



4th GO-ESSP community workshop
Data Portal implementation at the Met Office

Jeremy Tandy

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'Organic' un-governed growth has lead to:

- *complex, incoherent, undocumented IT systems*
- *striking resemblance to 'spaghetti and meatballs'*

The **'information silo'** results in:

- *inconsistent, locally processed data*
- *proliferation of data & data access mechanisms*
- *poor access to 'enterprise' information assets*

The **business drivers** for change are:

- *cost efficiency*
- *improved agility*
- *improved consistency*

The **'LDS' (Logical Data Store (Server?))** is the means by which these issues will be addressed

The LDS is not a panacea (it's a data portal)



Providing **shared** access to data / assets / resources cannot be achieved without effort:

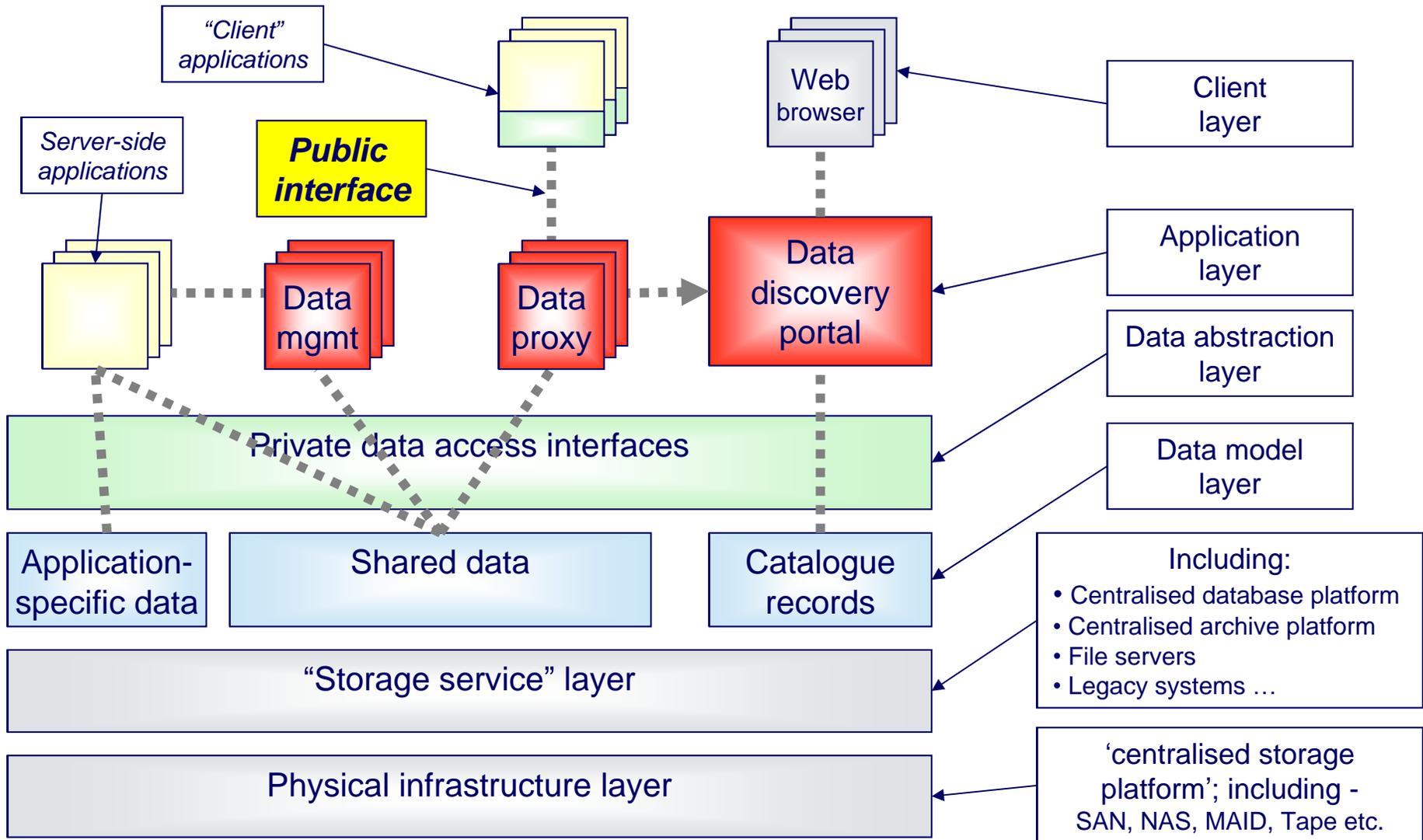
- *how will users find the data?*
- *how will users access the data?*

The **LDS** will ...

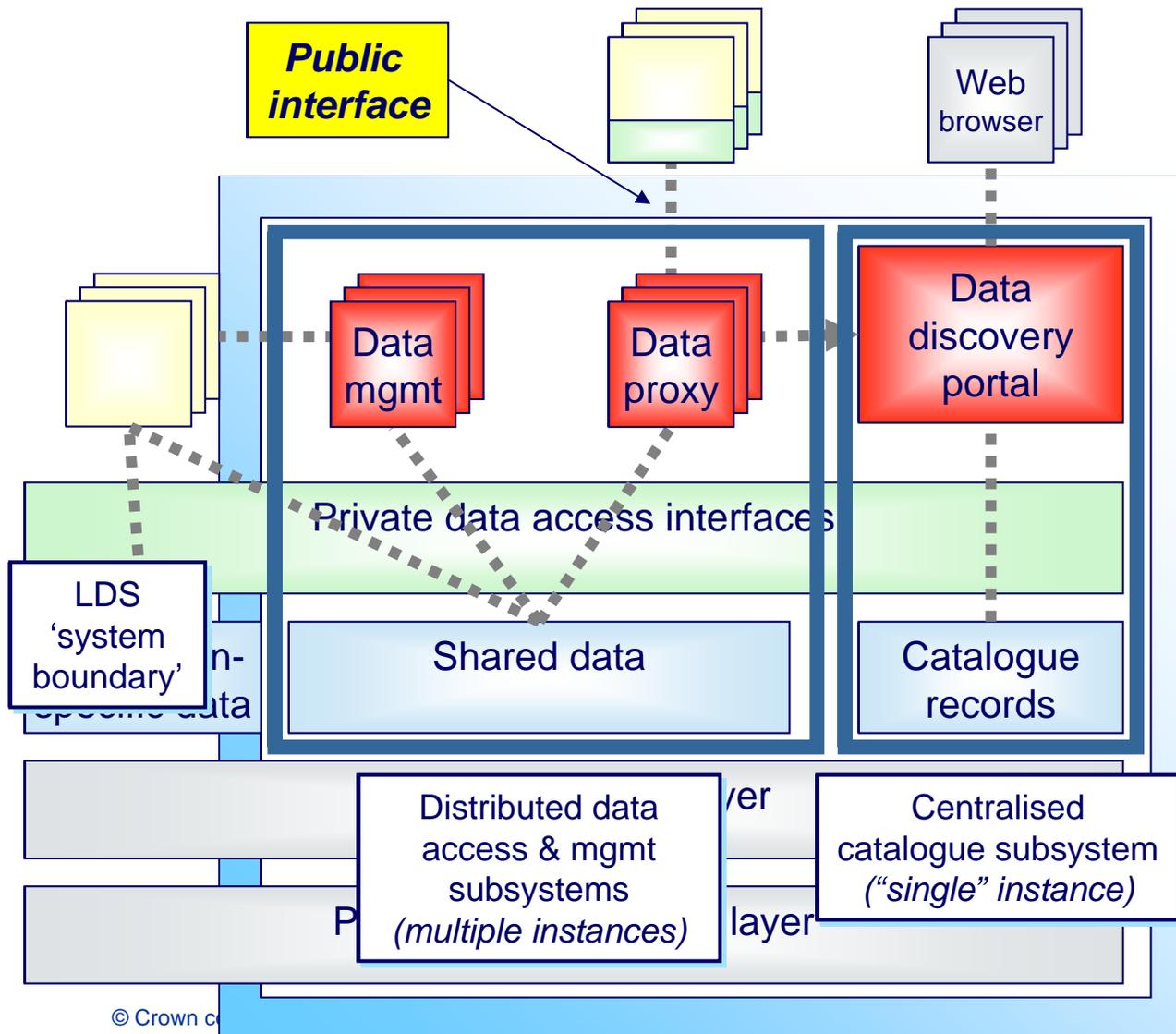
- *expose resources from underlying repositories*
- *provide metadata to describe the exposed resources*
- *list the available resources in a catalogue*
- *provide a portal to browse & search the catalogue*
- *provide services to access specified resources*

The Logical Data Store is a Data Portal

LDS “Component Map”



Subsystems & key concepts



Key concepts:

Modus operandi:

- search & browse via portal
- submit requests to proxy

Resources NOT services

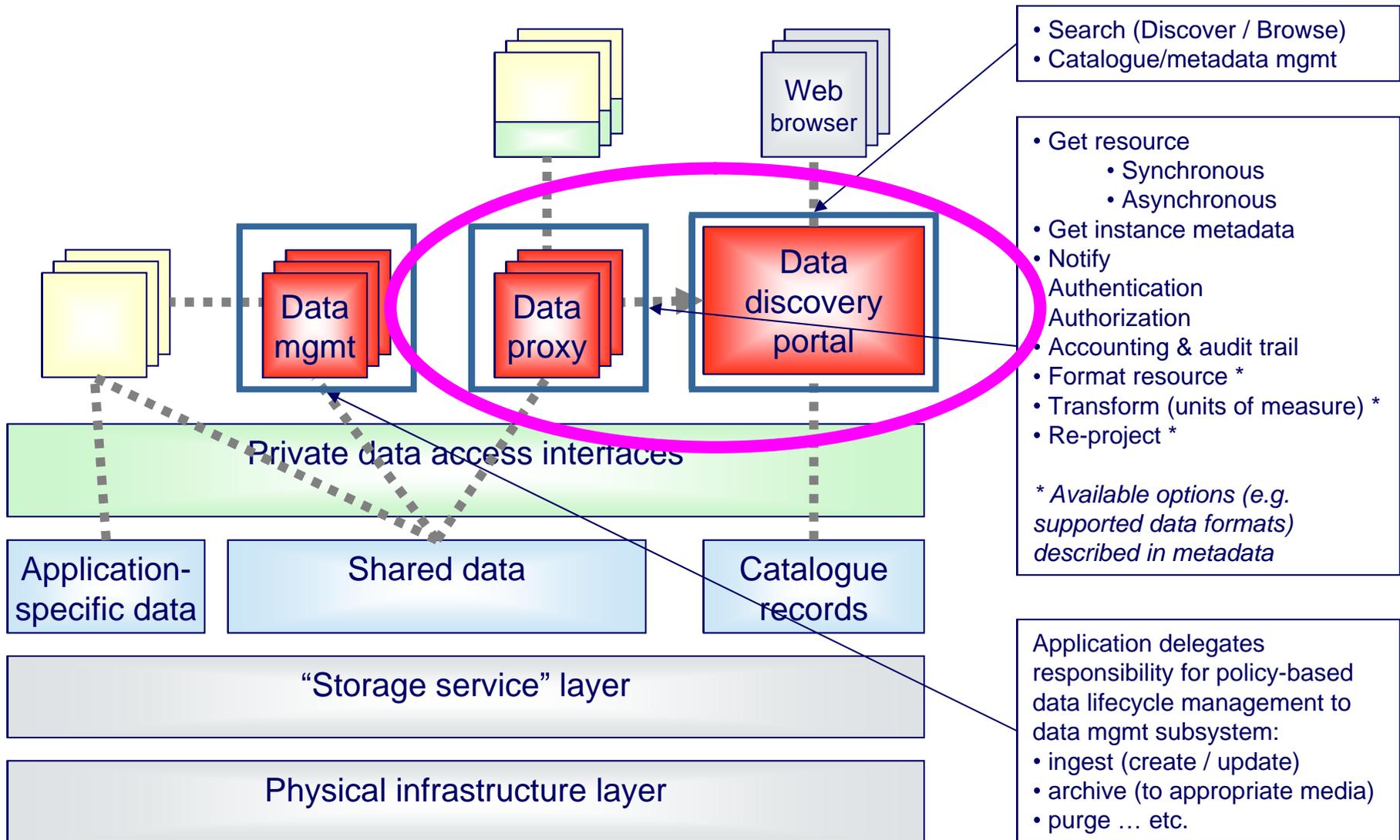
Distributed 'virtual' database

- opaque implementation
- distributed deployment
- scalable

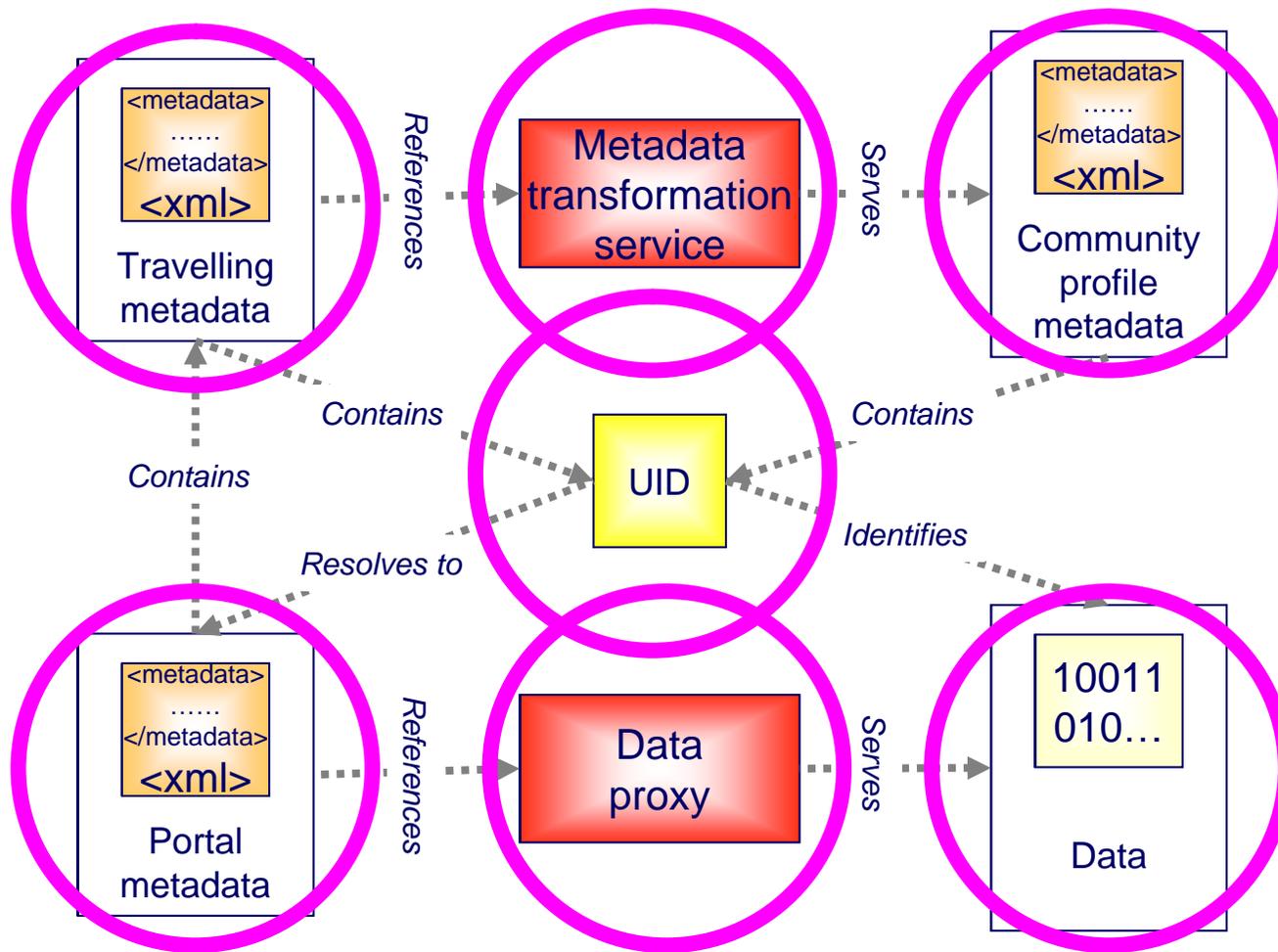
Simple public interface

- sweet-spot for complexity
- power-users go elsewhere
- accessible to client apps
- fault tolerant
- internet-like?
- HTTP
- 'document' oriented req.
- RESTful or SOAPy?

Services provided by the LDS & where they reside



Relationships between data and metadata



This looks complex! Why?

Unique Identifier:

- hash-based identifier
- URI resolves to metadata

Travelling metadata:

- flat & concise ...
- derived from Core profile
- transforms to Core profile

Core profile metadata:

- profile of ISO19115
- re-cast in GML / CSML?

Portal metadata:

- operational metadata
- UID resolves to this page
- acts like a registry

Data access service:

- HTTP interface
- document-centric

Stylesheets ...

Many parallel activities – hopefully no divergence!



JEDDS

- *JEDDS is an operational prototype of the mechanism by which we intend to deliver our dynamic data into the military community. It exploits ‘contemporary’ technologies such as Web Services, SOAP, XML and Oracle 10g spatial*
- *The prototype JEDDS has been successfully deployed at CWID’05 with a live data feed from Exeter via secure interfaces*
- *Thales UK integrated dynamic met data from JEDDS into their systems in less than two days. From their commercial position, JEDDS is vital to the exchange of Environmental Information (EI) across the whole of the MoD*

SIMDAT

- *EU co-funded project to promote the use of GRID technology*
- *Collaboration with ECMWF, DWD, MeteoFrance & EUMETSAT to deliver a ‘meteorological’ scenario: development of a ‘vGIS’ ...*

DEWS

- *DTI co-funded collaborative project ‘developing environmental web services’*
- *Applying leading edge technology in real scenarios; health & marine SAR*
- *Academic (BADC, ESSC) & commercial (Lost Wax, BMT, IBM) partners*

FLUME

- *‘Flexible Unified Model Environment’*
- *Requires metadata catalogue & data portal implementation for access to model o/p*

Questions & Answers