



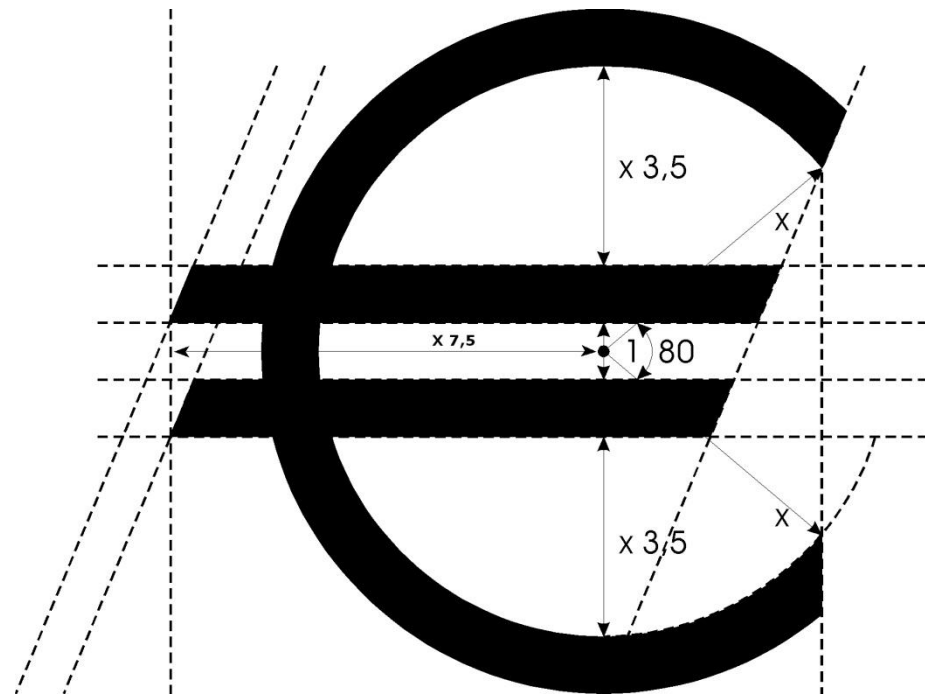
EUDAT Cost Model Development

Workshop at 3rd EUDAT Conference – Amsterdam 2014



Why do we need a cost model?

- Who pays?
- For what?
- To whom?
- How long?
- For whom?
- Why?
- **How much?**



TRACK 3 - POLICY AND SUSTAINABILITY ISSUES

3.3 COST & FUNDING MODELS



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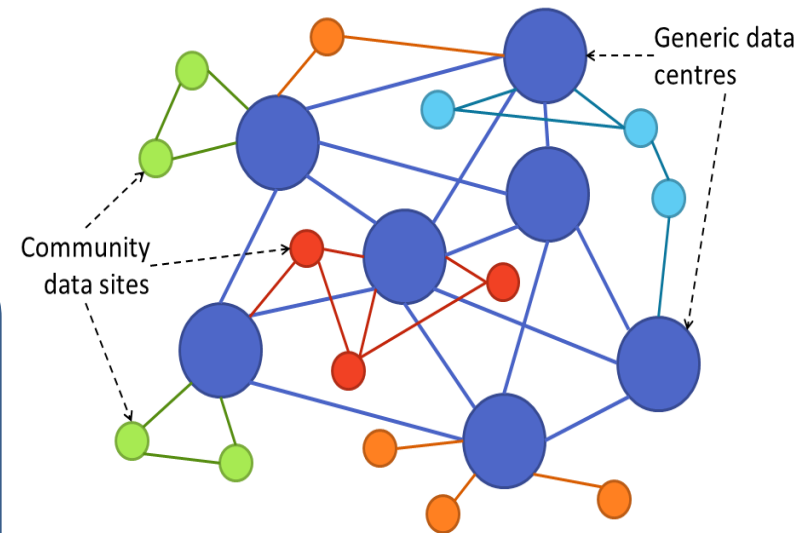
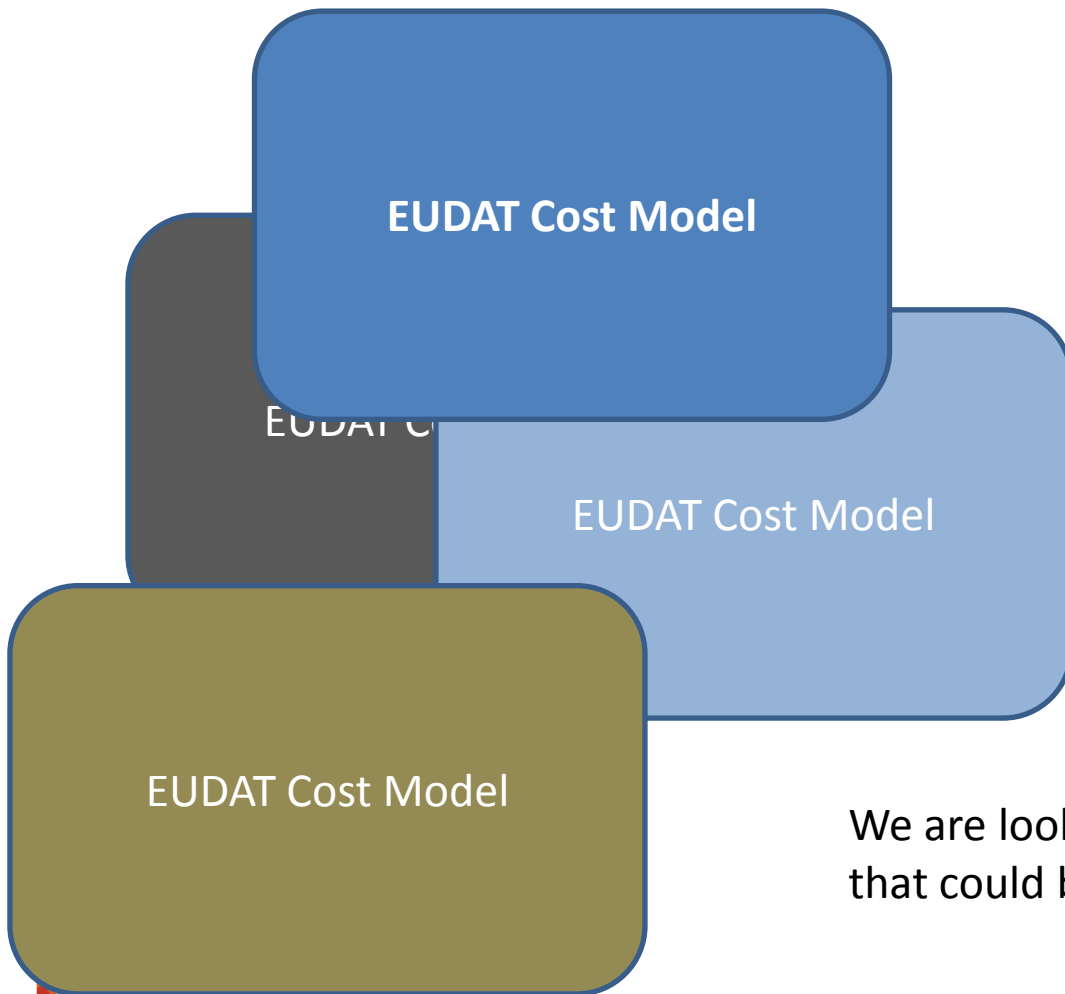


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The Objective of our Cost Model

- **To define the cost of operating a EUDAT site**
(i.e. a data centre providing 'EUDAT service')
- A tool for comparing these figures for various EUDAT sites
- To determine the overall cost of these services
- To map the cost of an individual site onto a single model (if this is possible)
- To define a funding model for EUDAT and also develop its pricing and business model (future tasks)

The Positioning of our cost model



We are looking for a 'template' (or templates) that could be applied to various sites.

Cost Model – why ?



CSC



SARA

COMPLEXITY - TB cost will be different depending on how each organisation calculates it or how the service is provided.

Complexity Elements – Service Production

- Direct costs (HW/SW)
- Shared costs (e.g. datacentre premises)
 - Site (or cost centre) specific calculation principles
- Indirect costs
 - Site specific calculation principles

Complexity Elements – Accounting Principles

- What is the current value of an asset ?
- Occupancy (filling factor)
 - What is the starting point for cost analysis ?
 - How is the unused capacity taken into account ?
- Price erosion

Challenge - Complexity

- A task that might seem easy for a single IT service provider seems daunting for research organisations. It is obviously more difficult for a federation of EUDAT data centres providing common services.
- **How do we define a common cost model(s) for each EUDAT service**, where each data centre has different ways of calculating costs, and where each data centre has (slightly) differences in service provisioning and service levels?
- **Is it possible at all to put a 'cost' on a EUDAT service?** Can we determine the cost of the exactly same service?

Open Questions

- **What is the BASE COST UNIT?**
- In what unit are we determining the cost?
What are we trying to measure – i.e. how much data and for how long? E.g.:
- **Euro/TB/Year?**
- **For what period of time do we need to know the above – 5 years out, 3 years**

Open Questions

- **What is the SERVICE?**
- How do we specify the service and service level? Who provides it to whom (site to EUDAT or site to user)? What does it comprise of and what other/support elements does it include?
- Can we determine a cost model or cost models accounting for various sites and what are the differences (e.g. support hours, tape + disk).
- Do we need one cost model for all services or will it differ for the different services?
- How do we handle internal procedures for e.g. depreciation, interest rates – what is required as input in general?). What policy is needed for that?

Open Questions

- **Direct cost elements:**
 - Hardware depreciation costs
 - Hardware maintenance costs
 - Software depreciation costs
 - Software maintenance costs
 - Datacentre costs
 - Electricity costs
 - Costs for network
 - Direct personnel costs
 - User training
- **Shared indirect cost by different services**
 - Helpdesk
 - Back-up
 - Service Monitoring
- **Other indirect costs**
 - Other personnel cost

Open Questions

- **What are the SERVICE LEVELS?**
- For example, what service hours will we cover? What response time will be applied?
- **INDIRECT COST?**
- How to account for the diversity of the various models in respect to this? What are the components?) TB cost will be different depending now how these costs are assigned?
- **COLLECTIVE/AVERAGE UNIT COST**
- Is it possible to define a collective/average cost and if so how do we do that, reflecting the diversity? This question is closely related to the future EUDAT business model.
- **COST VARIABILITY**
- How do the costs vary over time, e.g.? This discussion will continue in the exercise of building a Business Model.
- **OCCUPANCY/UTILISATION**
- How do we account for costs for utilization of the service? How do we account for unused capacity?

Open Questions

- **Other**
 - **Current value of an asset**
 - **Price Erosion**

PILOT

- **PILOT**
- This is to be completed by SURF/SARA and CSC in order to verify these assumptions. This will provide the first answer the question whether it is possible to achieve a uniform cost model.



Questions...