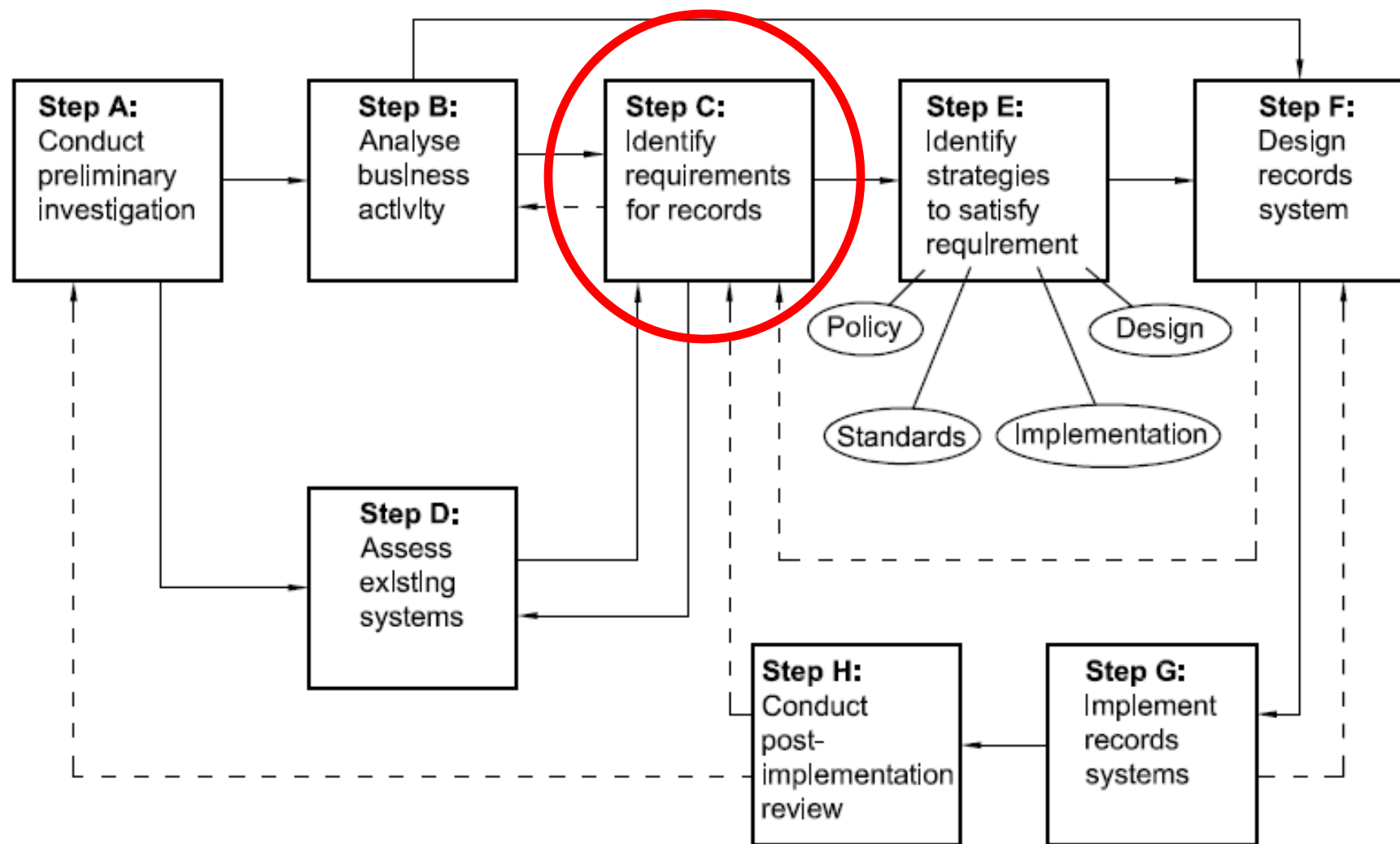
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(Source: National Archives of Australia and State Records New South Wales.)

Figure 1 — Design and Implementation of Records Systems (DIRS)

Analysis of Business Activity

- “Develop a conceptual model of what your organisation does and how it does it by examining its business activities and processes”
- To do:
 - “collect information from documentary sources and interviews”
 - “analyse the work performed by the organisation”
 - “identify and document each business function, activity and transaction”
 - “develop a business classification scheme based on a hierarchy of business functions, activities and transactions”
 - “validate the analysis of the organisation’s business activity with senior management”



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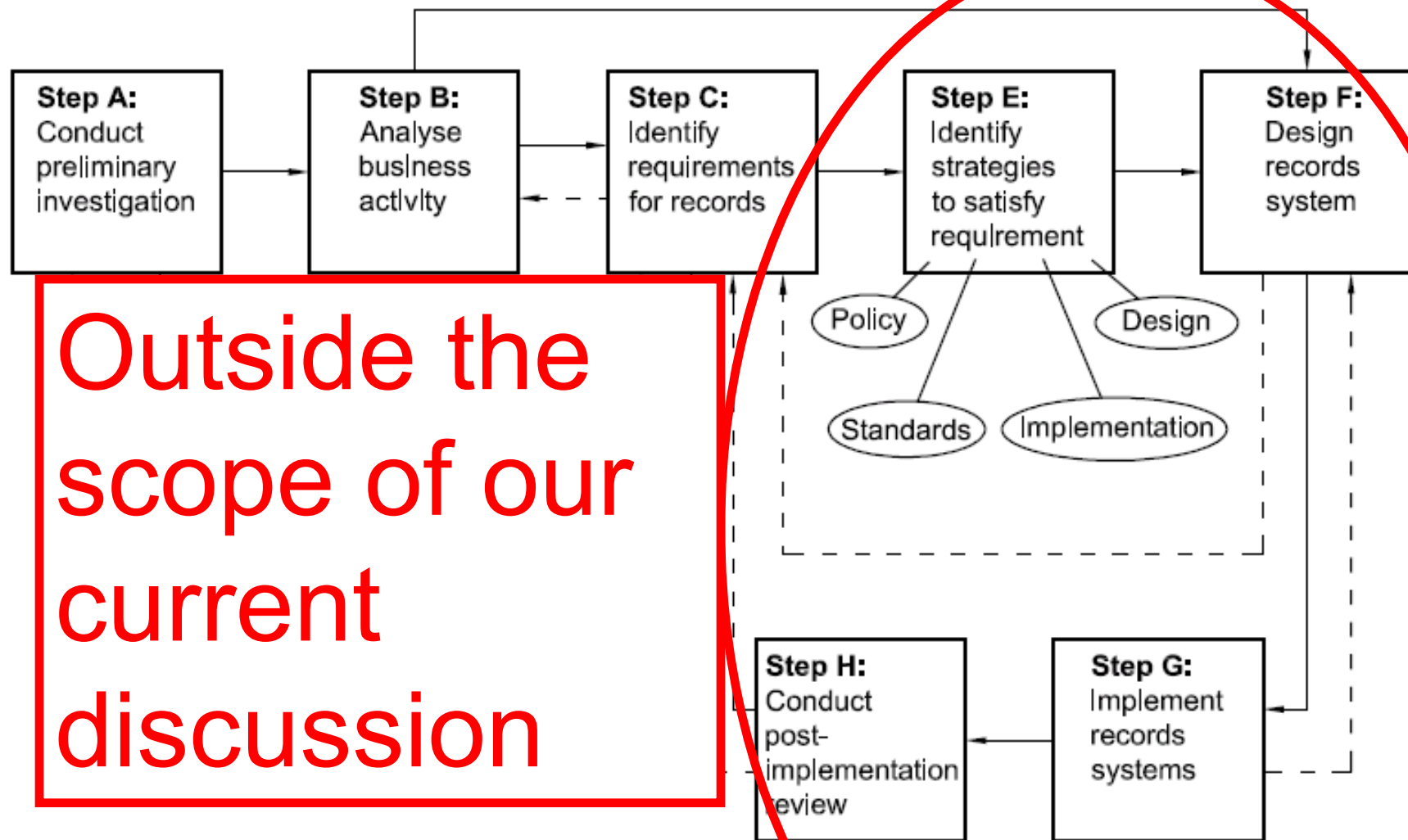
Figure 1 — Design and Implementation of Records Systems (DIRS)

Identification of Requirements

- “Identify and record your organisation’s requirements to make and keep *evidence* of its business activities and to document the requirements in a structured and easily maintainable form”
- To do:
 - “locate relevant sources”
 - “identify regulatory, business and community requirements for recordkeeping”
 - “document these identified requirements in a manner suitable for”
 - “reference purposes”
 - “determine and document which of the identified requirements will be met”

Assessment of Existing Systems

- “Survey your organisation’s existing recordkeeping and other information systems to measure the extent to which they provide evidence of business activities, or have the required functionality to do this”
- To do:
 - “identify existing paper-based, electronic and hybrid business information systems within the organisation”
 - “analyse whether your organisation’s prioritised recordkeeping requirements are being met”
 - “determine whether current systems have the capacity to meet them (by measuring the ‘gap’ between ‘what you have’ and ‘what you want’)”
 - “prepare a report describing the strengths and weaknesses of existing information and records management practices”



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Figure 1 — Design and Implementation of Records Systems (DIRS)

Discussion Task #1

- Designate a specific person to be your note taker
- Each person suggest one thing that you would like to know more about a specific Producer information environment relevant to your job

Discussion Task #2

- For each item on your list from Task #1, discuss how you might find out more about that aspect of the Producer information environment
- Consider the main challenges and opportunities associated with each