

# TRAIN THE TRAINER

## TEACHING RESEARCH DATA MANAGEMENT

ELIANE BLUMER, RENÉ SCHNEIDER

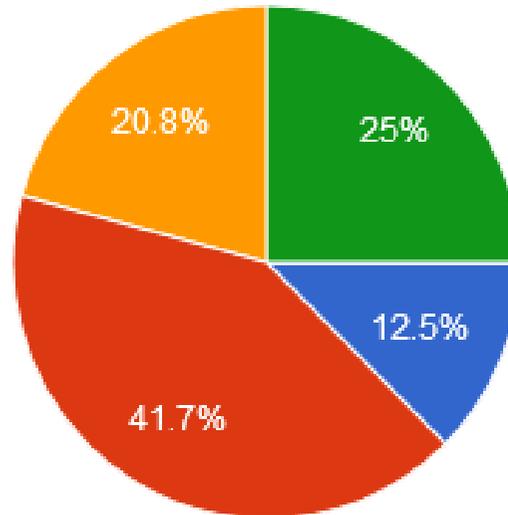


*Courtesy of Jørgen Stamp,  
[Digitalbevaring.dk](http://Digitalbevaring.dk). CC BY 2.5.*

# SURVEY – QUESTION 1

Are you planning to give a course on research data management?

24 responses

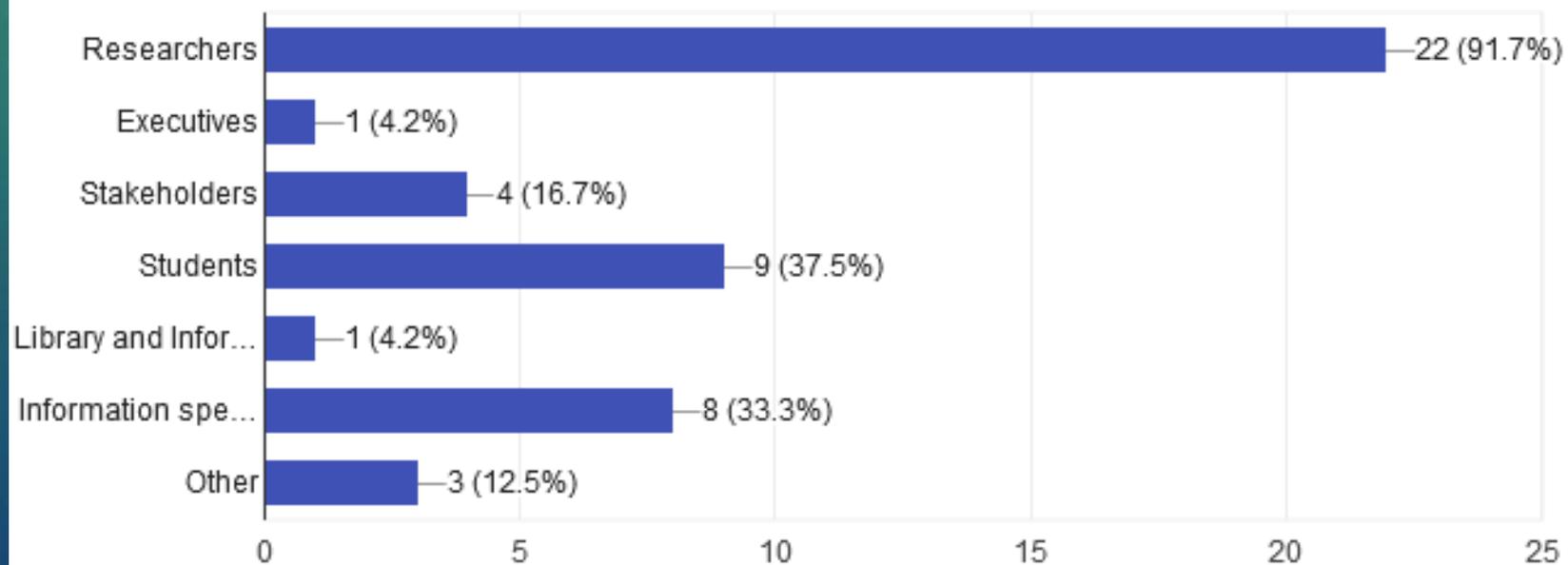


- I have already given such a course
- Yes, in the next six months
- Yes, in the next twelve months
- Yes, but certainly not in the next twelve months
- No

## SURVEY – QUESTION 2

For which target group(s) is this course intended?

24 responses



# SURVEY – QUESTION 3

What would you like to take away from this "Train the Trainer" workshop?

22 responses

Practical tips on what works. How to engage researchers. How to address disciplinary specific issues in training.

Broad discussion and possibly also valuable knowledge on both good facilitation and examples of generic curricula, tips and tricks addressing more common needs of researcher-driven data stewardship avoiding the often too implicit library perspective on data management, when taught by library staff.

Skills and tools in the best way to approach RDM with researchers.  
What aspects of RDM are worth focusing on if we only have limited time to present/discuss/train researchers on good RDM practices?

We currently have an online course that needs updating so looking for other up to date online resources. We also deliver face to face sessions of from 10 min to 1 h on data management so looking for ways to engage researchers in the topic.

I would like to learn how to organize a short workshop for researchers to help them to create a Data Management Plan. Also, I would like to learn how to deal with the different needs of the researchers about data management, which can vary a lot depending of their scientific area.

Ideally an insight into the structure of such a course and an overview of all necessary contents that should be provided.

## SURVEY – QUESTION 3

What would you like to take away from this "Train the Trainer" workshop?

22 responses

I feel that in the data management field most concepts are easy to understand (i.e. why to keep a backup, or why to keep documentation). The hard thing is to make people understand how important they are so that they will actually take the time and energy that it takes to implement good practices. Another barrier I've noticed is not knowing how to use the tools that are available. For many of them these tools (i.e. programming languages, version control software, metadata standards, etc) require a learning process that also takes time and effort, and they are not really sure about what the tools can do for them, or if they will even help. What I would like to get from this workshop is strategies to communicate the crucial importance of good data management practices, and how to make tools more approachable, without having to ask learners to invest long hours into learning them, before being sure they will help.

How to explain Muggles (non-initiated) what research data management is in simple terms, and why it matters. Also, I'm always open to improve my teaching skills with new methods and ideas.

Suggestions on how go motivate researchers to start thinking along the lines of data management

Best practices, insights and practical examples.

How to teach a dry topic and make it into an interesting and interactive course

New knowledge about presenting within this field.

## SURVEY – QUESTION 3

What would you like to take away from this "Train the Trainer" workshop?

22 responses

I'm very familiar with data management but not that experienced in teaching. I would appreciate concrete guidelines on how to structure the content of a data management course. Suggestions on new ways to teach besides the regular school room context.

I would like to obtain some practical tips how to develop and structure a course and gain some more didactic background

A better understanding of how to structure a training session and develop learning outcomes

Understanding better what are the researchers problems. What they don't know and how to deal with field specific questions

I would like to redesign my current workshop on research data management in order to make it as up-to-date, clear, comprehensive, discipline-specific and practical as possible, but I find it hard to combine all these requirements.

# SURVEY – QUESTION 3

Something like a toolbox which allows me to adapt the training - phase by phase for the whole life cycle of RDM - to every kind of researcher

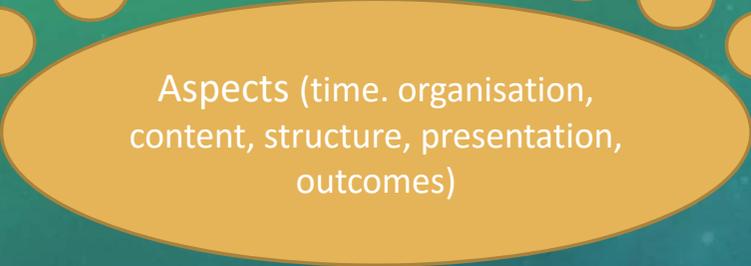
Inspiration for improvement of our research data management course

An original approach on the training of research data management in all its aspects (for my in particular legal and ethical aspects).

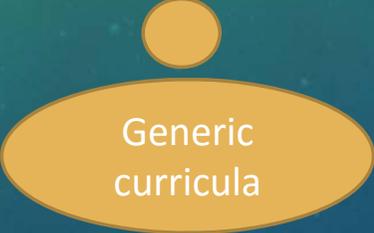
Practical tips on how to prepare for giving a course in RDM; tips on how to teach; have examples for good lessons in RDM; ideally have the tools and material for a RDM course or lesson.

How to condense and streamline the best and most appropriate content.

# SURVEY– QUESTION 3



Aspects (time, organisation,  
content, structure, presentation,  
outcomes)



Generic  
curricula



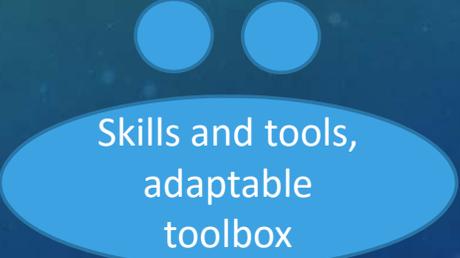
Best practices,  
other resources



Engage and motivate  
researchers, researcher  
driven, muggles



Practical tips



Skills and tools,  
adaptable  
toolbox



How to teach, new  
methods, ideas,  
approaches,  
communication

# PROGRAMME: MORNING

An example of a short course

Didactics I:

Methods, Learning Types, Adult learning

Short Break

Research Data Literacy

Hands On I: Content as Metro Map

## PROGRAMME: AFTERNOON

Didactics II: Planning a course

Hands-On II: Linearisation

Monitoring

Short Break

Hands On III: Detailed Planning and  
Visualisation

Wrap Up & Evaluation (4 pm)



# TRAIN THE TRAINER

## RESEARCH DATA MANAGEMENT

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ECOLE POLYTECHNIQUE FÉDÉRALE, LAUSANNE

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# TARGET GROUP

- Trainers

# LEARNING OBJECTIVES

At the end of this introduction, you will

- I. Be able to define data, research data and research data management (RDM).
- II. Know the main actors within research data management.
- III. Know the different steps within research data management.
- IV. Know tools and be able to assign them to the respective step.

# WHAT ARE DATA?

Research data are “used as primary sources for scientific research, and [...] are commonly accepted in the scientific community as necessary to validate research findings” ([OECD Principles and guidelines for access to research data from public funding](#)).

“A reinterpretable representation of information in a formalized manner suitable for communication, interpretation, or processing.”

Digital Curation Centre



**iT services** UNIVERSITY OF OXFORD

Slide adapted from the PrePARe Project

Introduction to research data management



# WHAT ARE RESEARCH DATA?

- **Observational:** data captured in real time that is usually unique and irreplaceable.
  - For example: neuroimaging, survey data, field recordings, sample data
    - **Experimental:** data captured from lab equipment that is often reproducible.
      - For example, gene sequences, chromatograms, magnetic field data
- **Models or simulation:** data generated from test models where model and metadata may be more important than output data from the model.
  - For example, climate models, economic models

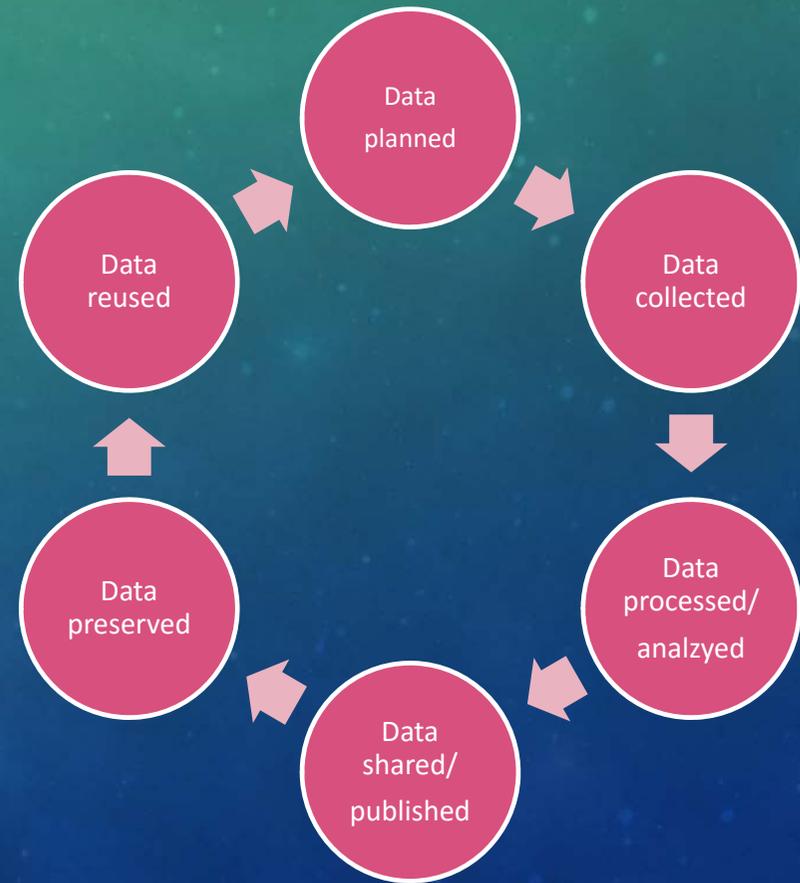
Source: <https://data.bris.ac.uk/bootcamp/data/>

# WHAT ARE RESEARCH DATA?

- **Derived or compiled:** resulting from processing or combining 'raw' data.
  - For example, text and data mining, compiled databases, 3D models
- **Reference or canonical:** a static or organic conglomeration or collection of datasets, probably published and curated.
  - For example, gene sequence databanks, collection of letters or archive of historical images

Source: <https://data.bris.ac.uk/bootcamp/data/>

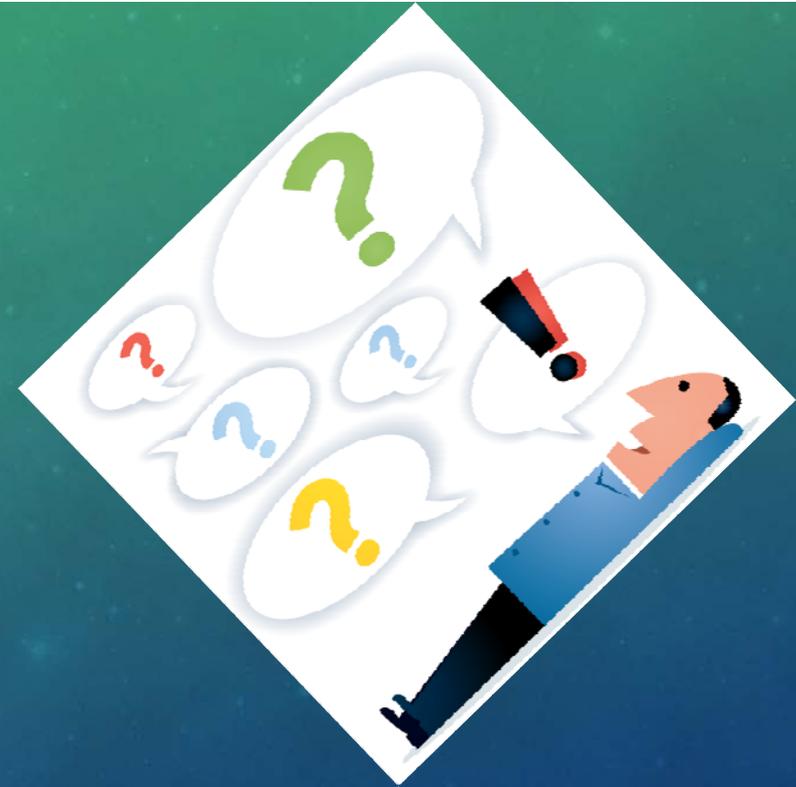
# RDM – FROM THE POINT OF VIEW OF...



## MINI-EXERCISE « ROLES IN RDM »

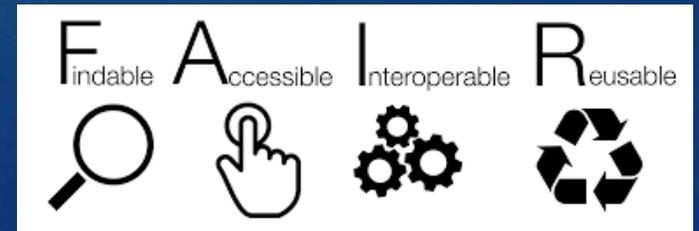
Mini-Exercise (5min)

- In groups of two.
- Make the puzzle.



# WHY RESEARCH DATA MANAGEMENT?

- FAIR Principles
  - To be findable
  - To be accessible
  - To be interoperable
  - To be reusable



[https://commons.wikimedia.org/wiki/File:FAIR\\_data\\_principles.jpg](https://commons.wikimedia.org/wiki/File:FAIR_data_principles.jpg)

# COMPLIANCE

Research Funders	Policy Coverage			Policy Stipulations				Support Provided			
	Published Outputs	Data	Time Limits	Data Plan	Sharing/ Access	Long-Term Curation	Monitoring	Guidance	Repository	Data Centre	Costs
SNSF	●	●	●	●	●	●	○	●	○	○	●
European Commission: H2020	●	●	●	●	●	●	●	●	●	●	●
European Commission: ERC	●	●	●	●	●	●	●	●	●	●	●
NIH	●	●	●	●	●	●	●	●	●	●	●
NSF	●	●	●	●	●	●	●	●	●	●	●
Bill & Melinda Gates Foundation	●	●	●	●	●	●	●	●	●	●	●
AHRC	●	●	●	●	●	●	○	●	○	●	●
BBSRC	●	●	●	●	●	●	●	●	●	●	●
EPSRC	●	●	●	●	●	●	●	●	○	○	●
ESRC	●	●	●	●	●	●	●	●	●	●	●
MRC	●	●	●	●	●	●	○	●	●	○	●
NERC	●	●	●	●	●	●	●	●	●	●	●
STFC	●	●	●	●	●	●	●	●	●	●	●
Cancer	●	●	●	●	●	●	●	●	●	○	●
Wellcome	●	●	●	●	●	●	●	●	●	●	●

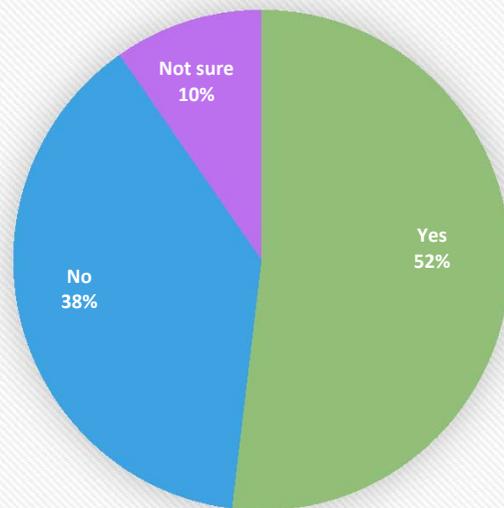
# EFFICIENCY

- Supports systematic documentation
- Improves the research process
- Economic benefits

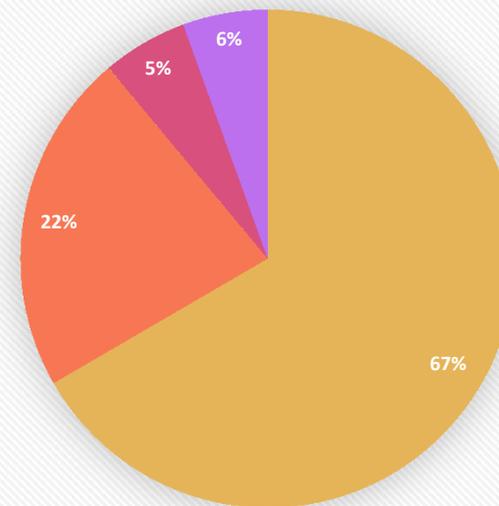


# SECURITY – HOW MUCH DATA WOULD YOU LOOSE IF...

Is your research automatically backed up?

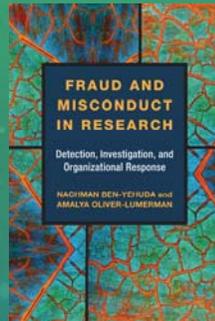


How much time did you lose?



■ 1 day - 7 days ■ 7 days - 1 month ■ 1 month - 6 months ■ More than 6 months of work

# QUALITY



- «Reproducibility crisis»
- Accuracy
- Scientific Integrity
- Public trust in science

<http://theconversation.com/the-science-reproducibility-crisis-and-what-can-be-done-about-it-74198>

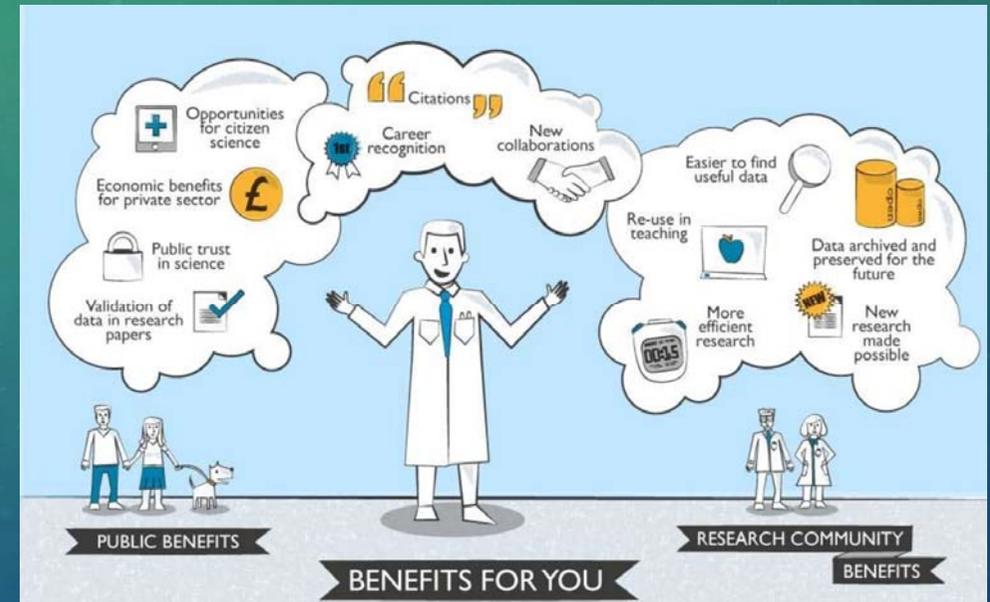
The image is a screenshot of a news article from 'THE CONVERSATION'. The article title is 'The science 'reproducibility crisis' – and what can be done about it'. The byline is 'March 16, 2017 9:45am GMT'. The main image shows a close-up of a person wearing safety goggles and a face mask, looking through a microscope. Below the image, there is a small text box that reads: 'Reproducibility is the idea that an experiment can be repeated by another scientist and they will get the same result. It is important to show that the claims of any experiment are true and for them to be useful for any further research.'

The image is a screenshot of a news article from 'The Scientist'. The article title is 'One Way to Fix Reproducibility Problems: Train Scientists Better'. The byline is 'By Katarina Zimmer | November 28, 2017'. The main image shows a portrait of Leonard Freedman, president of the Global Biological Standards Institute. Below the image, there is a text box that reads: 'Leonard Freedman is on a mission to make science better. He's one of the scientists who helped calculate a now-notorious statistic about waste in preclinical research—namely, that \$28 billion in research funds is spent each year on irreproducible research, due to issues with biological reagents, laboratory errors, ill-planned experiments. To help solve the "reproducibility crisis," Freedman's latest ambition is to train students in the fundamental principles of experimental design. The organization he leads, the Global Biological Standards Institute, recently received a \$2.34 million grant to launch the project, entitled Producing Reproducible Experiments by Promoting Reverse Experimental Design. He spoke with The Scientist about where these are going wrong in experimental setups...and how his research will help solve the...'

<https://www.the-scientist.com/?articles.view/articleNo/51047/title/One-Way-to-Fix-Reproducibility-Problems-Train-Scientists-Better/>

# (OPEN) ACCESS

- Citations and career recognition
- New collaborations
- Validation of data

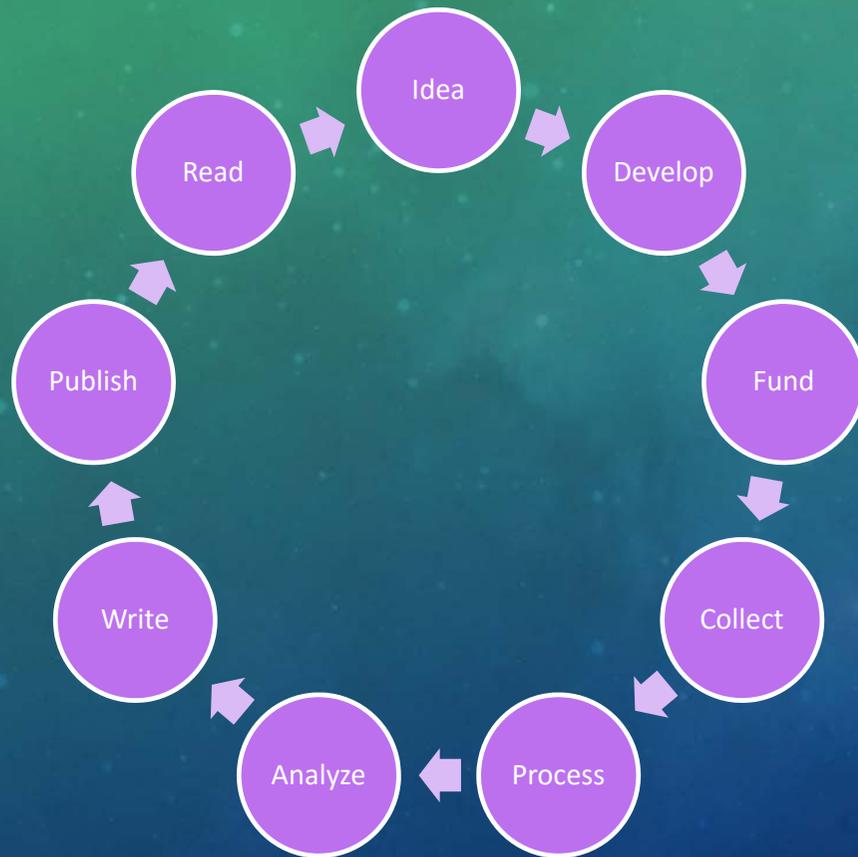


## STEPS AND TOOLS

- Take a look at the tools (5min)
- Pin them to the right step (5min)
- Take a look at the solution (5min)
- Discuss (5min)



# SMALL REPETITION



## YOU SHOULD NOW ...

- I. Be able to define data, research data and research data management (RDM).
- II. Know the main actors within research data management.
- III. Know the different steps within research data management.
- IV. Know tools and be able to assign them to the respective step.

ANY QUESTIONS?

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[Digitalbevaring.dk](http://Digitalbevaring.dk). CC BY 2.5.*

# TRAIN THE TRAINER

## METHODS-DIDACTICS

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# OVERVIEW

- I. Methodological and Didactical Approach
- II. Learning Styles and their Implication for Practice
- III. Principles for Adult Learning (Andragogics)
- IV. Aspects of a Training Trainers for Research Data Management

# I. METHODOLOGICAL AND DIDACTICAL APPROACH

No matter what you are planning to do  
no matter the duration of your course,  
you should base your course on a didactical concept.

Two examples:

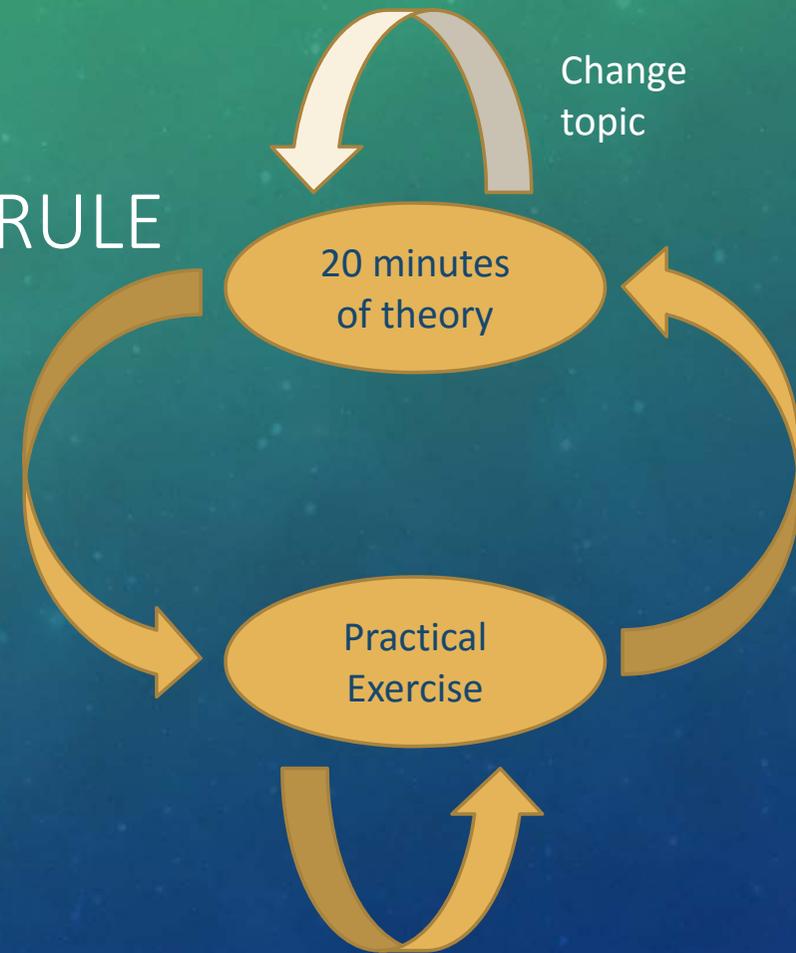
- The Twenty-Minute-Rule
- E-Class Reference

## 1ST EXAMPLE: THE TWENTY-MINUTE-RULE

Never speak longer than 20 minutes of theory.  
Simply because the brain feels bored after 20 min.

Then change for practice.  
(Else: change topic after 20 min.)

But: Experience and practice is very important, esp. for adults.



# ECLASS REFERENCE

**E** = Explain

**C** = Clarify

**L** = Look

**A** = Act

**S** = Share

**S** = Self Evaluate/Submit

Gerson, E. (2000): E-CLASS: Creating a Guide to Online Course Development For Distance Learning Faculty.

<http://www.westga.edu/~distance/ojdl/winter34/gerson34.html>

ECLASS - The pedagogical concept behind eLML:

[http://www.elml.ch/website/en/html/about\\_concept.html](http://www.elml.ch/website/en/html/about_concept.html)

## ECLASS REFERENCE – DURING THE LUNCH TIME LECTURE

**E** = Explain – Goals and target group

**C** = Clarify – Definitions, theoretical input

**A** = Act – Two exercises (One for two – one for the whole group)

**L** = Look – Proposing one possible solution

**S** = Share – Exchanging in pleno (with all participants)

(**S** = Self Evaluate/Submit – giving comments on other solutions)

# E-CLASS REFERENCE: TRAIN2DACAR E-LEARNING MODULES

Explain:  
Goals  
Scenario (Storytelling)



Modul 4-1

 35 min

## Repositorien

Dieses Modul zeigt Ihnen, wo Sie Ihre Daten mittelfristig, d.h. unmittelbar nach Abschluss des Projekts und vor dem Transfer in ein Langzeitarchiv ablegen können. Wir zeigen Ihnen ein Portal, in dem Sie geeignete Repositorien finden können und diskutieren die Vor- und Nachteile der bekanntesten Repositorien.

### Lernziele

Sie lernen in diesem Modul

- wie sie sich einen Gesamtüberblick über bestehende Repositorien verschaffen können,
- welches die wichtigsten Repositorien für eine erste Veröffentlichung ihrer Daten sind,
- wie sie Projektmanagement und Datenverwaltung incl. Publikation und Archivierung miteinander kombinieren können.

### SCENARIO

Fabrice ist Projektleiter eines archäologischen Forschungsprojekts an einer schweizerischen Universität und möchte einige Daten aus dem Forschungsprojekt, die nicht an eine vollständige Datenbank gebunden sind, auf einem geeigneten Repository publizieren und dies schon bevor er sich den Fragen der Langzeitarchivierung stellt.

Er möchte wissen, welche Repositorien es überhaupt gibt und welche in seiner Disziplin als Hauptanlaufstellen gelten.

Auf welchen Repositorien er möglichst niedrigschwellig seine Daten ablegen und nach welchen Kriterien er seine Entscheidung treffen soll.



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## REPOSITORIES



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LIZENZ CC BY 2.5

[www.researchdatamanagement.ch](http://www.researchdatamanagement.ch)

Clarify:  
Slides



# E-LEARNING MODULE

LOOK

## Überblick Repositorien

[PDF downloaden](#)

In dieser Tabelle haben wir drei Repositorien, Zenodo, Dryad und Figshare miteinander verglichen und die jeweiligen Vor- und Nachteile zusammengestellt.

Eine grundsätzliche Empfehlung auszusprechen ist – wie praktisch immer im Forschungsdatenmanagement – nur sehr schwierig möglich. Es kommt immer auf den Einzelfall an.

## Übung

Wie sie sehen konnten, gibt es unterschiedliche Orte oder Repositorien, an denen Sie ihre Daten ablegen können. All diese Orte unterscheiden sich qualitativ recht deutlich voneinander.

In diesem Spiel geht es darum, die unterschiedlichen Formen in einer Rangfolge zusammenzustellen. Jeder Rang ist durch ein entsprechendes Smiley gekennzeichnet.

Die Übung finden Sie unter: <http://tinyurl.com/zfbqey>

TAKEAWAYS

## Takeaways

Grundsätzlich gibt es sehr verschiedene Möglichkeiten seine Daten abzulegen, damit sie der Allgemeinheit für eine Weiterverwendung zur Verfügung stehen.

Im Idealfall übergeben Sie die Daten an ein Datenzentrum, das sich auch um die Fragen der Langzeitarchivierung kümmert.

Möglich ist auch eine mittelfristige Ablage in einem grossen Repository wie etwas Zenodo, dryad oder figshare. Dort riskieren sie aber, dass Ihre Daten in der grossen Masse untergehen und müssen sich eine separate Lösung für die Langzeitarchivierung suchen.

Von Selbstpublikation auf Projektseiten sollten Sie in Zeiten des Forschungsdatenmanagement – auch wenn es noch keine ideale Lösung gibt – in jedem Fall absehen.



Look:  
One specific Item



Act:  
Exercise

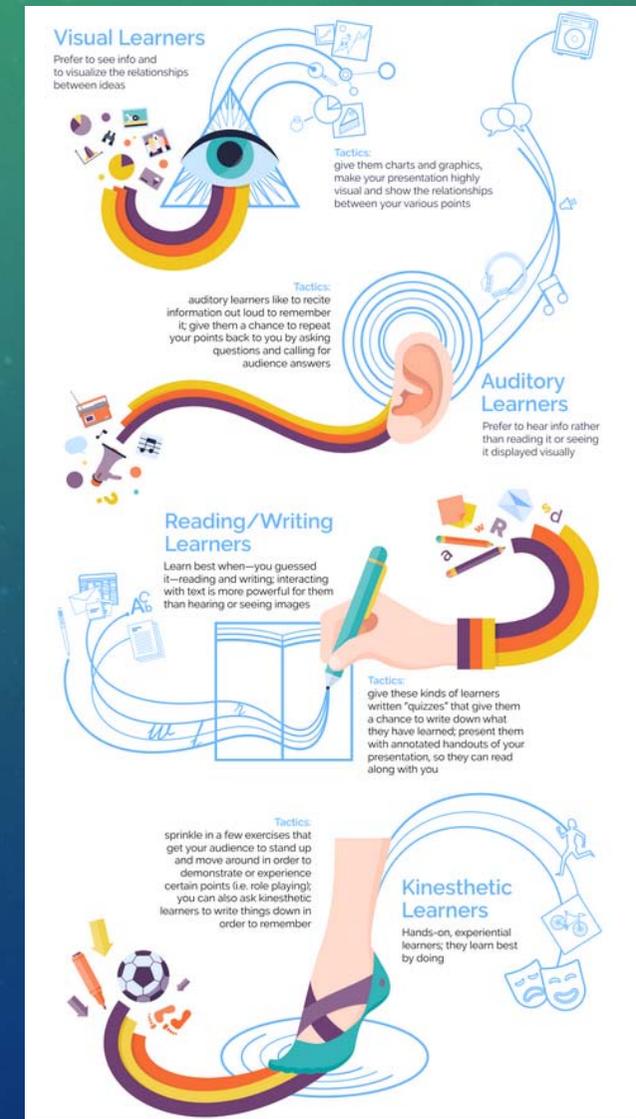
& Take Away:  
Essentials



## II. LEARNING STYLES / TYPES

There is a (disputed) theory in learning that is based on the existence of four different learning types or learning styles.

- a) Visual
- b) Auditory
- c) Communicative (reading / writing)
- d) Kinesthetic (motoric)



<https://blog.prezi.com/the-four-different-types-of-learners-and-what-they-mean-to-your-presentations-infographic/>

## IMPLICATIONS FOR PRACTICE

No matter if this is true or not or one day proven in cognitive studies, you should always teach classes that combine auditory, visual, communicative and kinesthetic aspects, maybe only to make them somewhat more entertaining or less boring.

(Never forget: Whatsapp is less than a second away ...)

## II. LEARNING STYLES – DURING THE LUNCH TIME LECTURE

- a) Auditory - Talk
- b) Visual - Slides
- c) Communicative – Group work
- d) Kinesthetic – Puzzling and Pinning

### III. ADULT TEACHING (ANDRAGOGICS)

Teaching research data management always means to teach adults, generally adults that are very intelligent or do at least consider themselves to be so.

It is interesting to see that teaching adults differs in some aspects from teaching children and adolescents.

# PRINCIPLES

1. Adults must want to learn. (inner motivation and added values are decisive)
2. Adults will learn only what they feel they need to learn. (be practical and direct)
3. Adults learn by doing. (active participation matters)

## PRINCIPLES (CONTINUED)

4. Adult learning focuses on problems and the problems must be realistic. (from problems to solutions → discover gaps and try to close them)
5. Experience affects adult learning. (advantage and burden → avoid the repetition of negative experiences)
6. Adults learn best in an informal situation. (I only want to learn what I need to know. → No fixed curriculum.)
7. Adults want guidance. (Present options → don't say exactly what has to be done.)

- <http://www.literacyns.ca/clln-resources.htm>
- Canadian Literacy and Learning Network. [Principles of Adult Learning Archived](#) 2014-02-17. Archived at the [Wayback Machine](#). Jossey-Bass, 2013.



FINALLY

Don't forget:

Teaching is all about **preparation** –

and **flexibility** for everything

that does not work the way you thought it should.



# QUESTIONS?

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# RESEARCH DATA LITERACY

## WHAT DOES THAT REALLY MEAN?



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# OVERVIEW

- I. Core competences
- II. Special skills
- III. Course duration and target groups
- IV. Literacy as metro map

# CORE COMPETENCES

- Big 6 of Information Literacy as Essential Skills (Eisenberg)
- Seven Pillars of Information Literacy as a Core Model for Higher Education (SCONUL)
- DPOE curriculum: «Train the trainer program in Digital Curation» (established by the Library of Congress)

# BIG 6 INFORMATION LITERACY

Big 6
Clarify
Locate
Select /Analyze
Organize / Synthesize
Evaluate
Create / Present

# SEVEN PILLARS FOR HIGHER EDUCATION

Big 6	Seven Pillars
1. Clarify	
2. Locate	1. Identify
3. Select /Analyze	2. Scope
4. Organize / Synthesize	3. Plan
	4. Gather
5. Evaluate	5. Evaluate
	6. Manage
6. Create / Present	7. Present

# TRAIN THE TRAINER DIGITAL CURATION

Big 6	Seven Pillars	DPOE curriculum
1. Clarify		
2. Locate	1. Identify	1. Identify
3. Select /Analyze	2. Scope	2. Select
4. Organize / Synthesize	3. Plan	
	4. Gather	3. Store
		4. Protect
5. Evaluate	5. Evaluate	
	6. Manage	5. Manage
6. Create / Present	7. Present	6. Provide

# FUSION

Research Data Literacy
Provide
Identify
Scope
Plan
Store
Protect
Evaluate
Manage

# SPECIAL SKILLS

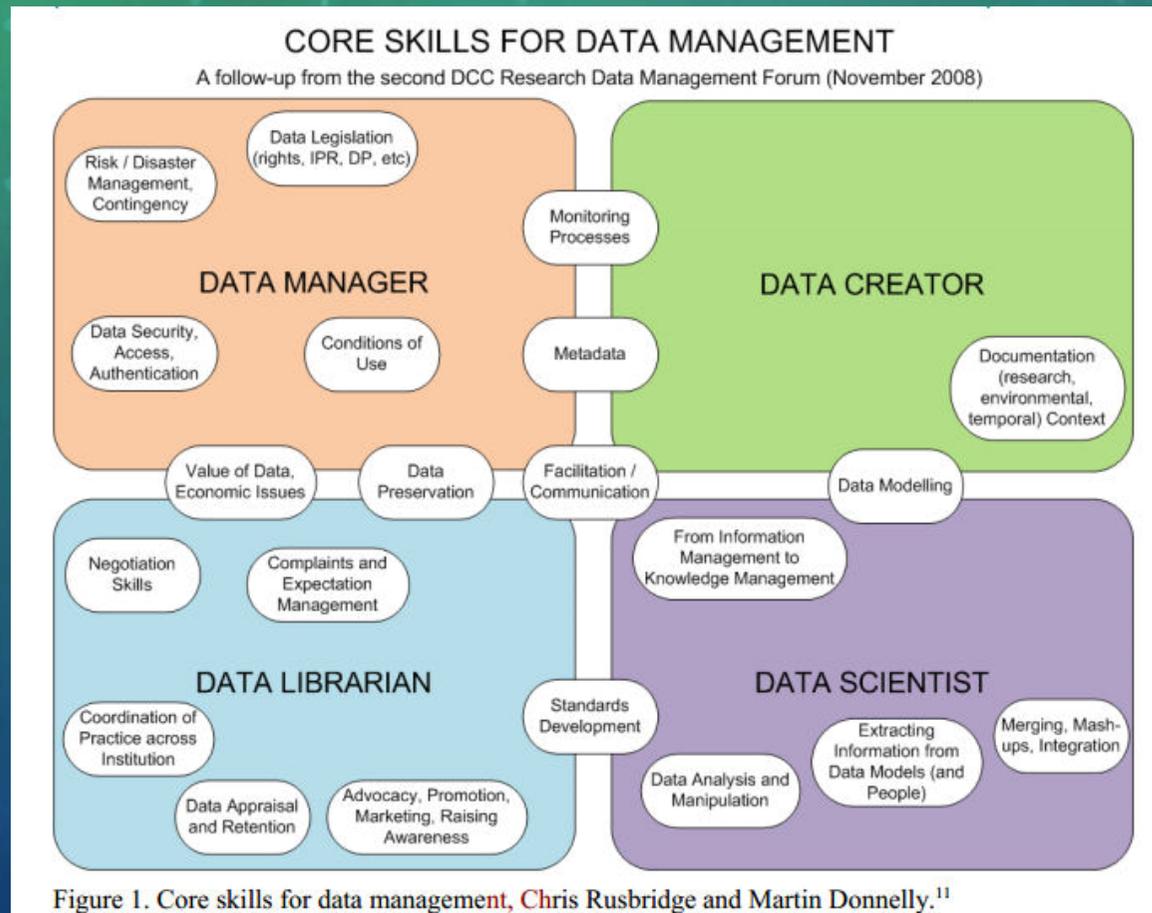


Figure 1. Core skills for data management, Chris Rusbridge and Martin Donnelly.<sup>11</sup>

# SKILLS ATTRIBUTED TO COMPETENCES

Competences	Skills
Identify	Documentation (research environmental, temporal) / Context / From Information Management to Knowledge Management
Scope	Monitoring Process / Extracting Information from Data Models (and People)
Plan	Data Modeling / Meta Data / Standards Development
Store	Data Analysis and Manipulation / Merging, Mashing, Integration
Protect	Data Preservation / Data Security / Access Authentication / Conditions of Use / Data Legislation
Evaluate	Data Appraisal and Retention / Value of Data / Economic Issues
Manage	Complaints and Expectation Management / Coordination of Practice across Institution / Negotiation Skills / Risk & Disaster Management / Contingency / Advocacy, Promotion, Marketing
Provide	Facilitation, Communication / Raising Awareness

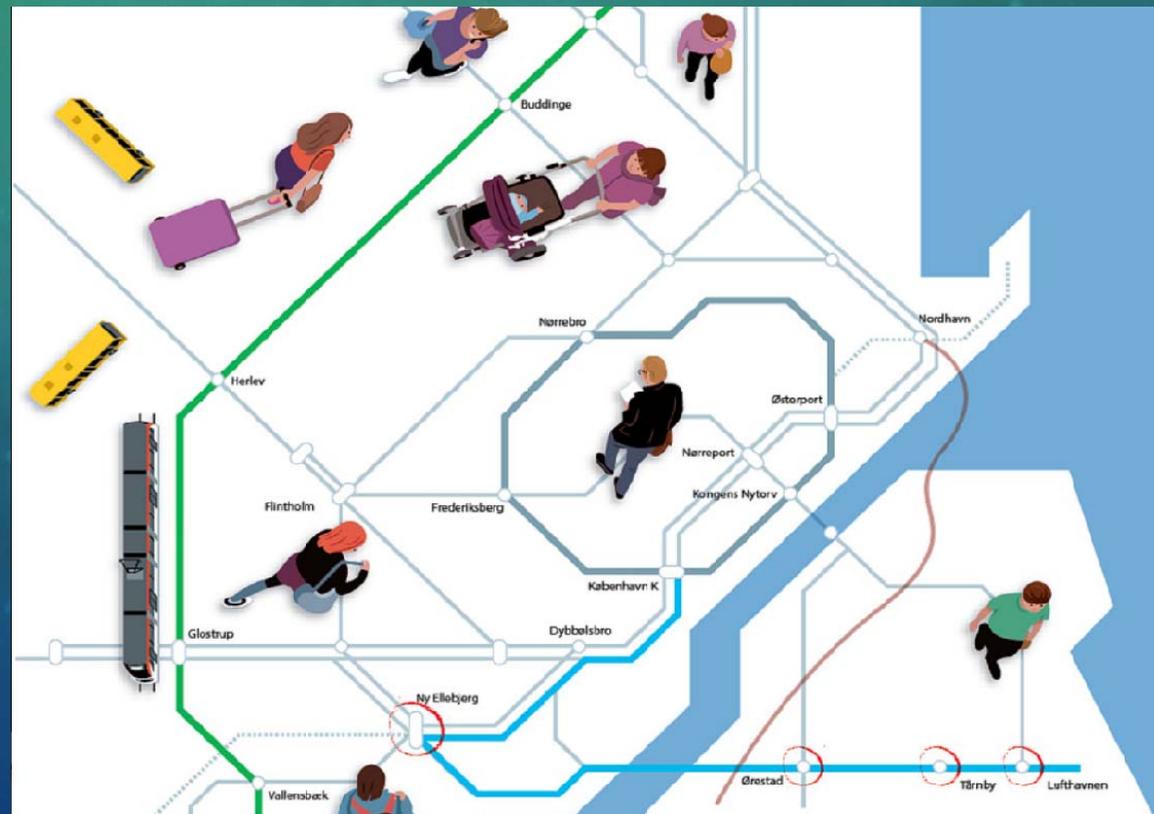


# DURATION AND TARGET GROUPS

	2 hours	1 course (30 hours)	1 module (2-3 courses)	Intermediary program	Full study programme	Certificate
Any Bachelor student	*	-	-	-	-	-
Any Master student	+	*	-	-	-	-
LIS Bachelor Students	-	+	*	*	-	-
LIS Master Students	-	-	+	*	*	-
Data Creators	+	*	-	-	-	-
Data Scientists	+	*	-	-	-	*
Data Librarians	-	+	-	-	-	+
Data Managers	-	+	-	-	-	+

+ : compulsory  
\* : optional

## IV. LITERACY AS METRO MAP

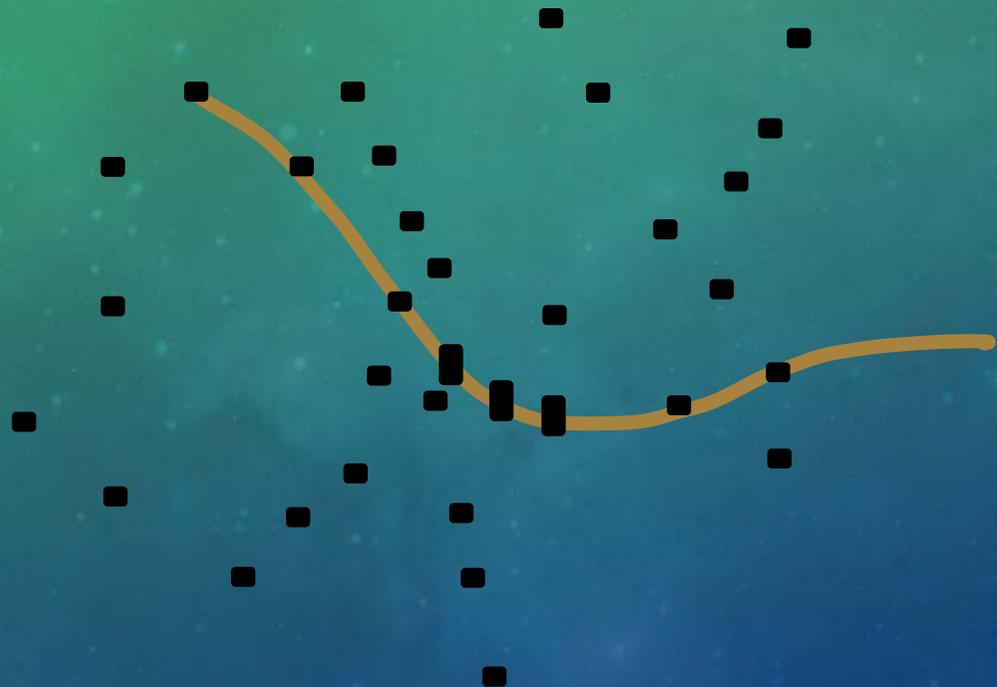


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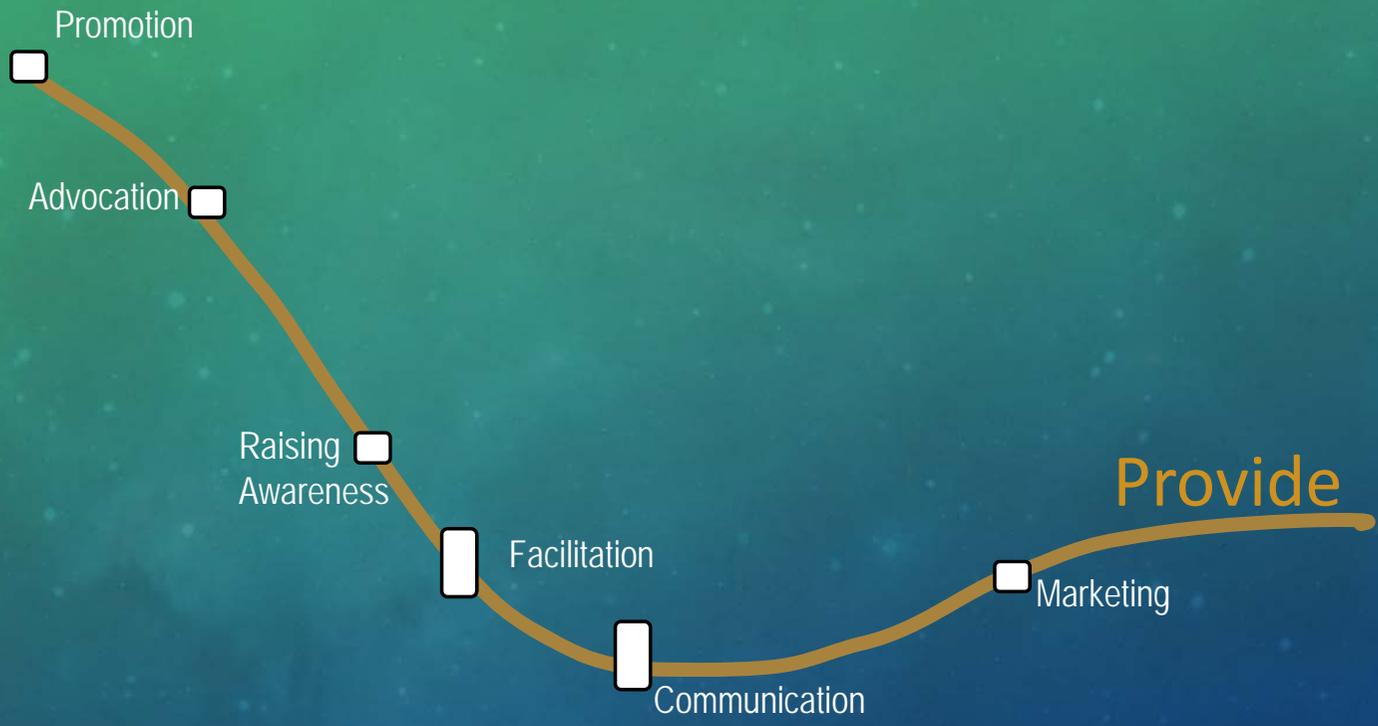
LET'S SAY



- that metro lines represent *core competences*,
- and *special skills*, i.e. the respective knowledge like stops!



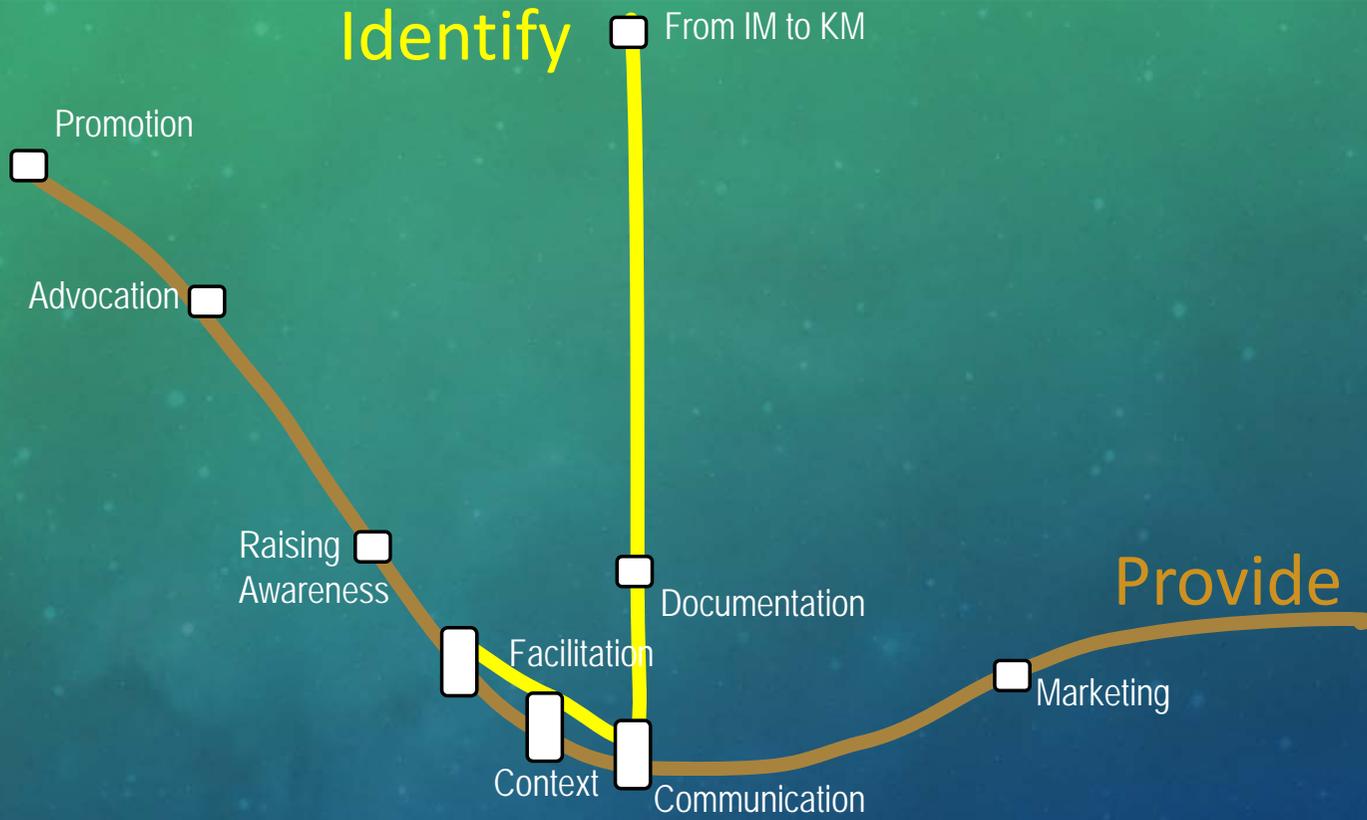
Provision Line

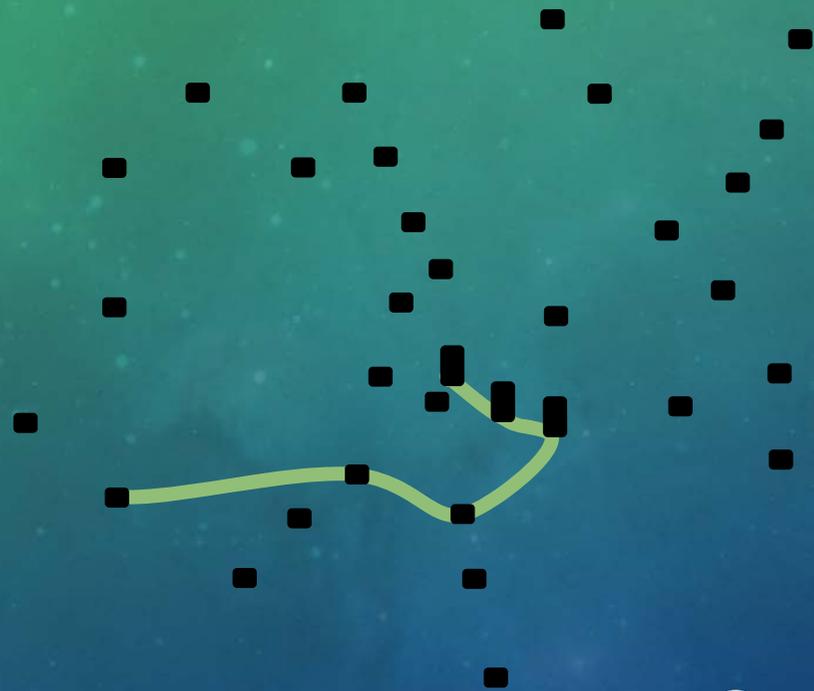




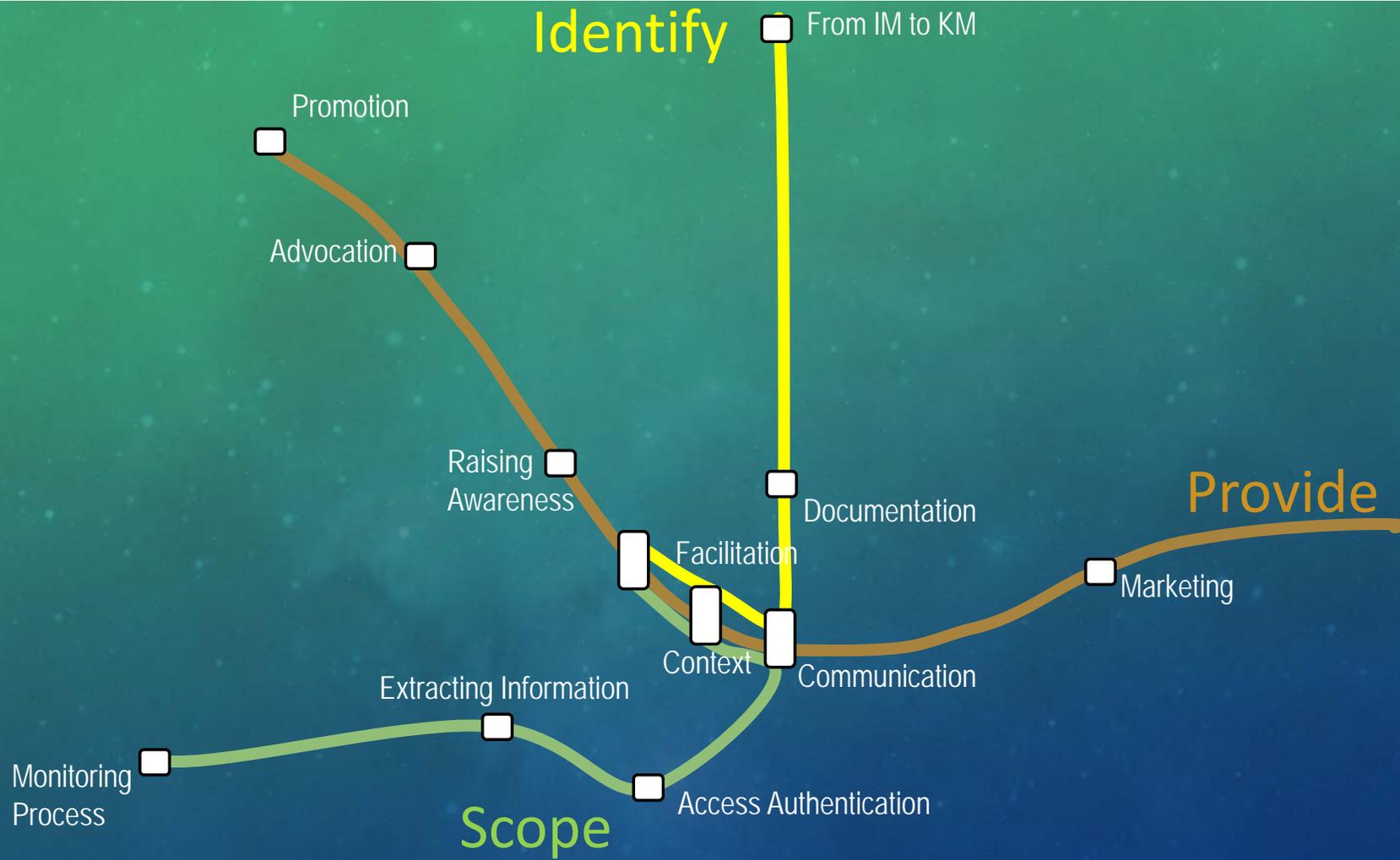
- Identification Line

# Identify



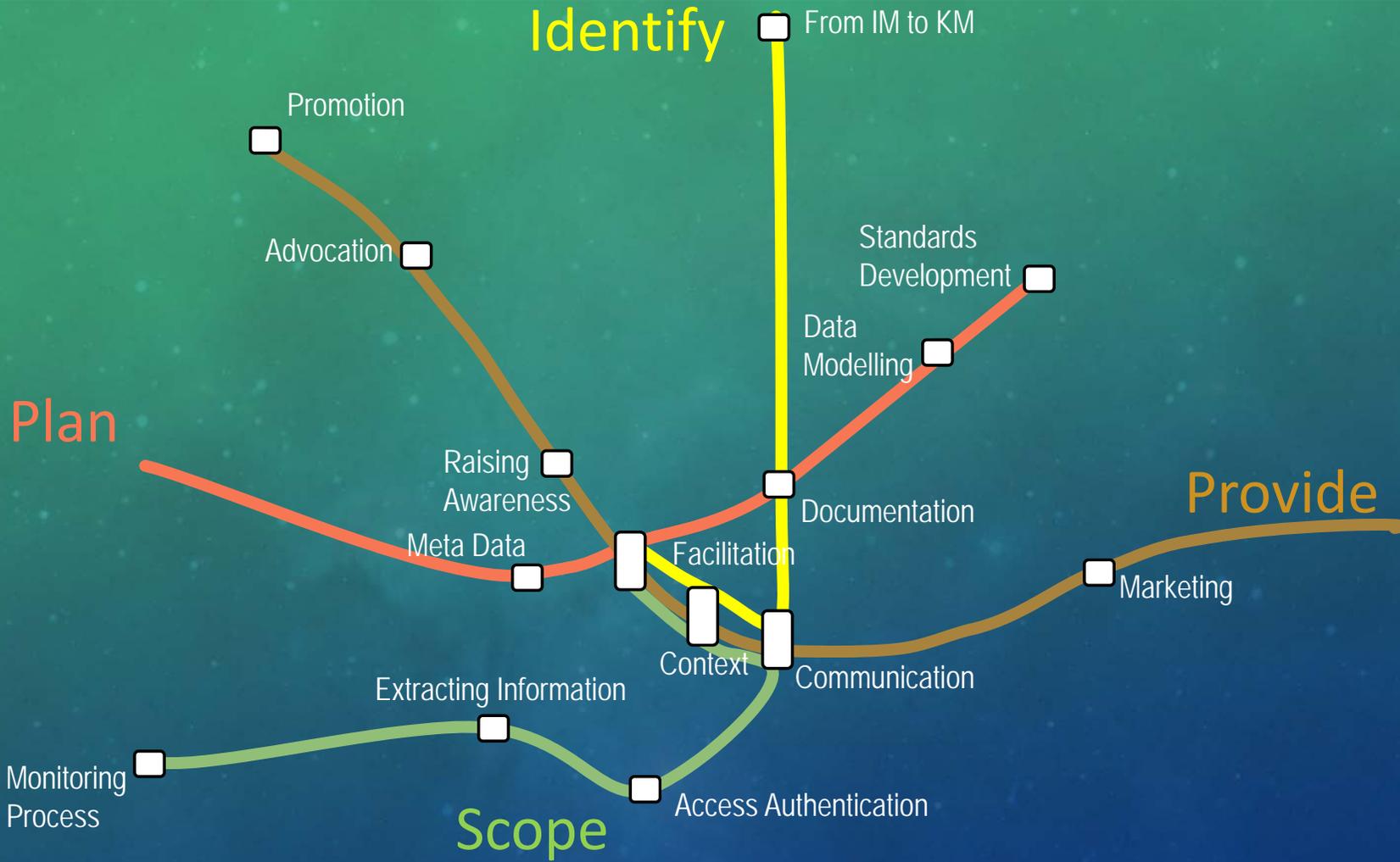


Scope Line



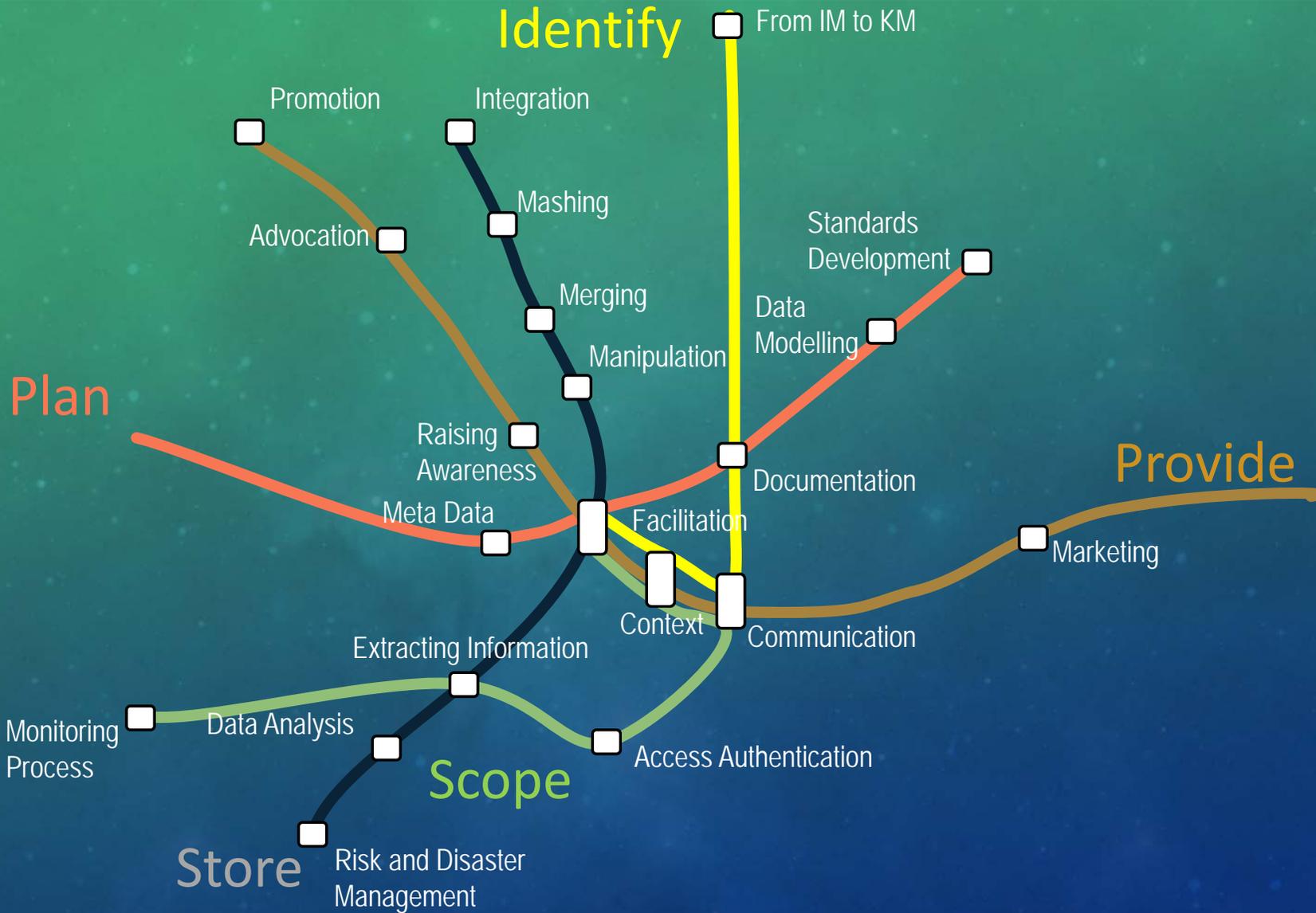


Planning Line

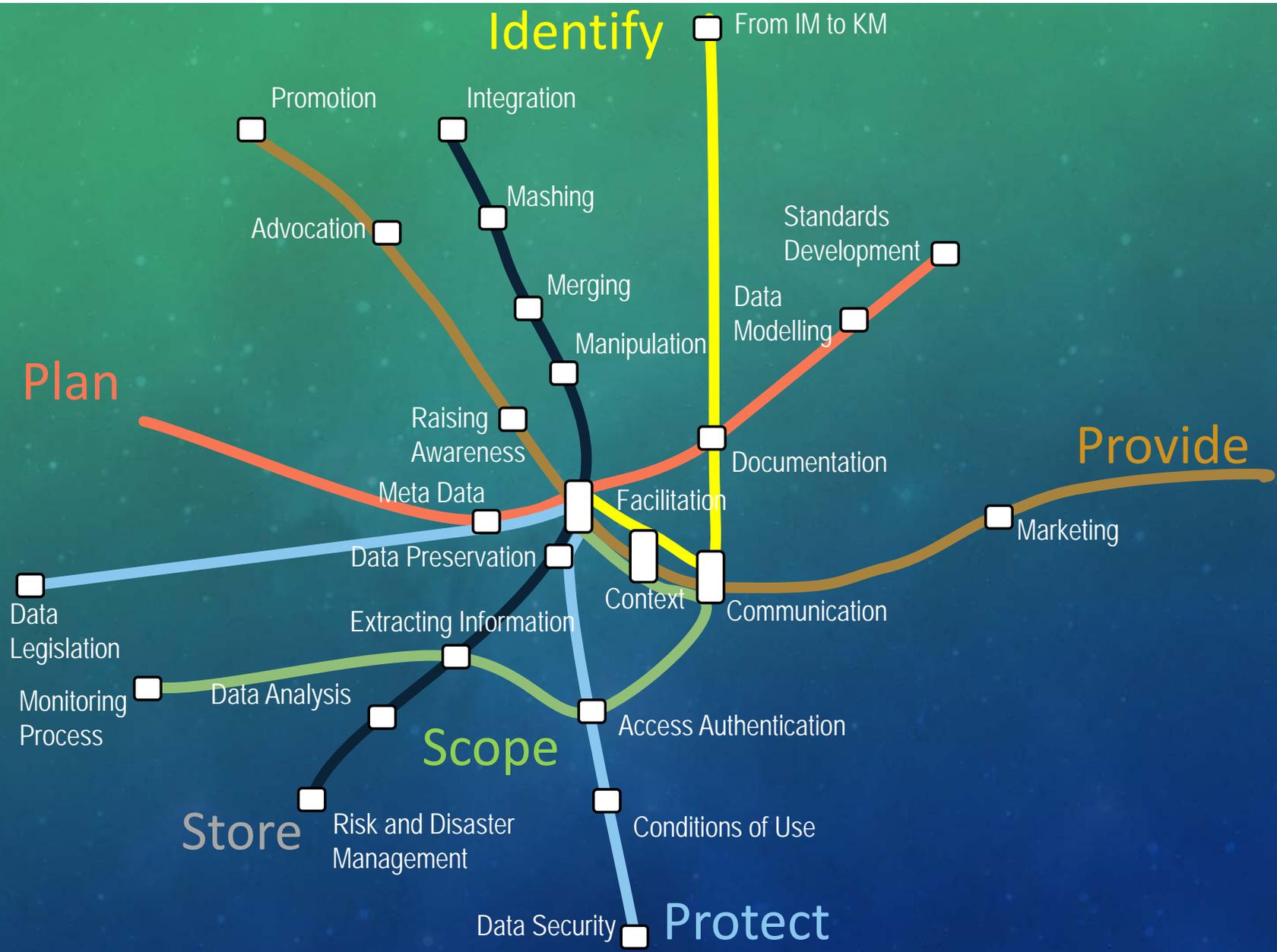




Storage Line







# Identify

# Plan

# Provide

# Scope

# Store

# Protect

From IM to KM

Promotion

Integration

Advocation

Mashing

Standards Development

Merging

Data Modelling

Manipulation

Plan

Raising Awareness

Documentation

Meta Data

Facilitation

Provide

Data Preservation

Context

Marketing

Data Legislation

Extracting Information

Communication

Monitoring Process

Data Analysis

Access Authentication

Store

Risk and Disaster Management

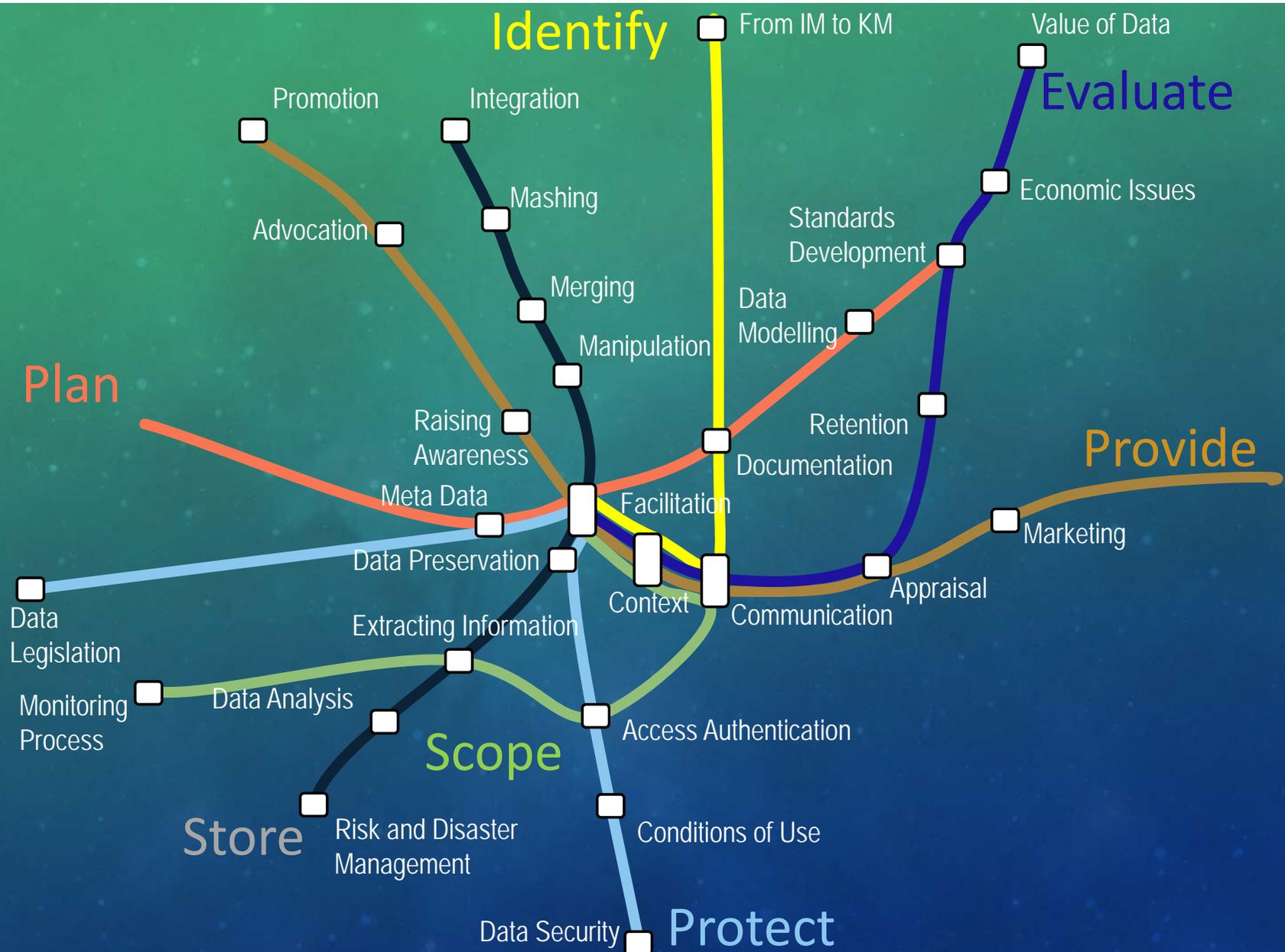
Conditions of Use

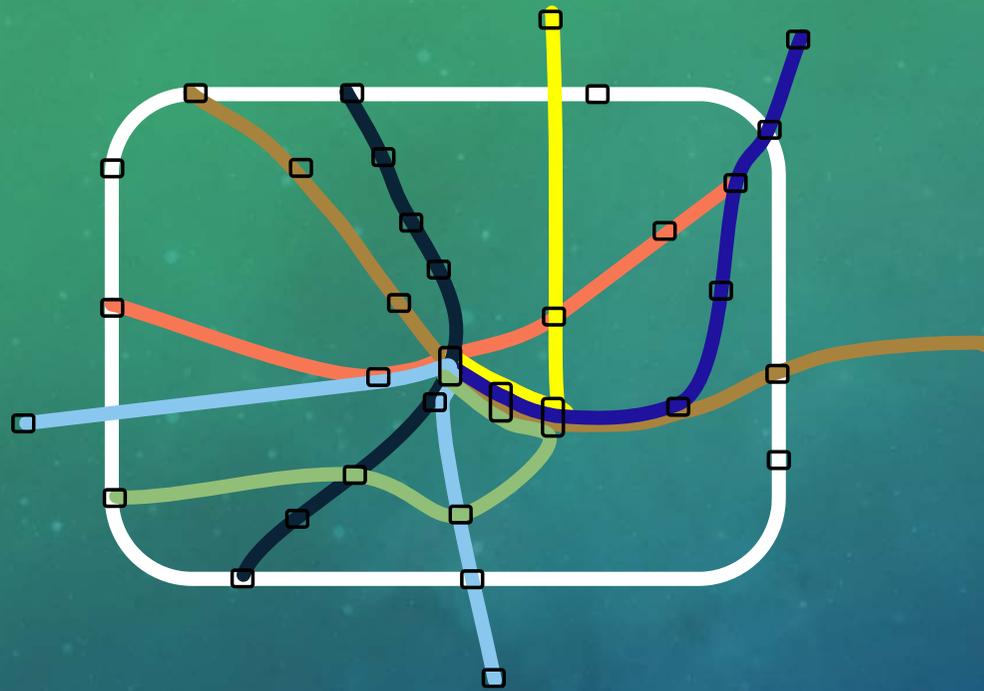
Data Security

Protect

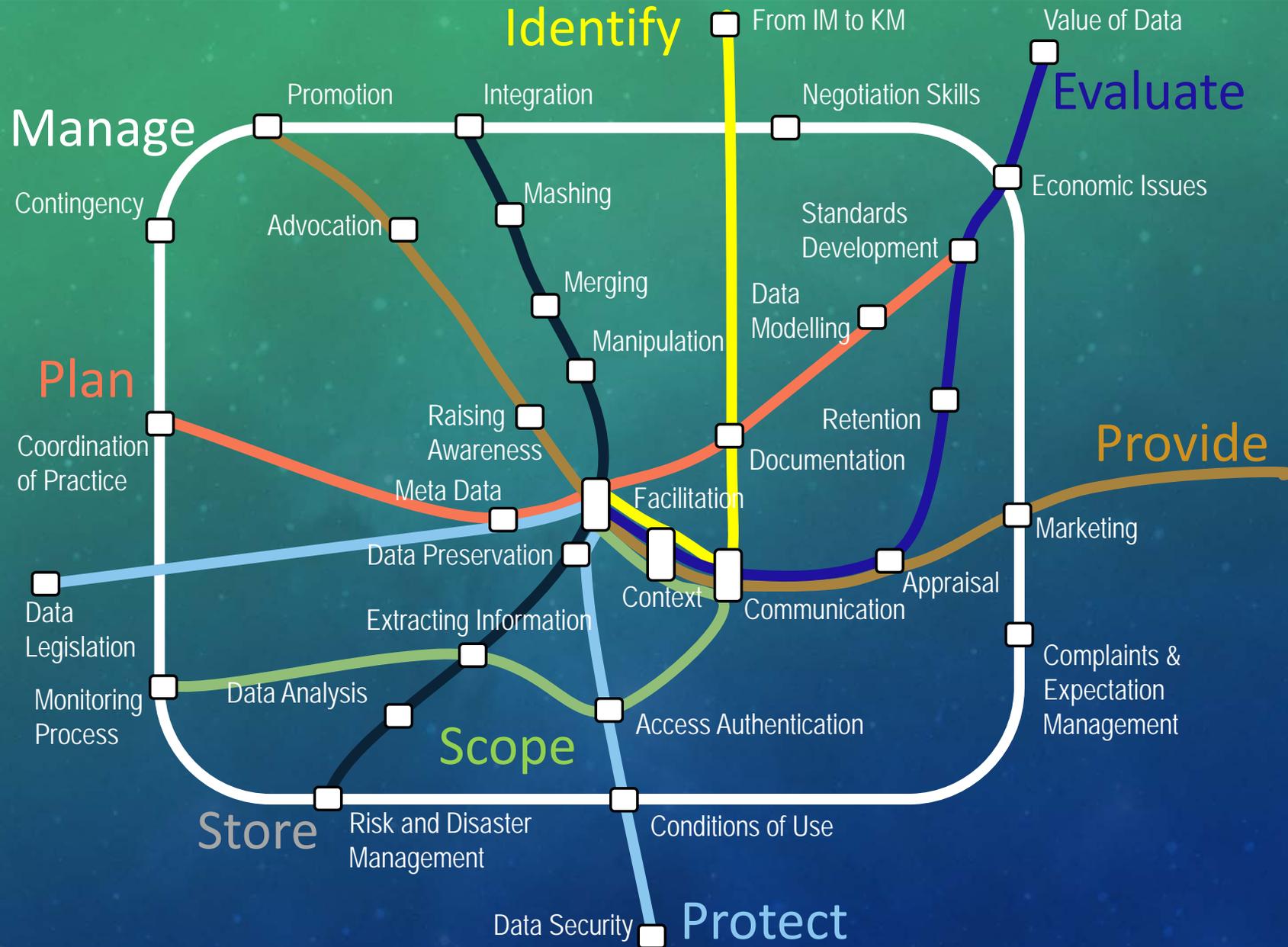


Evaluation Line





Management Line



**Identify**

**Evaluate**

**Provide**

**Protect**

**Store**

**Plan**

**Manage**

From IM to KM

Negotiation Skills

Value of Data

Economic Issues

Standards Development

Data Modelling

Retention

Documentation

Appraisal

Communication

Context

Access Authentication

Conditions of Use

Data Security

Risk and Disaster Management

Data Analysis

Extracting Information

Data Preservation

Facilitation

Meta Data

Raising Awareness

Merging

Manipulation

Mashing

Advocation

Promotion

Integration

Contingency

Coordination of Practice

Data Legislation

Monitoring Process

Complaints & Expectation Management

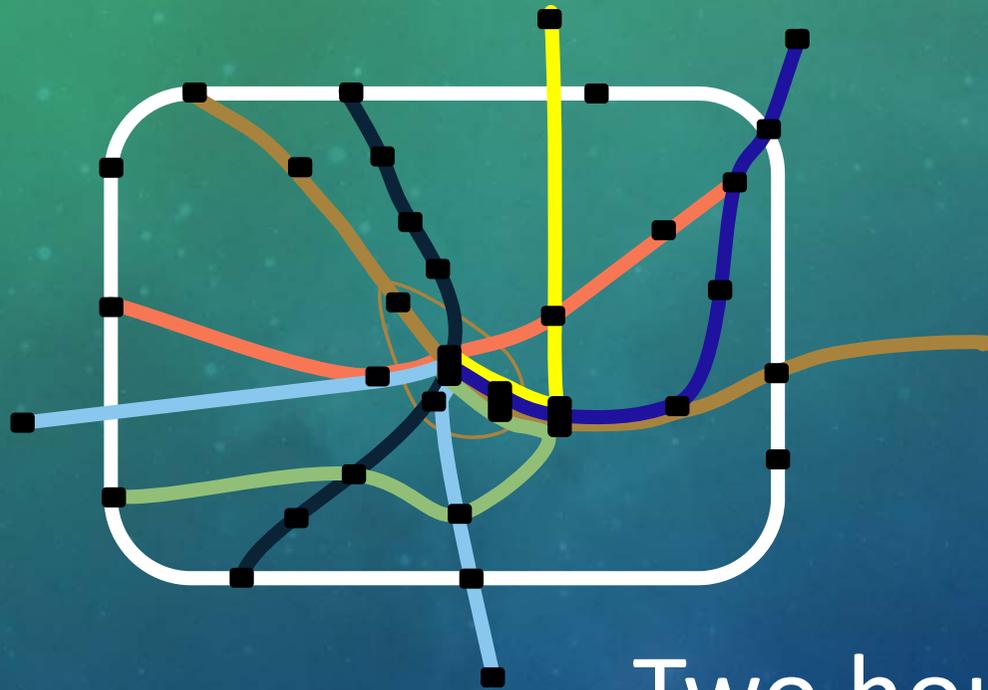
Marketing

**Scope**

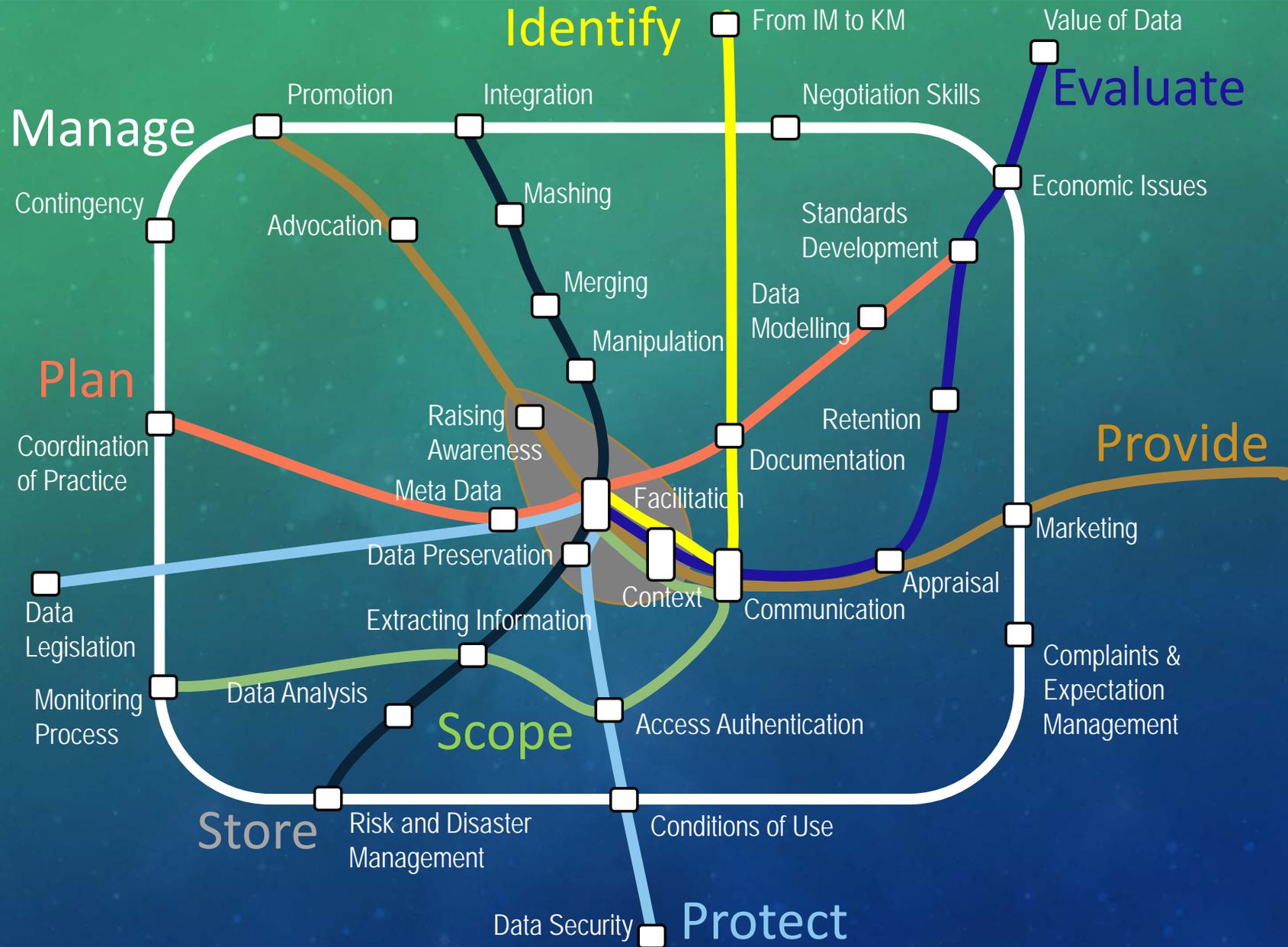
## AND THAN WE COULD SAY

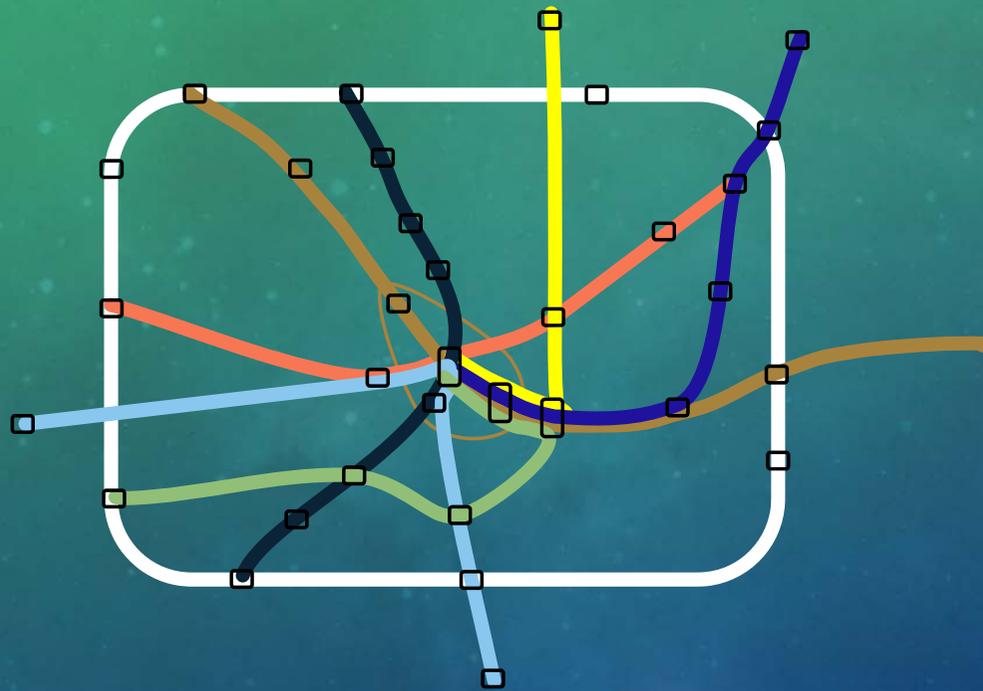


- that metro lines represent *core competences*,
- and *special skills*, i.e. the respective knowledge like stops,
- *Teaching units* are like zones you could move in,
- and *study programmes* are represented by the duration of validity.



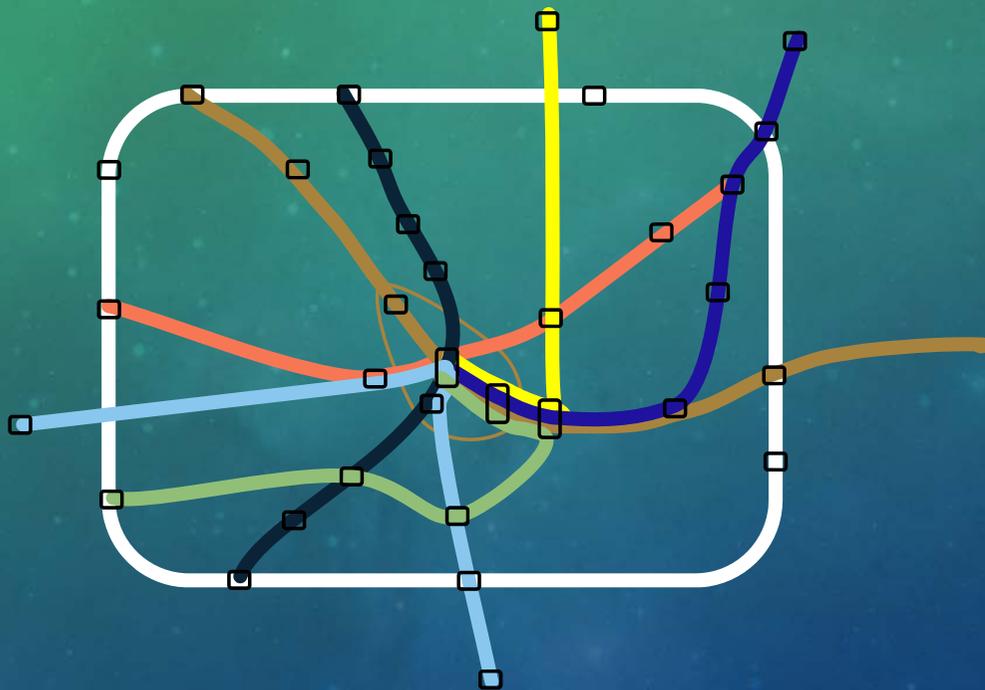
Two hours validity



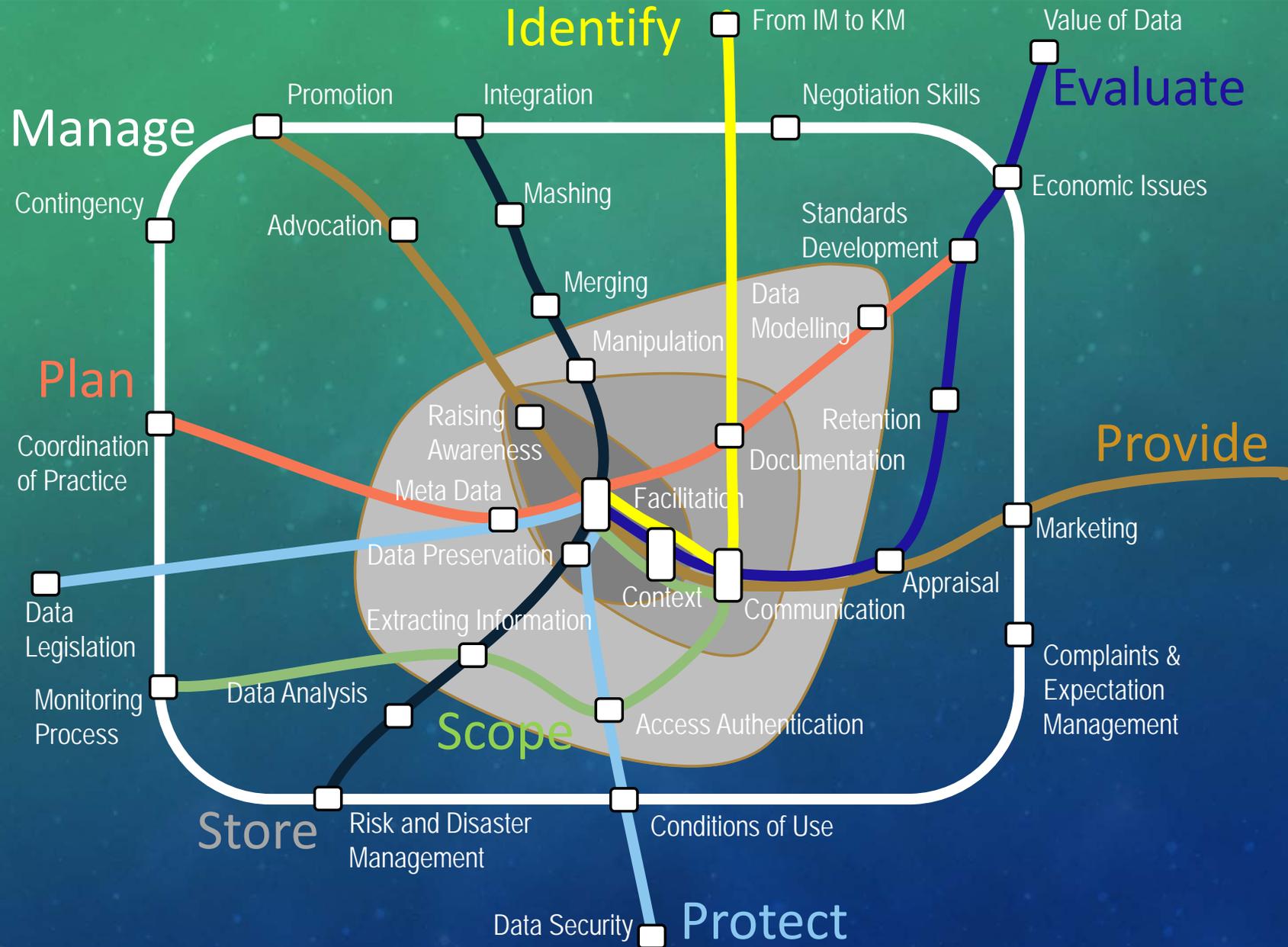


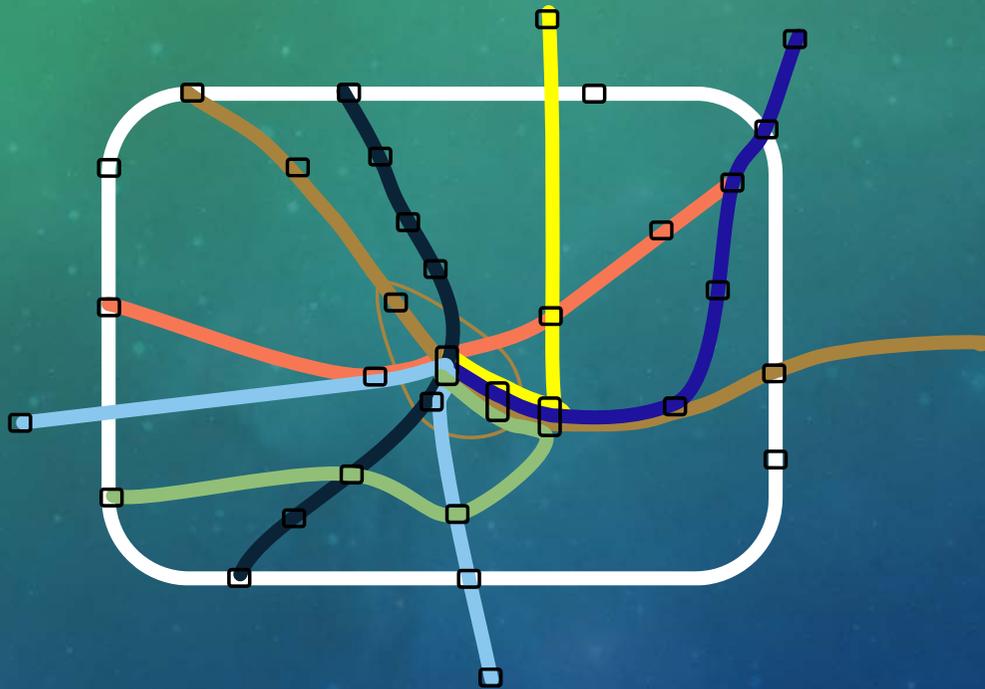
Whole Course / Workshop Ticket



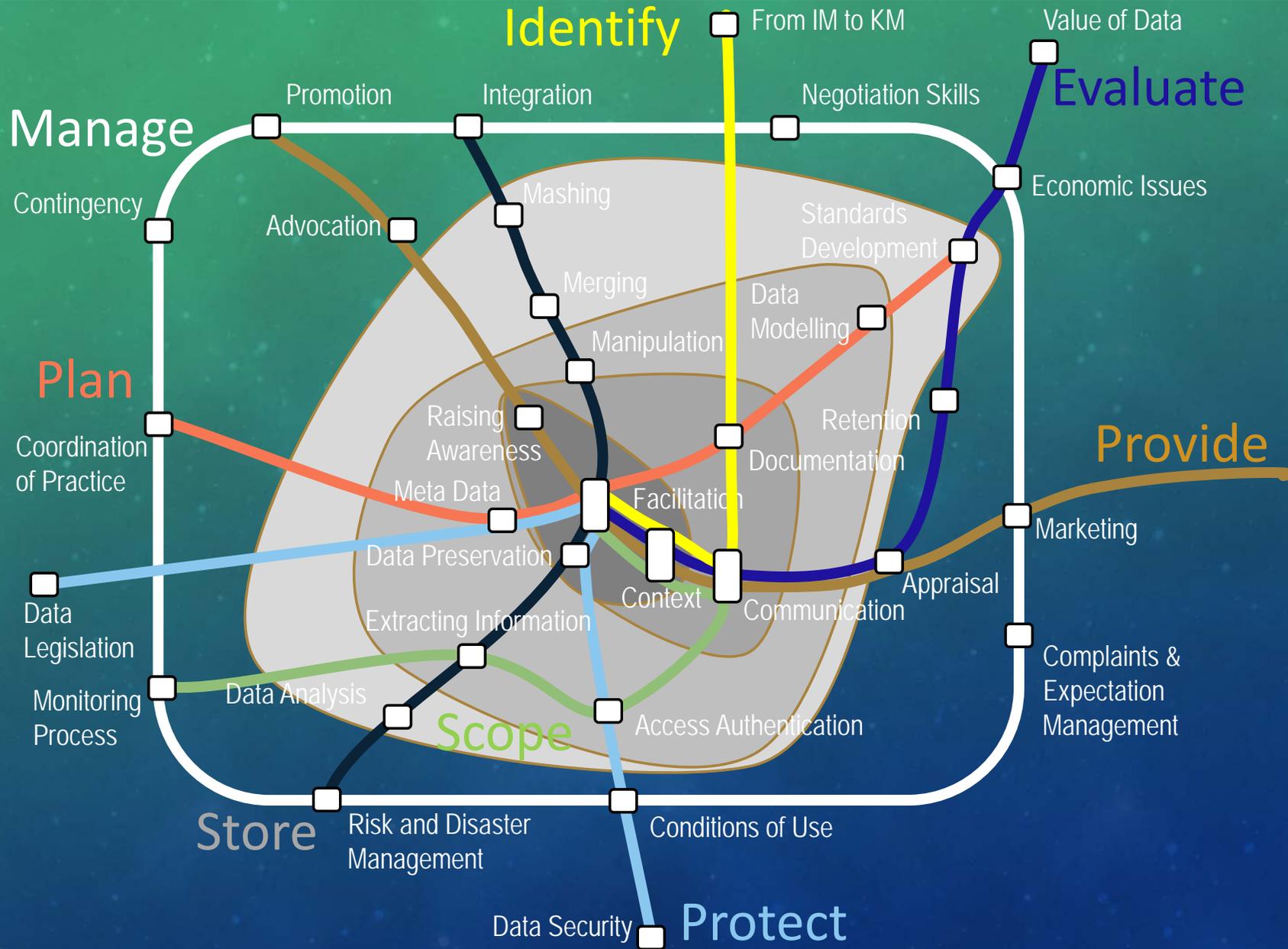


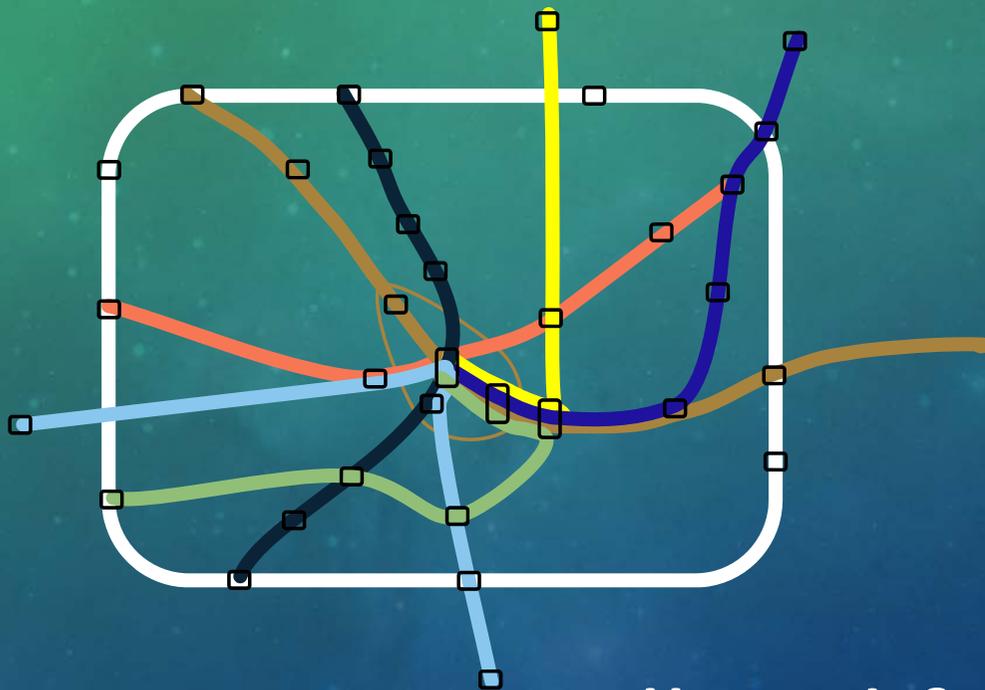
One Module Ticket



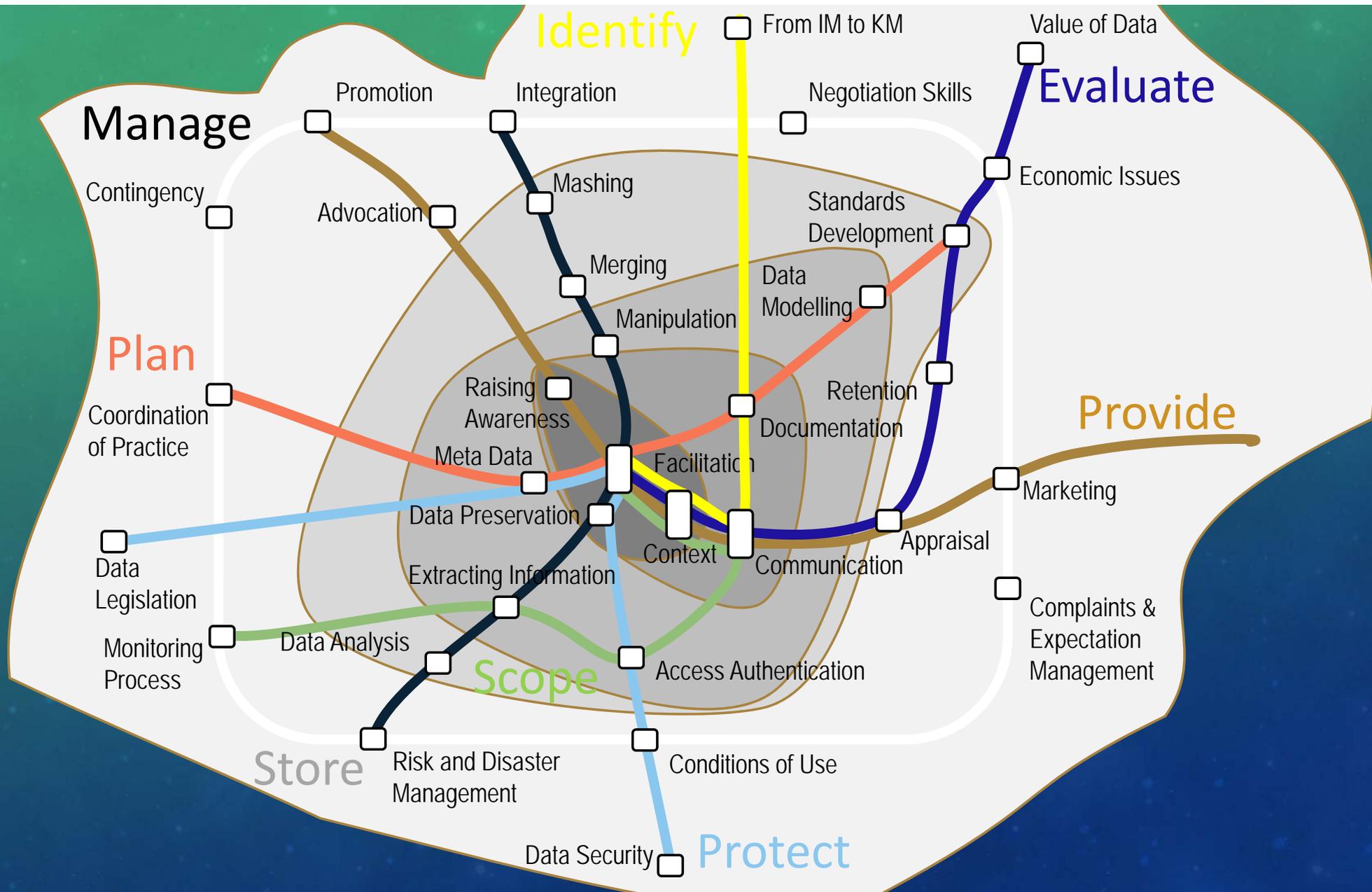


Certificate Ticket





Full and free access  
(Two years validity)



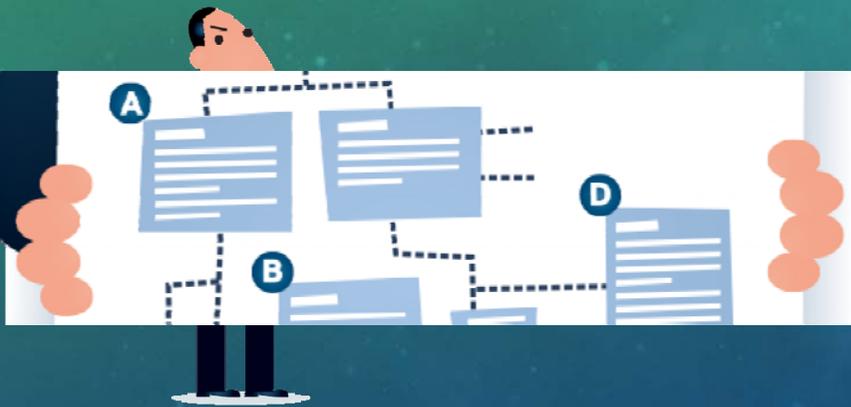


# QUESTIONS?

RENE.SCHNEIDER@HESGE.CH

SCHNEIDER, René, 2013. [Research Data Literacy](#). In: *Worldwide commonalities and challenges in information literacy research and practice: European Conference, ECIL 2013, Istanbul, Turkey, October 22-25, 2013: revised selected papers*. Berlin: Springer, 2013, S. 134-140. *Communications in Computer and Information Science*, Vol. 397.

# RESEARCH DATA METRO MAP IN FIVE STEPS



*All cartoons courtesy of Jørgen Stamp,  
[Digitalbevaring.dk](http://Digitalbevaring.dk). CC BY 2.5.*

RENÉ SCHNEIDER  
HES-SO, HAUTE ECOLE DE GESTION, GENEVA  
LICENCE CC BY 4.0

# QUESTION

How do I create a metro map,  
i.e. an overview of all possible course content?



## FIVE STEPS

1. Stops – Collect all skills
2. Metro lines – Allocate skills to core competences
3. Connecting stations – Determine thematic proximity
4. Zones – Prioritise Content
5. Spatial Arrangement



# 1. STOPS

Try to determine the skills to acquire and/or the content to learn in an accurate and concise manner and write them on cards.

These will be your stops.

You may define them yourselves or choose them out of existing courses or training programmes.



# STOPS

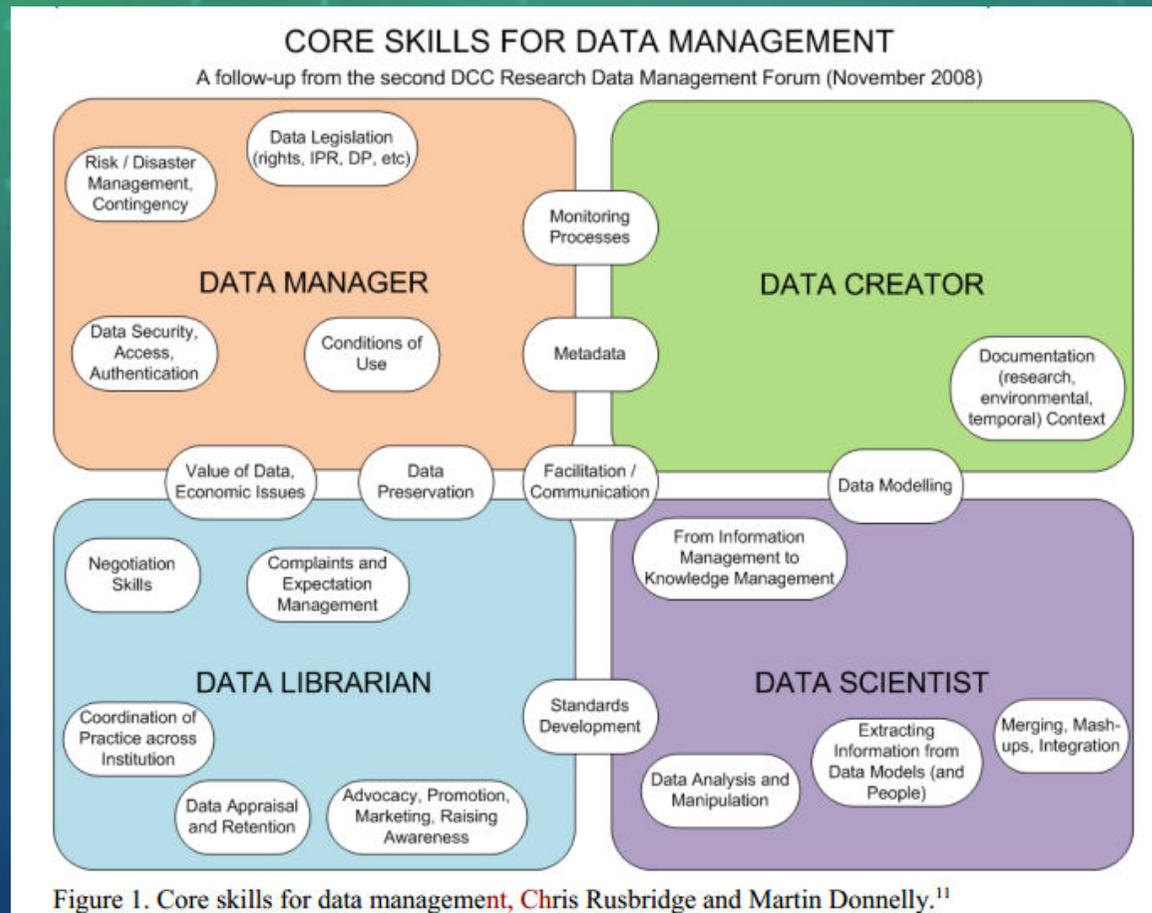


Figure 1. Core skills for data management, Chris Rusbridge and Martin Donnelly.<sup>11</sup>

## 2. METRO LINES



Then try to fix the metro lines (not more than 6 ( $\pm 2$ ), probably based on a data literacy competence) and attribute each card to one line.

It might be useful to consider a general and comprehensive competence (line), e.g. management that might become a kind of circle line.

This attribution may happen in a twofold manner. (As follows...)

# CARD SORTING

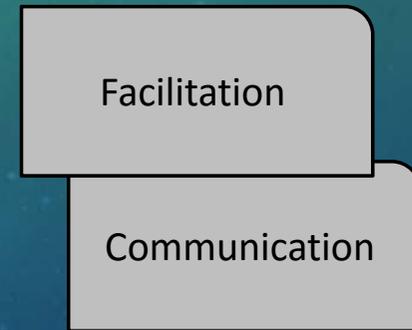
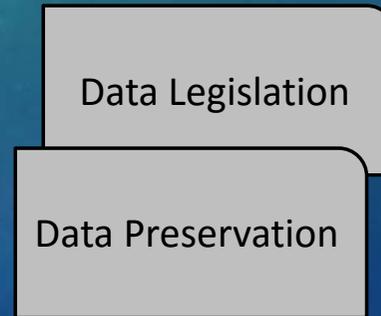
## 1. Open Card Sorting:

- Assemble the cards in groups if their content makes them belong together.
- Then define the labels of each category.

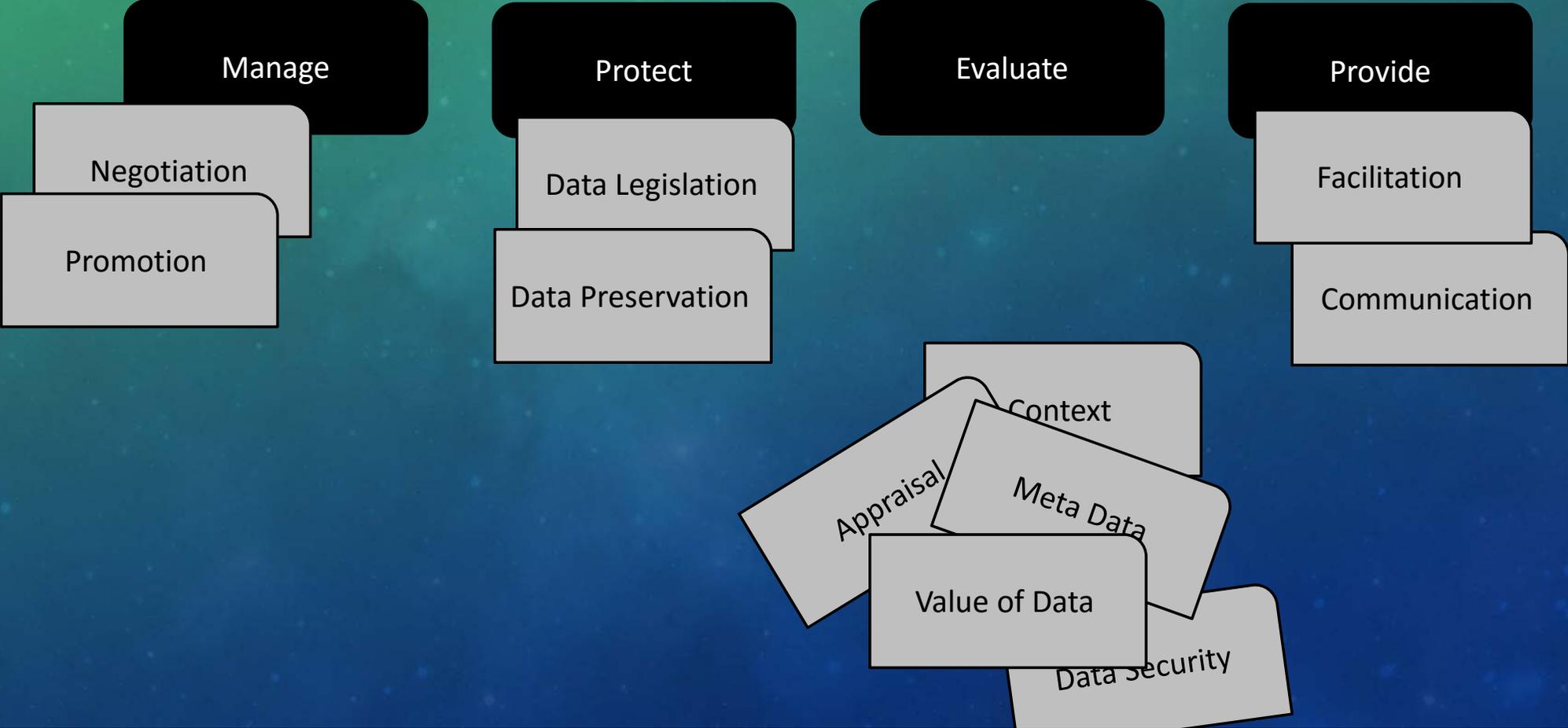
## 2. Closed Card Sorting:

- Start with a number of a priori determined categories (competences) and allocate each skill to one category.

# OPEN CARD SORTING



# CLOSED CARD SORTING



# CLOSED CARD SORTING

In our case we will make use of the core competences developed for research data literacy:

Provide, Identify, Scope, Plan, Store, Protect, Evaluate, Manage

It's up to you to formulate your own competences or shorten or modify the list with respect to the needs of your target groups.

### 3. CONNECTION STATIONS



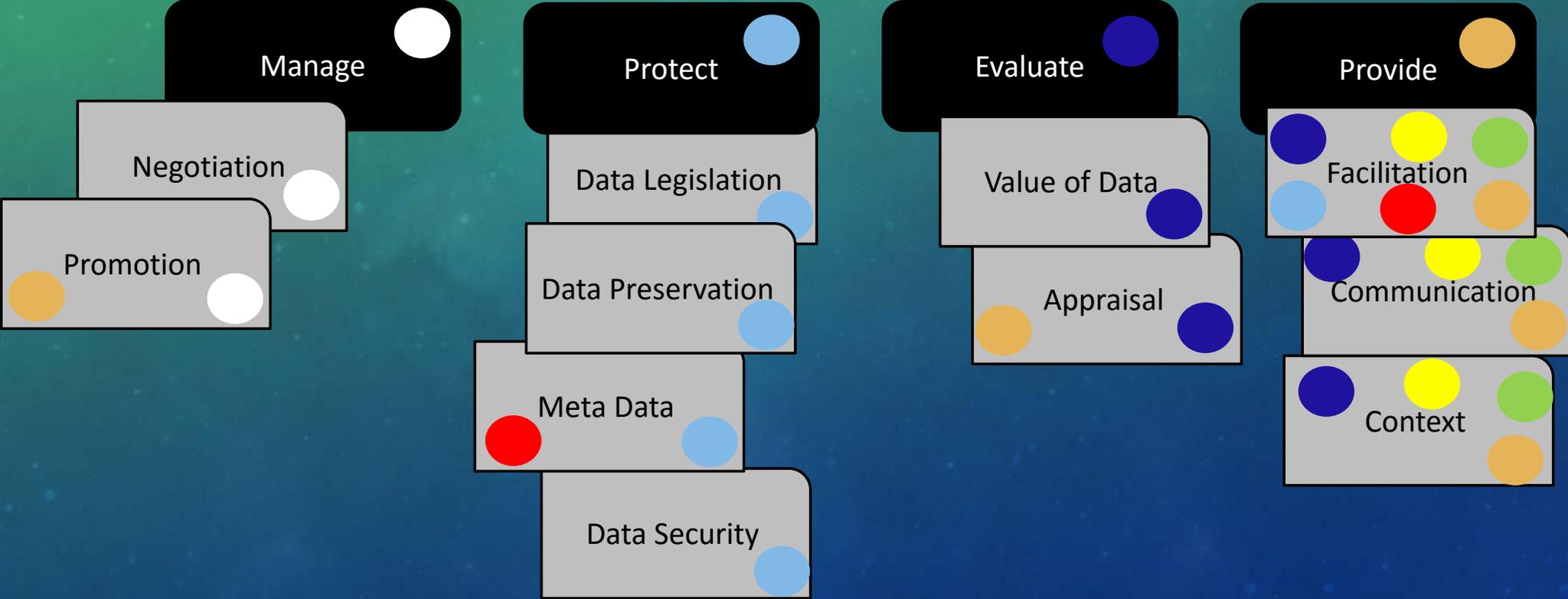
Some skills may belong to more categories.

Mark each line with a color.

Assign – in the following step - as many colors (lines) to a card (skill) as possible.

As soon as a card has more than one color, it will become a connecting station in your map.

# COLOURED MARKING



## 4. DEFINITION OF ZONES – PRIORITISING



Then, mark each coloured card with a priority that you give to the content.

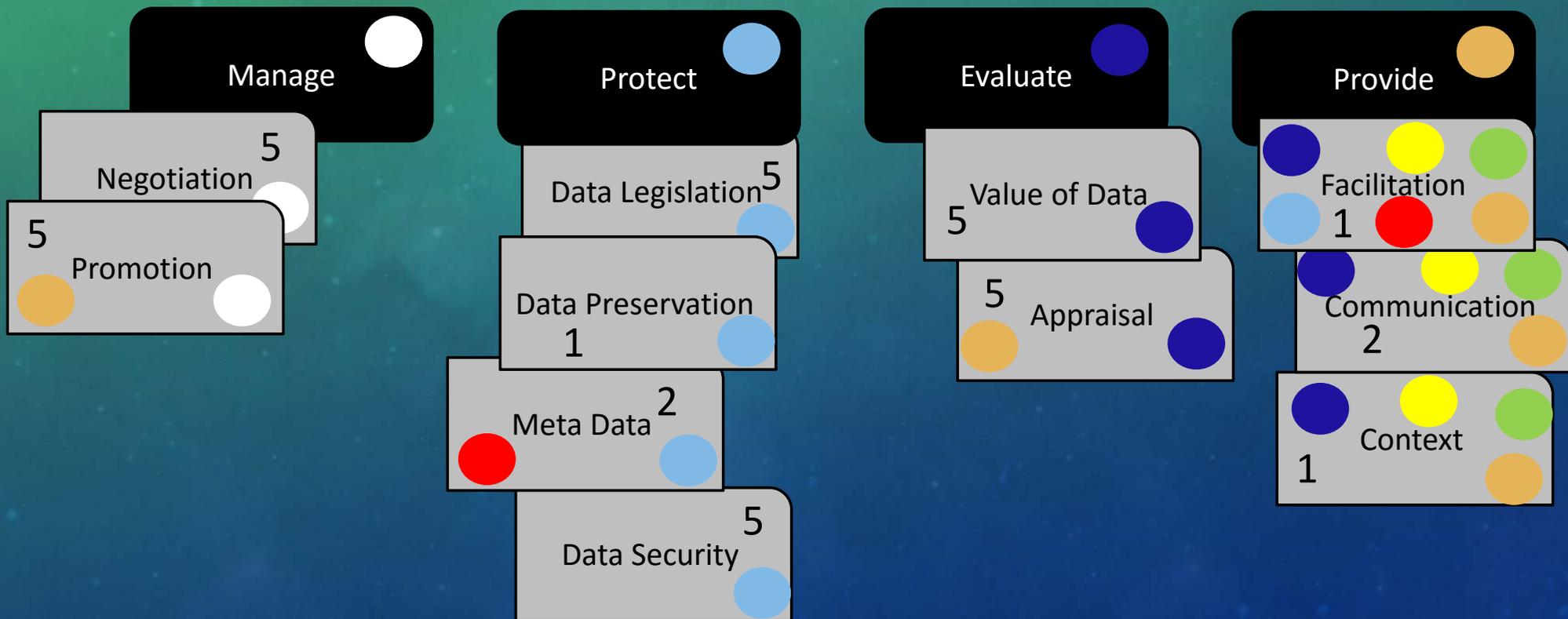
The number of coloured labels might be an indicator for its importance, i.e. a card with lots of colours may have a high importance ... and thus be placed in the centre of your map.

## DEFINITION OF ZONES – PRIORITISING

Assign highest priority (i.e. a low number starting from 1) to knowledge that everybody should have.

The higher the number, the lower its importance for everyone and the higher the probability that it is only important for experts or managers.

# PRIORITISING



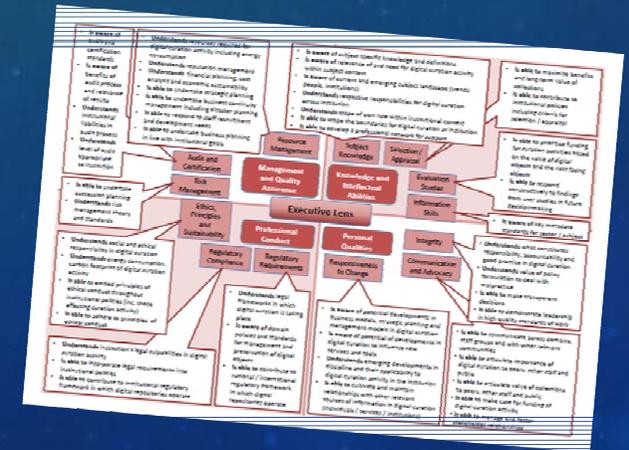
# DEFINITION OF ZONES – SIMPLIFIED

According to the results of the digcurv projet, <http://www.digcurv.gla.ac.uk/>, it is possible to simply have three levels /zones.

DigCurv distinguishes three levels: Practitioner, Manager, Executive.

Each lense itself divides the competences:

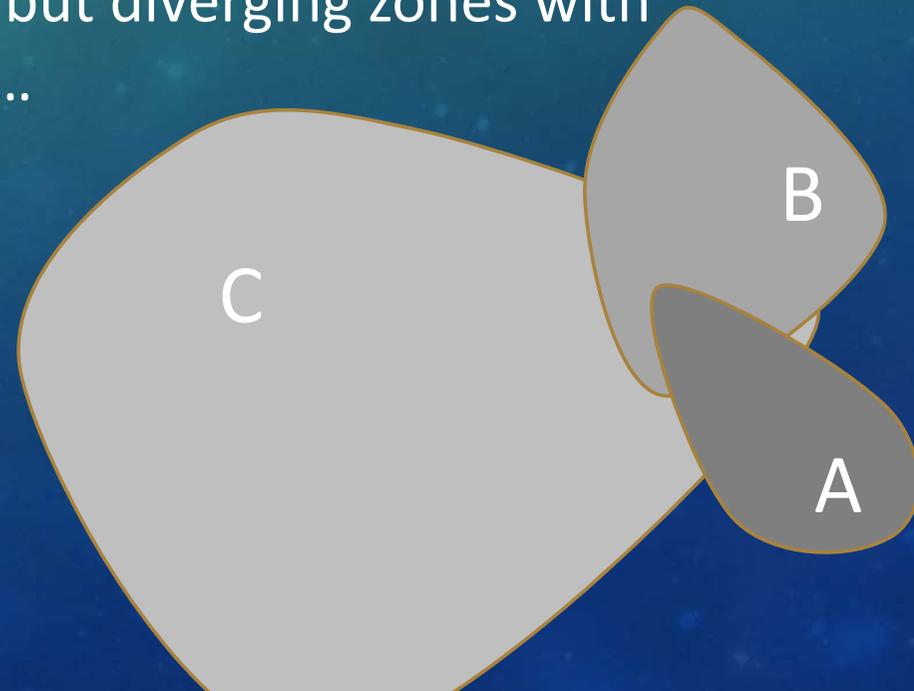
- is aware of – Awareness - 1
- understands – Understanding - 2
- is able to – Action – 3



## DEFINITION OF ZONES – SIMPLIFIED

You may therefore define three overlapping but diverging zones with an intersecting zone for general knowledge ...

A: Executive  
B: Manager  
C: Practitioner



## DEFINITION OF ZONES – SIMPLIFIED

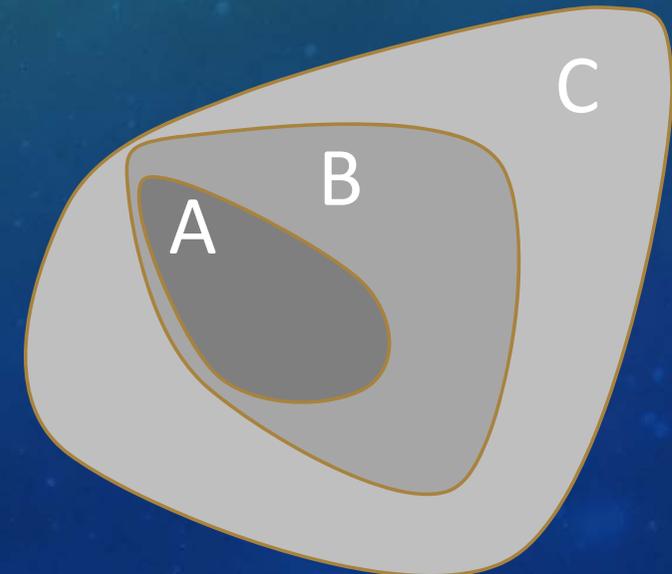
Or three concentric zones, according to the time you have at disposal for your course. The larger or peripheric the zone, the deeper the knowledge to be mediated.

A: Awareness

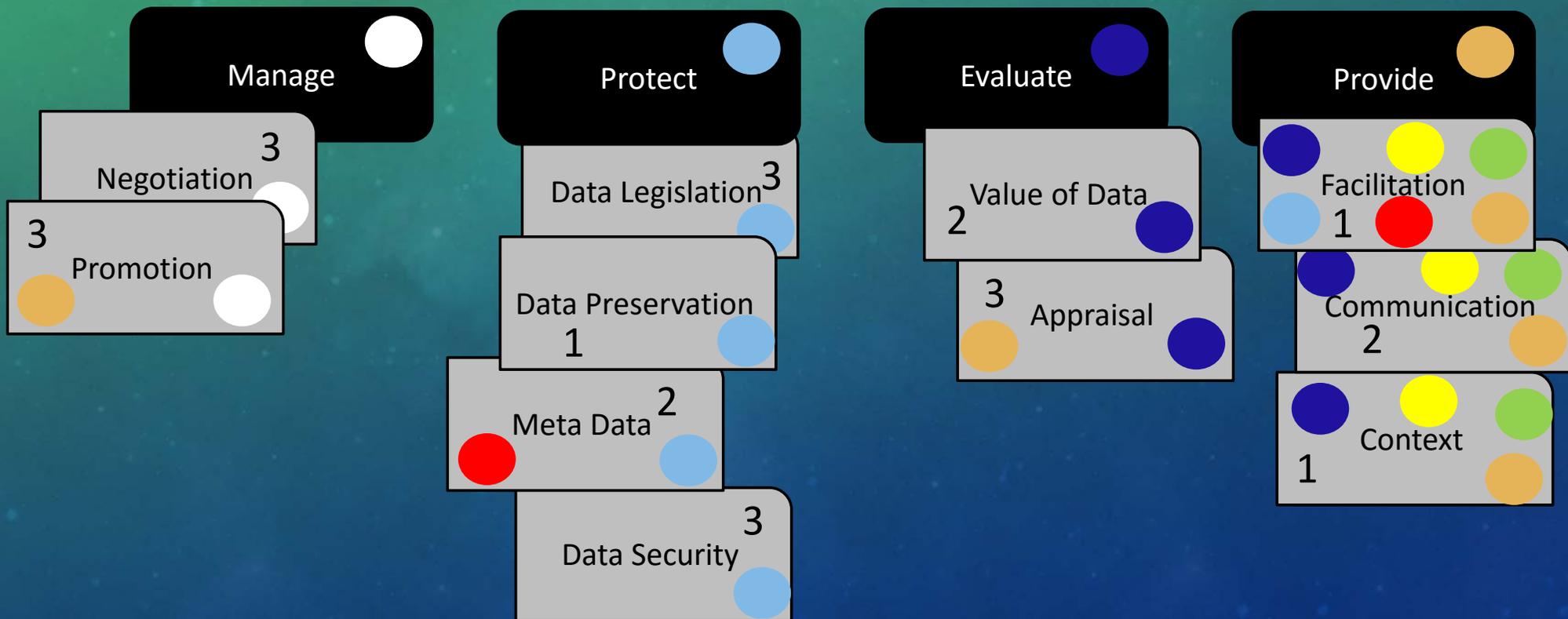
B: Understanding

C: Enabling

(This is the approach we suggest in this workshop for the sake of simplicity)



# PRIORITISATION



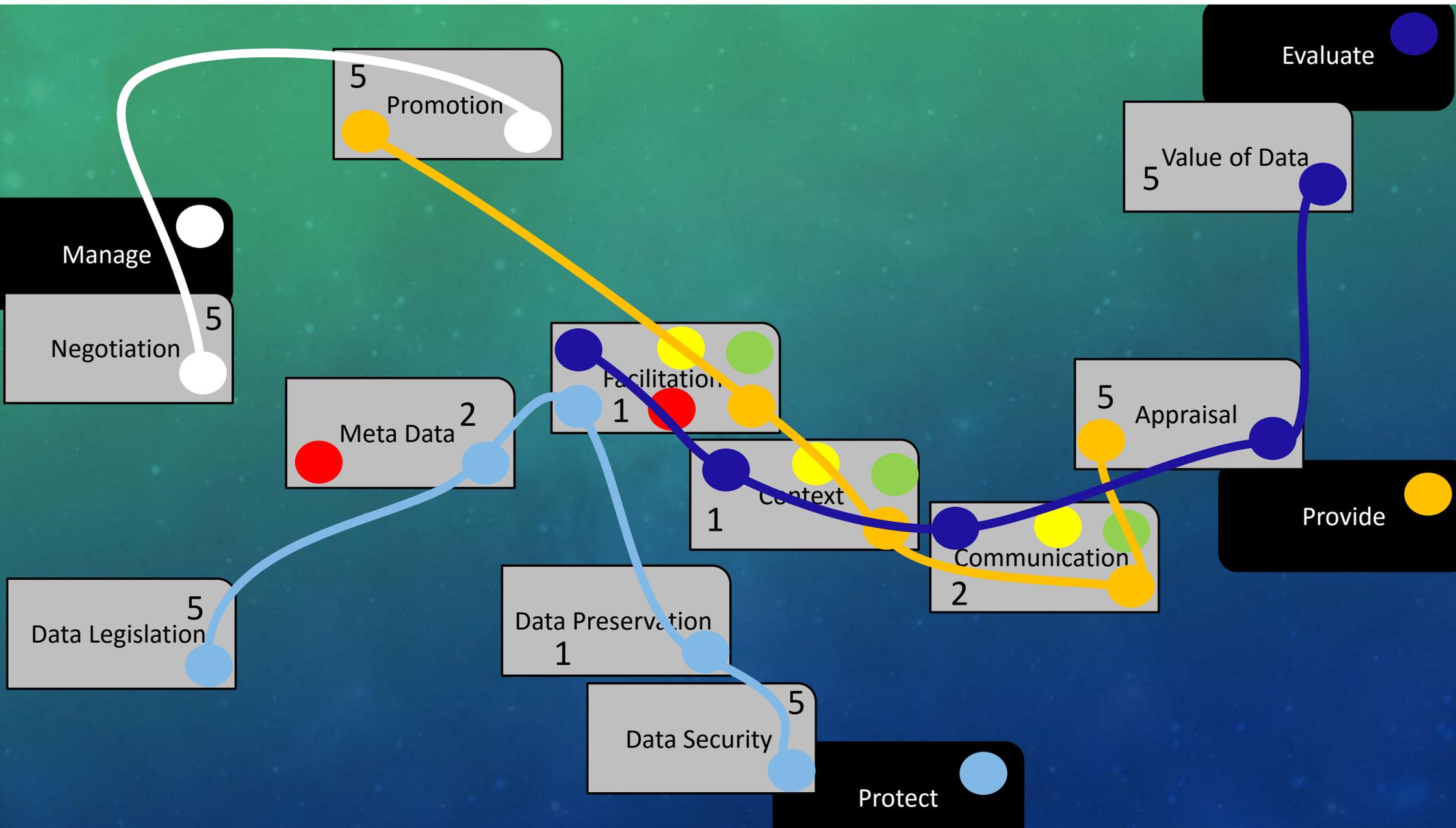
## CONSEQUENCE

1. Each card with a low number is placed in the centre!
2. Each card with more than one colour,
  - a. builds one intersection, if there is one card with these two colours,
  - b. Creates a parallel section, if several cards have the same colours and same priority,
  - c. Builds several intersections, if they are of the same colour but have different priorities.

## 5. SPATIAL ARRANGEMENT



Arrange cards and lines in an imaginary geographic space.

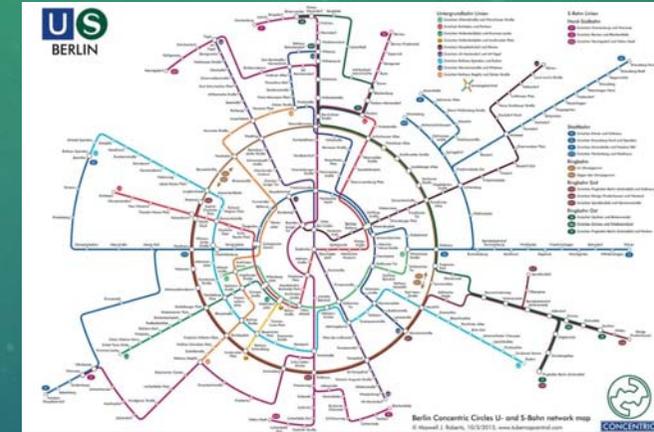


## RECOMMENDATION



Once finished, we recommend to redraw everything on paper.

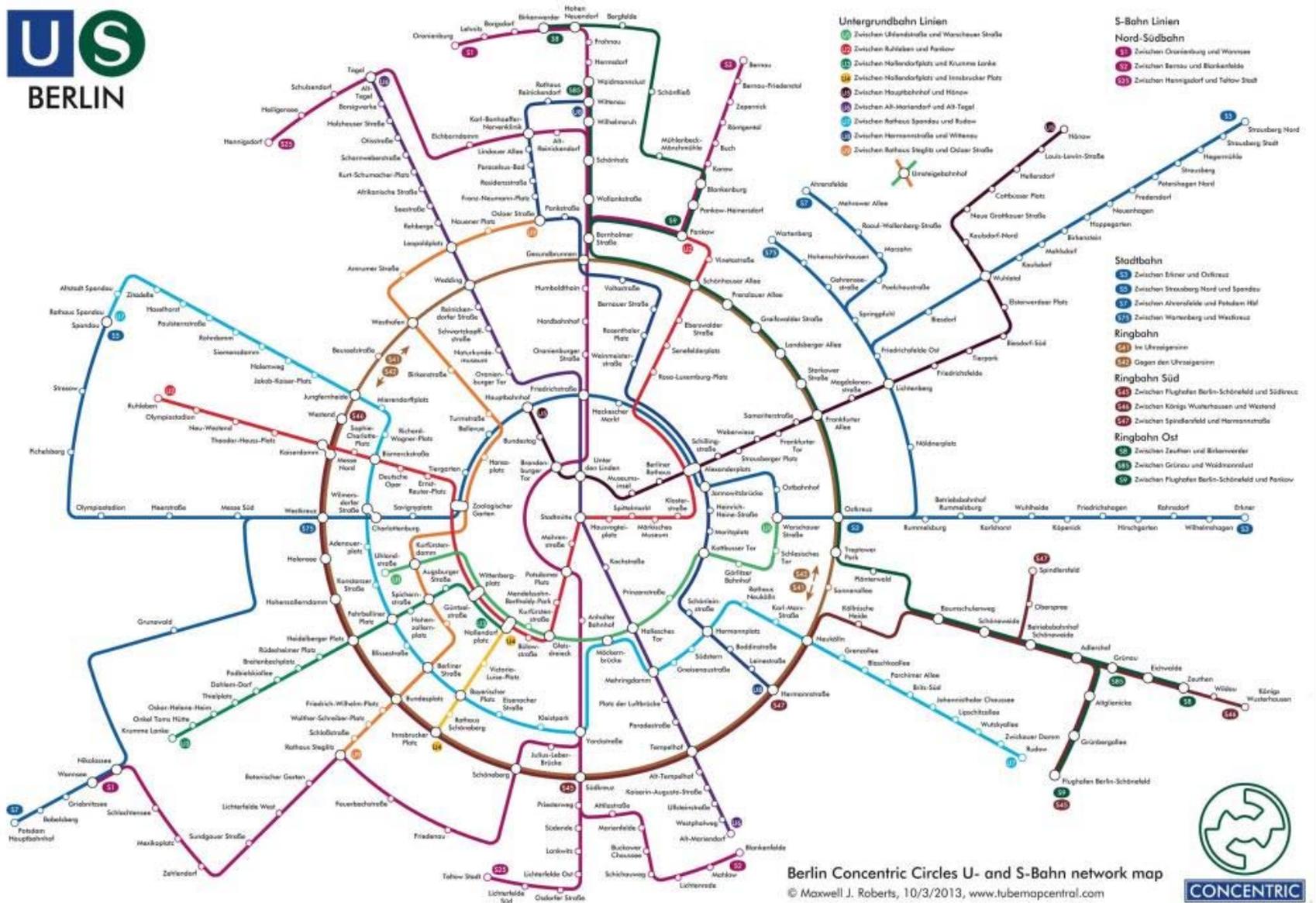
## SOME HINTS FOR THE EXPERTS



© Maxwell J. Roberts

- Order: Lines should be rather straight because it is easier for the eye to follow lines instead of zigzags.
- Coherence: Go for parallel lines, avoid angles, prefer symmetry.
- Harmony: Some combinations of colour and form are more pleasant to the eye than others, e.g. a 90 degrees angle just seems perfect to the eye, if it is only 80 degrees, it seems as if something went wrong.
- Balance: Avoid concentrations of stations which create blank areas elsewhere.

<http://www.welt.de/gesundheit/psychologie/article120467042/Ein-Psychologe-macht-S-und-U-Bahn-Plaene-rund.html>



Berlin Concentric Circles U- and S-Bahn network map  
© Maxwell J. Roberts, 10/3/2013, www.tubemapcentral.com



## EXERCISE



Create your own metro map with all the content you can imagine to teach.



*All cartoons courtesy of Jørgen Stamp,  
[Digitalbevaring.dk](http://Digitalbevaring.dk). CC BY 2.5.*

# A FEW THINGS ABOUT (GOOD) TEACHING

ELIANE BLUMER

ECOLE POLYTECHNIQUE FÉDÉRALE, LAUSANNE

LICENCE CC BY 4.0

# TEACHING AND ITS PREPARATION IS A PROCESS

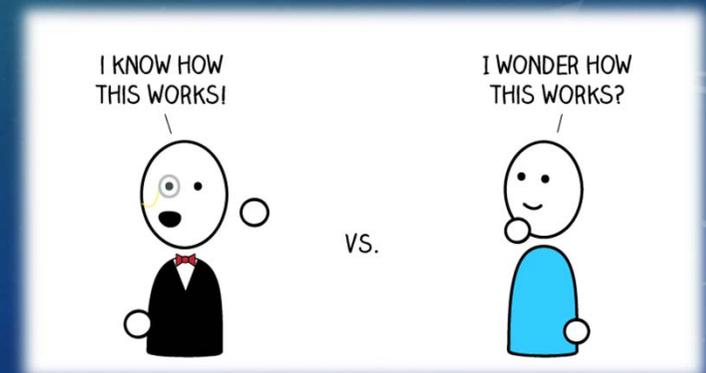


## BASIC DECISIONS

- ✓ What is the **context** of my course?
- ✓ What is my **target group**?
- ✓ What are the **learning objectives**?
- ✓ **How** do I want to **convey** my content?
- ✓ How **many sequences** does my course contain?
- ✓ How do I **evaluate** my course?

# CONTEXT

- Any prerequisites already given?
  - Time
  - Room
  - Learning methods
- Expectations
- Target Group



# TARGET GROUP

Basic  
Decisions

## Individual prerequisites

- ✓ • Cognitive
  - Learning strategies
  - Competencies
  - Intelligence
- ✓ • Emotional
  - Fears
  - Security level
- ✓ • Motivational
  - Curiosity
  - Attitudes

## Environmental prerequisites

- ✓ • Family
  - Financial situation
  - Relationships
- ✓ • Social/socio-cultural
  - Culture
  - Language
  - Status
- ✓ • Institutional
  - Accessibility of the building
  - Child care

## LEARNING OBJECTIVES

- **Who:** the subject who has to learn.
- **What:** observable behaviour, formulated with a verb.
- **How:** the goal which the subject has to achieve.
- **How many:** if necessary, quantitative indicators.

## LEARNING OBJECTIVES - EXAMPLES

- The student translates the French terms into English by heart.
- The nurse chooses the adequate treating method for every listed illness in the less time possible.
- The participant justifies his/her opinion towards current political situation with logic arguments.

# LEARNING OBJECTIVES

LOW LEVEL THINKING SKILLS			HIGH LEVEL THINKING SKILLS								
Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation						
Recall /regurgitate facts without understanding. Exhibits previously learned material by recalling facts, terms, basic concepts and answers.	To show understanding finding information from the text. Demonstrating basic understanding of facts and ideas.	To use in a new situation. Solving problems by applying acquired knowledge, facts, techniques and rules in a different way.	To examine in detail. Examining and breaking information into parts by identifying motives or causes; making inferences and finding evidence to support generalisations.	To change or create into something new. Compiling information together in a different way by combining elements in a new pattern or proposing alternative solutions.	To justify. Presenting and defending opinions by making judgements about information, validity of ideas or quality of work based on a set of criteria.						
<b>Key words:</b>	<b>Key words:</b>	<b>Key words:</b>	<b>Key words:</b>	<b>Key words:</b>	<b>Key words:</b>						
Choose Copy Define Duplicate Find How Identify Label List Listen Locate Match Memorise Name	Observe Omit Quote Read Recall Recite Recognise Record Relate Remember Repeat Reproduce Retell Select	Show Spell State Tell Trace What When Where Which Who Why Write	Ask Cite Classify Compare Contrast Demonstrate Discuss Explain Express Extend Generalise Give examples Illustrate Indicate Infer Interpret Match Observe Outline Predict Purpose Relate Rephrase Report Restate Review Show Summarise Translate	Act Administer Apply Associate Build Calculate Categorise Choose Classify Connect Construct Correlate Demonstrate Develop Dramatise Employ Experiment Relate Represent Group Identify Illustrate Interpret Interview Link Make use of Manipulate Model Organise Perform Plan Practice Show Select Simulate Solve Summarise Teach Transfer Translate Use	Analyse Appraise Arrange Assumption Breakdown Categorise Cause and effect Choose Classify Differences Discover Discriminate Dissect Distinction Distinguish Divide Establish Examine Find Focus Function Group Highlight In-depth Inference Interpret Isolate List Motive Omit Order Organise Point out Prioritize Question Rank Reason Relationships Research See Select Separate Similar to Simplify Survey Take part in Test for Theme Comparing	Adapt Add to Build Change Choose Combine Compile Compose Construct Convert Create Delete Design Develop Devise Discuss Elaborate Estimate Experiment Extend Formulate Happen Hypothesise Imagine Improve Innovate Integrate Invent Make up Maximise Minimise Model Modify Original Originate Plan Predict Produce Propose Reframe Revise Rewrite Simplify Substitute Suppose Tabulate Test Theorise Think Transform Visualise Agree Disprove Measure Dispute Effective Estimate Evaluate Explain Give reasons Good Grade How do we Importance Infer Influence Interpret Judge Justify Mark	Agree Appraise Argue Assess Award Bad Choose Compare Conclude Consider Convince Criteria Criticise Debate Decide Deduct Defend Determine Disprove Dispute Effective Estimate Evaluate Explain Give reasons Good Grade How do we Importance Infer Influence Interpret Judge Justify Mark	Dispute Dispute Effective Estimate Evaluate Explain Give reasons Good Grade How do we Importance Infer Influence Interpret Judge Justify Mark	Dispute Dispute Effective Estimate Evaluate Explain Give reasons Good Grade How do we Importance Infer Influence Interpret Judge Justify Mark	Dispute Dispute Effective Estimate Evaluate Explain Give reasons Good Grade How do we Importance Infer Influence Interpret Judge Justify Mark	
<b>Actions:</b>	<b>Outcomes:</b>	<b>Actions:</b>	<b>Outcomes:</b>	<b>Actions:</b>	<b>Outcomes:</b>	<b>Actions:</b>	<b>Outcomes:</b>	<b>Actions:</b>	<b>Outcomes:</b>	<b>Actions:</b>	<b>Outcomes:</b>
Describing Finding Identifying Listing Locating Naming Recognising Retrieving	Definition Fact Label List Quiz Reproduction Test Workbook Worksheet	Classifying Comparing Exemplifying Explaining Inferring Interpreting Paraphrasing Summarising	Collection Examples Explanation Label List Outline Quiz Show and tell Summary	Carrying out Executing Implementing Using	Demonstration Diary Illustrations Interview Journal Performance Presentation Sculpture Simulation	Attributing Deconstructing Integrating Organising Outlining Structuring	Abstract Chart Checklist Database Graph Mobile Report Spread sheet Survey	Constructing Designing Devising Inventing Making Planning Producing	Advertisement Film Media product New game Painting Plan Project Song Story	Attributing Checking Deconstructing Integrating Organising Outlining Structuring	Abstract Chart Checklist Database Graph Mobile Report Spread sheet Survey
<b>Questions:</b>	<b>Questions:</b>	<b>Questions:</b>	<b>Questions:</b>	<b>Questions:</b>	<b>Questions:</b>	<b>Questions:</b>	<b>Questions:</b>	<b>Questions:</b>	<b>Questions:</b>	<b>Questions:</b>	<b>Questions:</b>
Can you list three ...? Can you recall ...? Can you select ...? How did _____ happen? How is ...? How would you describe ...? How would you explain ...? How would you show ...? What is ...? When did _____ happen? Where is ...? Which one ...? Who were the main ...? Why did ...?	Can you explain what is happening ... what is meant ...? How would you classify the type of ...? How would you compare ...?contrast ...? How would you rephrase the meaning ...? How would you summarise ...? What can you say about ...? What facts or ideas show ...? What is the main idea of ...? Which is the best answer ...? Which statements support ...? Will you state or interpret in your own words ...?	How would you use...? What examples can you find to ...? How would you solve _____ using what you have learned ...? How would you organise _____ to show ...? How would you show your understanding of ...? What approach would you use to...? How would you apply what you learned to develop ...? What other way would you plan to ...? What would result if ...? Can you make use of the facts to ...? What elements would you choose to change ...? What facts would you select to show ...? What questions would you ask in an interview with ...?	What are the parts or features of ...? How is _____ related to ...? Why do you think ...? What is the theme ...? What motive is there ...? Can you list the parts ...? What inference can you make ...? What conclusions can you draw ...? How would you classify ...? How would you categorise ...? Can you identify the difference parts ...? What evidence can you find ...? What is the relationship between ...? Can you make a distinction between ...? What is the function of ...? What ideas justify ...?	What changes would you make to solve...? How would you improve ...? What would happen if...? Can you elaborate on the reason...? Can you propose an alternative...? Can you invent...? How would you adapt _____ to create a different...? How could you change (modify) the plot (plan)...? What could be done to minimise (maximise)...? What way would you design...? Suppose you could _____ what would you do...? How would you test...? Can you formulate a theory for...? Can you predict the outcome if...? How would you estimate the results for...? What facts can you compile...? Can you construct a model that would change...? Can you think of an original way for the ...?	Do you agree with the actions/outcomes...? What is your opinion...? How would you prove/disprove...? Can you assess the value/importance of...? Would it be better if...? Why did they (the character) choose...? What would you recommend...? How would you rate the...? What would you cite to defend the actions...? How would you evaluate ...? How could you determine...? What choice would you have made...? What would you select...? How would you prioritise...? What judgement would you make about...? Based on what you know, how would you explain...? What information would you use to support the view...? How would you justify...? What data was used to make the conclusion...?						
<b>Bloom's Taxonomy: Teacher Planning Kit</b>											

# COMPETENCES



Basic  
Decisions

# TEACHING METHODS

- [Teaching Methods and approaches](#)
- [Interactive teaching techniques](#)
- [Teaching resources](#)
- [Best teaching blogs of 2017](#)
- [A few OER resources](#)



# DRAFT AND DETAIL PLAN

## Detail Plan - Train the Trainer Workshop: How do I create a course in research data management? 22. Feb. 2018

Time	What	Documentation	Referees	Comments
09.00	Ready to Go			
09h00-13h15	Vorstellung Dozenten und Überblick	Karten Präsentation 00 / Resultate Umfrage	EB RS	Ice-Breaker Wissen, was auf einen zukommt
09h15-10h00	T & P: „Lunch Time Lectures“ RDM	Präsentation 0 <b>Material:</b> - Puzzle - Übungsblatt Schritte	EB	Beispiel für einen Kurs Gruppenbildung (nach Heterogenität)
10h00-10h20	T: Didaktik 1	Präsentation 1 <b>Material:</b> - Poster klein (leer) 1x pro TN	RS	Didaktische Erläuterung des Kurses
10h20-10h30	Reserve			
10h30-11h00	Pause			
11h00-11h20	T: Forschungsdatenkompetenz	Präsentation 2 Kein Material	RS	Aspekte der Forschungsdatenkompetenz
11h20-12h10	P: Card Sorting	Präsentation 3 Übung: Card Sorting <b>Material:</b> - je Gruppe Kernkompetenzen auf Karte und 30 leere Karten - Flipchart, Pattafix, Farben, Zahlen	EB, RS, (heterogene Gruppen)	Praktische Umsetzung des vorher Gesagten, erster Schritt zur Darstellung von Kursinhalten
12h10-12h30	Vernissage Metromaps	Metromaps, Magnete	alle,	Präsentation der unterschiedlichen Metromaps (5-7 min à Map)
12h30-13h00	Lunch			
Zeit	Was	Unterlagen	Referenten	Kommentare zu Methodik und Lernzielen

# IMPLEMENTATION

Implementation



<http://capturedclutter.com/paper-management-organization-atlanta/>

# DYNAMICS IN GROUPS

Realization

## Forming

Team acquaints and establishes ground rules. Formalities are preserved and members are treated as strangers.



## Storming

Members start to communicate their feelings but still view themselves as individuals rather than part of the team. They resist control by group leaders and show hostility.



## Norming

People feel part of the team and realize that they can achieve work if they accept other viewpoints.



## Performing

The team works in an open and trusting atmosphere where flexibility is the key and hierarchy is of little importance.



## Adjourning

The team conducts an assessment of the year and implements a plan for transitioning roles and recognizing members' contributions.



# COMMUNICATION

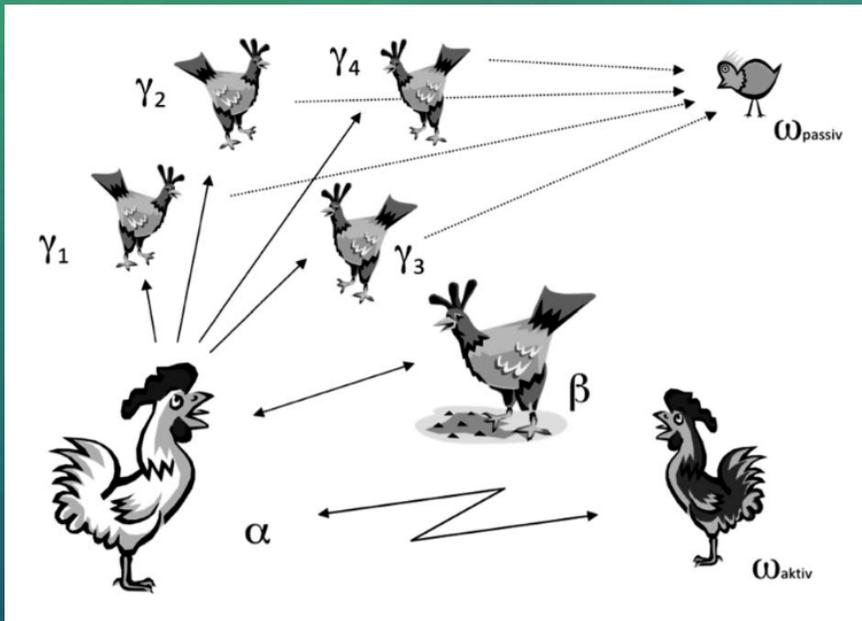


- Be clear
- Do paraphrase
- Be respectful
- Do tailor to audience
- Do face-to-face
- Don't give more attention to something else than to your participants
- Don't overuse abbreviations
- Don't monopolize the conversation
- Don't react or get upset
- Don't interrupt

For further information: <http://alfabravo.com/2007/11/presentation-skills-dos-donts/>

Based on: <https://www.bastiansolutions.com/blog/index.php/2013/02/15/5-dos-and-donts-of-communication/>

# DIFFICULT SITUATIONS



Rosa-Luxemburg Stiftung. (2009) Arbeit mit Gruppen – Arbeitsmaterial. S. 12.  
More information: <https://www.uq.edu.au/tutors/difficult-classroom-situations>  
More information: [http://www.icab.be/articles/methods\\_overview.html](http://www.icab.be/articles/methods_overview.html)

# FEEDBACK



I didn't like it.

Connections

I want to get rid of.

This was missed out.



I liked it.

# ANY QUESTIONS?

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# RESEARCH DATA METRO MAP LINEARISATION AND SCHEDULING



*All cartoons courtesy of Jørgen Stamp,  
[Digitalbevaring.dk](http://Digitalbevaring.dk). CC BY 2.5.*

RENÉ SCHNEIDER

HES-SO, HAUTE ECOLE DE GESTION, GENEVA

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## LINEARISATION



So far you have a two-dimensional metro map.

But teaching is bound to space and time.

Space is three-dimensional but the arrow of time itself  
is **linear** and **irreversible**.

Hence, teaching is a matter of linearisation.



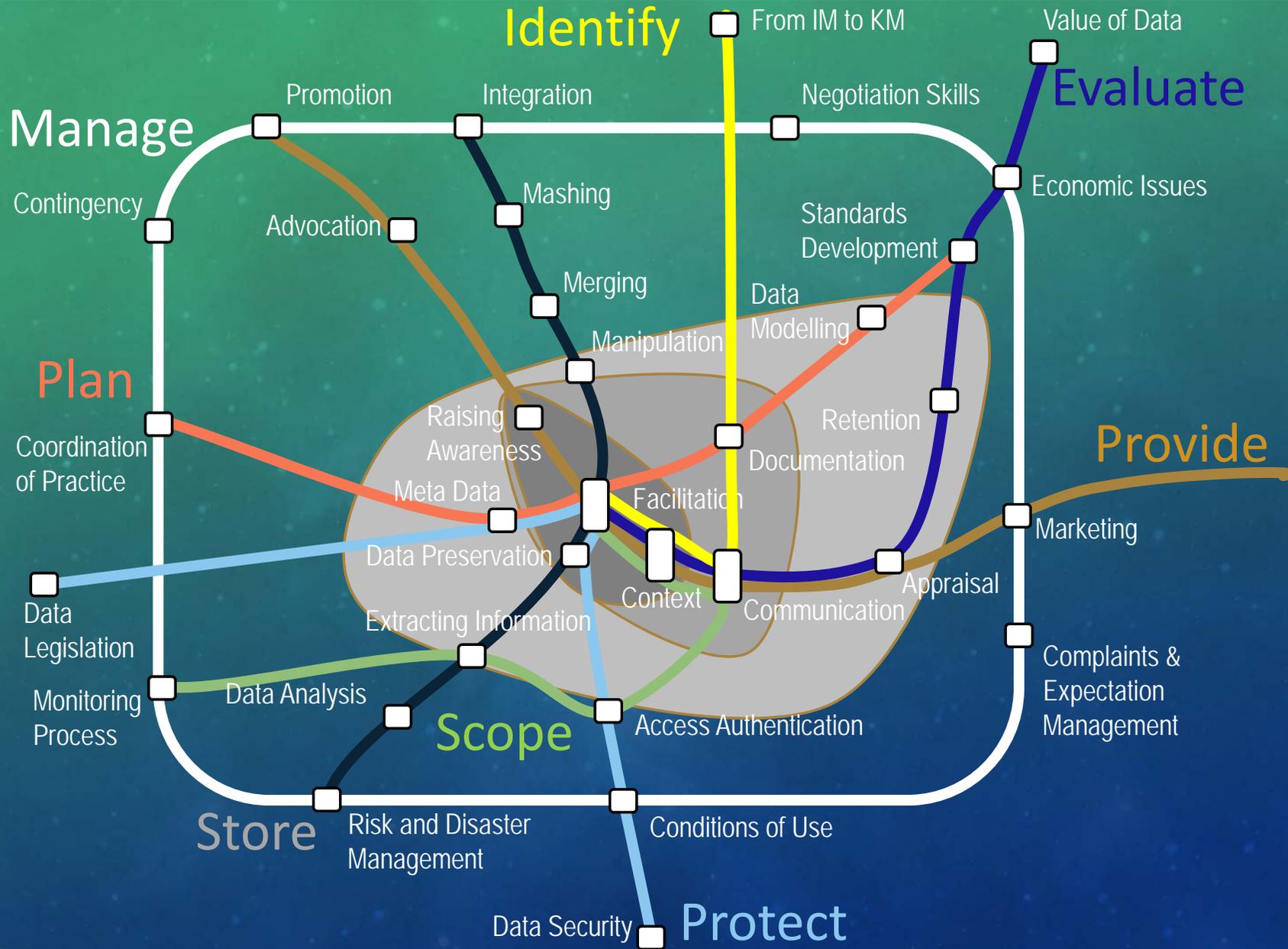
# 2 HOURS

Stop	Time
Raising Awareness	5 min
Context	45 min
Facilitation	40 min
Data Preservation	50 min



# ONE-DAY WORKSHOP

Stop	Time
Raising Awareness	1 hour
Facilitation	
Context	
Communication	
Documentation	2 hours
Data Preservation	4 hours
Communication	1 hour



# FULL COURSE (30 HOURS)

Stop	Time
Context	2 hours
Raising Awareness	
Facilitation*	
Communication	2 hours
Extraction Information	4 hours
Documentation	4 hours

Stop	Time
Data Modelling	4 hours
Data Documentation	4 hours
Manipulation	2 units
Data Preservation	6 hours
Appraisal	2 hours
Retention	

\* means, you will always come back to that topic, in our case Facilitation

## EXERCISE - LINEARISATION



1. Take your map.
2. Choose the stops that you will pass across according to the duration of your course and/or the level of your students.
3. Define the teaching goals according to these constraints.

This will be the first step to your train (course) schedule.



*All cartoons courtesy of Jørgen Stamp,  
[Digitalbevaring.dk](http://Digitalbevaring.dk). CC BY 2.5.*

# TOUR D'HORIZON

ELIANE BLUMER

ECOLE POLYTECHNIQUE FÉDÉRALE, LAUSANNE

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## A FEW EXAMPLES...

- I. Teaching format
- II. Target audience
- III. Objectives/competences
- IV. Duration
- V. Other

# MOOC « RESEARCH DATA MANAGEMENT AND SHARING »

<b>Teaching format</b>	Self-study, online
<b>Target audience</b>	Open for all, Beginners
<b>Objectives</b>	Basics, Planning, Organizing, Archiving, Sharing
<b>Duration</b>	5 weeks or self-paced
<b>Other</b>	Certificate if wanted

## WEEK 1

### Understanding Research Data

This week introduces multiple types of research data in an array of contexts as well as important data management concepts including metadata and the research data lifecycle. We will also define the concept of data management, identify the roles and responsibi... [More](#)

 9 videos, 2 readings [expand](#)

 **Graded:** Understanding Research Data

## WEEK 2

### Data Management Planning

This week provides an overview of Data Management Plans (DMPs) including the components of good DMPs, the DMP policies of several funding agencies, and information on data management planning tools.

 4 videos, 1 reading [expand](#)

 **Graded:** Data Management Planning

# ESSENTIAL 4 DATA SUPPORT

<b>Teaching format</b>	a.) self-study (free) b.) self-study with registration c.) course with certificate (250Euro)
<b>Target audience</b>	Information Specialists
<b>Objectives</b>	Basics, Planning, Organizing, Archiving, Storing, Archiving, Sharing, Managing
<b>Duration</b>	2 days + ca. 25h self-study
<b>Other</b>	English

The screenshot shows the rdnl (research data netherlands) website. The header includes the logo and navigation links: ABOUT THE COURSE, START THE COURSE, FORUM, and LOGIN. The main content area is titled 'About Essentials 4 Data Support' and features a sidebar menu with options: 'About the course', 'Three ways', 'Terms of use', and 'Registration course'. Below the menu is a 'Mission' section with a circular image of hands holding a ball of binary code (0s and 1s). The mission text states: 'The Essentials 4 Data Support course... data supporters and coordination bet... support researchers in storing, managin...'

# DORANUM

<b>Teaching format</b>	Self-study
<b>Target audience</b>	Information Specialists and future trainers
<b>Objectives</b>	Basics, Planning, Organizing, Archiving, Storing, Archiving, Sharing, Managing
<b>Duration</b>	2 days + ca. 25h self-study
<b>Other</b>	Only in French



ACCUEIL ACTUALITÉS THÉMATIQUES RESSOURCES A IMPRIMER LE PROJET CONTACT

## Enjeux et bénéfices

### En bref

Le partage des données va de pair avec une bonne gestion des données. En effet, pour pouvoir être diffusées, les données doivent avoir été au préalable décrites, documentées, conservées dans un format réutilisable, etc. Mais pourquoi partager ses données ? Quels sont les enjeux pour les acteurs de la recherche, la science en général et la société ?

Consultez les sujets développés pour cette thématique et n'hésitez pas à laisser vos commentaires sur les pages des produits !

### Testez vos connaissances !

QUESTION 1/4



# ANDS : 23 THINGS

<b>Teaching format</b>	Self-study, online
<b>Target audience</b>	Information Specialists in Australia
<b>Objectives</b>	Entire research life-cycle
<b>Duration</b>	Ca. 23 weeks
<b>Other</b>	3 levels

Resources
10 medical and health Things >
Things 1 to 23 ▾
Thing 1: Getting started with research data
Thing 2: Issues in research data management
Thing 3: Data in the research lifecycle
Thing 4: Data discovery
Thing 5: Data sharing
Thing 6: Long-lived data: curation & preservation

## Ready, set, data

Kick off your research data journey with some data basics.



- [Thing 1: Start](#)
- [Thing 2: RDM Issues](#)
- [Thing 3: Lifecycle](#)

## Thing 1: Getting started with research data

Research data comes in many shapes and sizes. Kick off your stories.

- **Getting started** is for you if you are just beginning to learn
- **Learn more** is if you know a bit but want to know more
- **Challenge me** is often more technical or assumes that you can manage and wrangle research data.

**Do I have to do them all?** No - you can pick'n'mix a different set of things you can do as much or as little as you want to do, or need to know.

# DIGITAL CURATION MSC (ROBERT GORDON UNIVERSITY)

<b>Teaching format</b>	Master of science, online
<b>Target audience</b>	Information Specialists
<b>Objectives</b>	Basics, Planning, Storing, Curating, Managing, Archiving
<b>Duration</b>	3 semester
<b>Other</b>	Expensive



The image shows a banner for the Digital Curation MSc program at Robert Gordon University Aberdeen. At the top left is the RGU logo and the text 'ROBERT GORDON UNIVERSITY ABERDEEN'. Below this is a navigation menu with five items: 'Areas of Study' (highlighted in purple), 'Future Students', 'Student Life', 'Alumni & Giving', and 'Research'. The main part of the banner features a photograph of a young man and woman smiling and looking at a computer screen. At the bottom, a purple bar contains the text 'DIGITAL CURATION MSc' in white.

# RESEARCHDATAMANAGEMENT.CH

<b>Teaching format</b>	Self-study, online
<b>Target audience</b>	Information Specialists in Switzerland
<b>Objectives</b>	Entire research data life-cycle
<b>Duration</b>	23 weeks
<b>Other</b>	3 skill levels

The screenshot shows the homepage of the Research Data Management E-Learning Platform. The header includes the logo for 'Train2Dacar' (a stylized 'TD' with a network diagram) and the text 'RESEARCH DATA MANAGEMENT E-LEARNING PLATFORM'. A navigation menu on the left lists 'HOME', 'Basismodule', 'Vertiefungsmodule', 'Didaktikmodul', and 'Über uns'. The main content area is titled 'Forschungsdatenmanagement' and includes a welcome message: 'Willkommen auf der E-learning-Webseite zum Thema Forschungsdatenmanagement der HTW Chur und der HEG Genf.' Below this, there are six module cards arranged in two rows. The top row contains 'BASIS Modul 1 Grundlagen', 'BASIS Modul 2 Lebenszyklus', and 'BASIS Modul 3 Nachnutzung'. The bottom row contains 'BASIS Modul 4', 'VERTIEFUNG Modul 5', and 'VERTIEFUNG Modul 6'. The 'BASIS' modules are blue, and the 'VERTIEFUNG' modules are green.

## TO RESUME

- A lot of different formats
  - However, strong concentration on online
- Most widely expanded : English resources
- Data Analysis is often left out

Fachinotti, Elena; Gozzelino, Eva, Lonati, Sara: Les bibliothèques scientifiques et les données de la recherche : défis et enjeux; (Travail de recherche réalisé dans le cadre du Master of Science en Information documentaire HES à la Haute école de gestion de Genève (HEG-GE), 2016).

ANY QUESTIONS?

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## DRAFT AND DETAIL PLAN

1. Choose one stop of your metro-line course.
2. Fill in the draft and detail plan template.
3. Give a short presentation of 3min.



# DRAFT AND DETAIL PLAN

## Formular für die Feinplanung

Zeit	Inhalte / Themen	Ablauf, Methoden

## BASIC DECISIONS

Answer once more the following questions and do write down the answers on a sheet of paper.

- ✓ What is the **context** of my course?
- ✓ What is my **target group**?
- ✓ What are the **learning objectives**?
- ✓ **How** do I want to **convey** my content?
- ✓ How **many sequences** does my course contain?
- ✓ How do I **evaluate** my course?





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# TRAIN THE TRAINER

## WHAT WE DID AND WHY WE DID IT

RENÉ SCHNEIDER

HES-SO, HAUTE ECOLE DE GESTION, GENEVA

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A REVIEW FROM THE META LEVEL

μετά

Everything we did was driven by a purpose.

# 0. SURVEY PRIOR TO THE COURSE

Get in contact.

Get a first idea.

Show that you are prepared.

# I. PRESENTATION AS DATA SET

## Ice Breaker

A different approach for introducing oneself and creating groups.

## II. LUNCH TIME LECTURE

The essence of the whole day «en miniature».

## II. DIDACTICS I

Application of the 20-minute rule.

Basic theoretical input.

## II. HANDS ON: METRO MAP

Put theory into practice.

Group work.

Make people come together, change out ideas and work towards a goal, even if the result is far from being perfect or terminated.

Card sorting helps to clear your mind and to communicate your point of view to others.

## III. DIDACTICS II

Some more theory.

Guidance to come to more concrete results.

## IV. HANDS ON II

From two dimensions to linear sequencing.

Group work continued with a new mix.

(Some groups work, others don't.

Give the latter the chance to re-try in other constellations.

## V. MONITORING

Show different sources for inspiration.

## VI. HANDS ON III

From linear sequencing to punctual refinement.

Make people present the work they did.

## VII. WRAP-UP AND EVALUATION

Space for all that has to be said and done before leaving.

(From both sides!)



# FINAL QUESTIONS?

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