



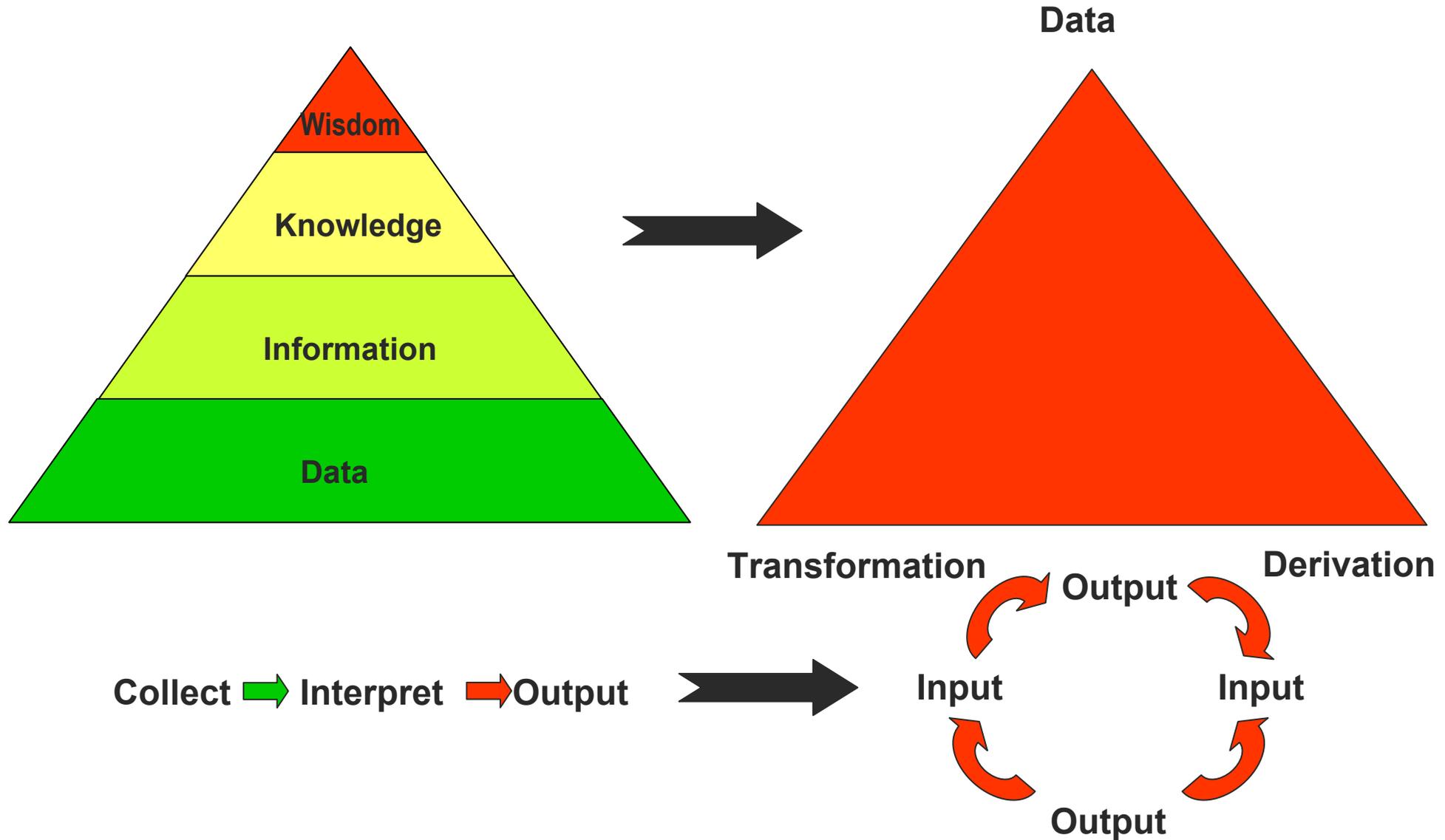
The Australian Solid Earth & Environmental Sciences GRID – The Way Forward



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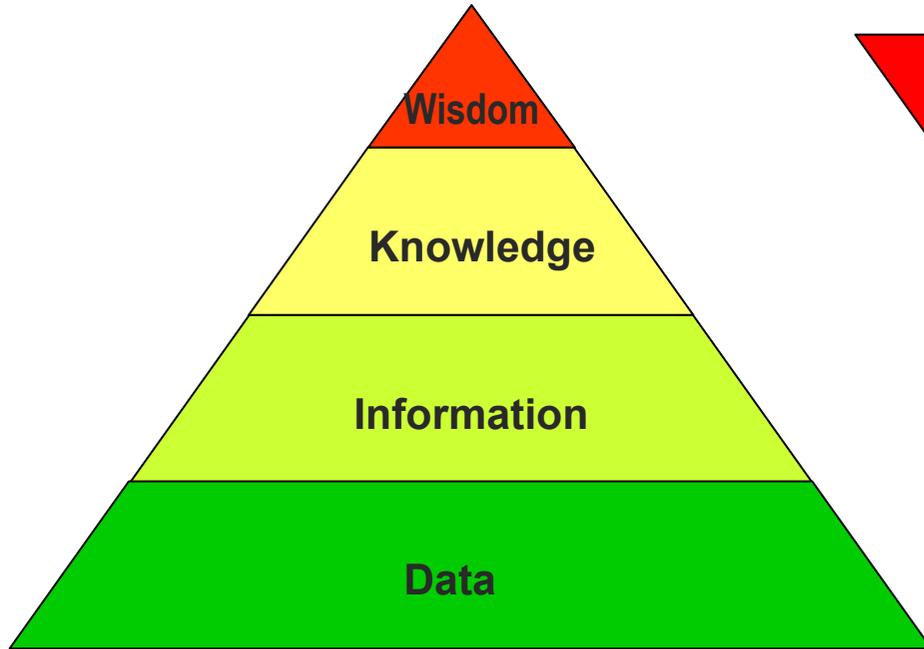


The new Scientific Methodology

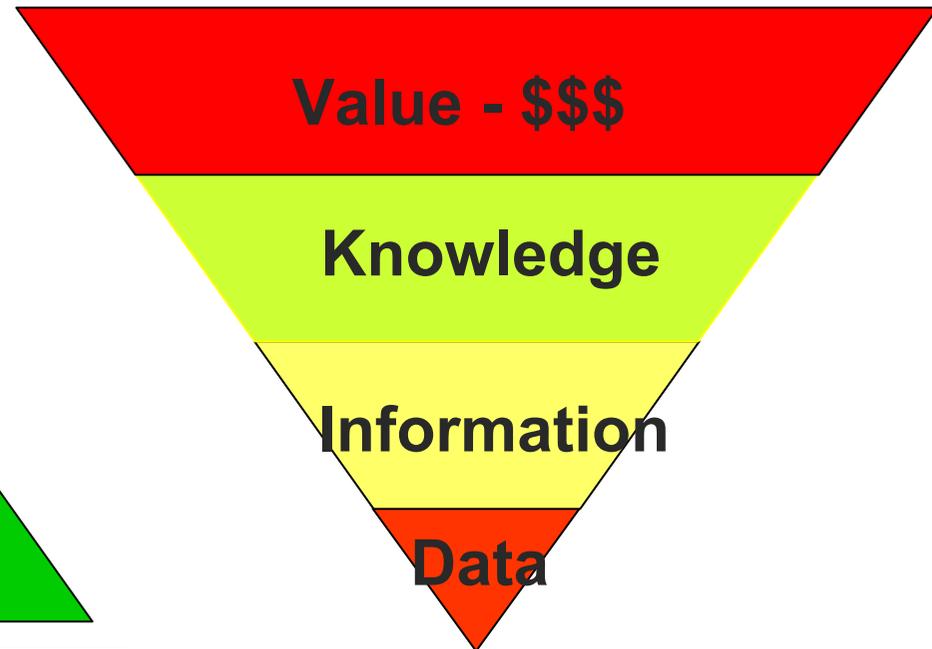


In the new world – there is no such thing as ‘pure’ data

The Value Proposition



The scientist's / data
custodian's view



The investor /
stakeholder view

How Can SEEGrid Deliver Value?

- Probably not by focussing too much on delivering (rather than managing) data.....?????
-But by focussing on delivering knowledge to a wide range of potential (non-specialist) users.
- “The best form of data compression is interpretation”, Simon Cox.
- CANRI interface design as a template.....



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The Vision of a 3D SEEGrid “Map”

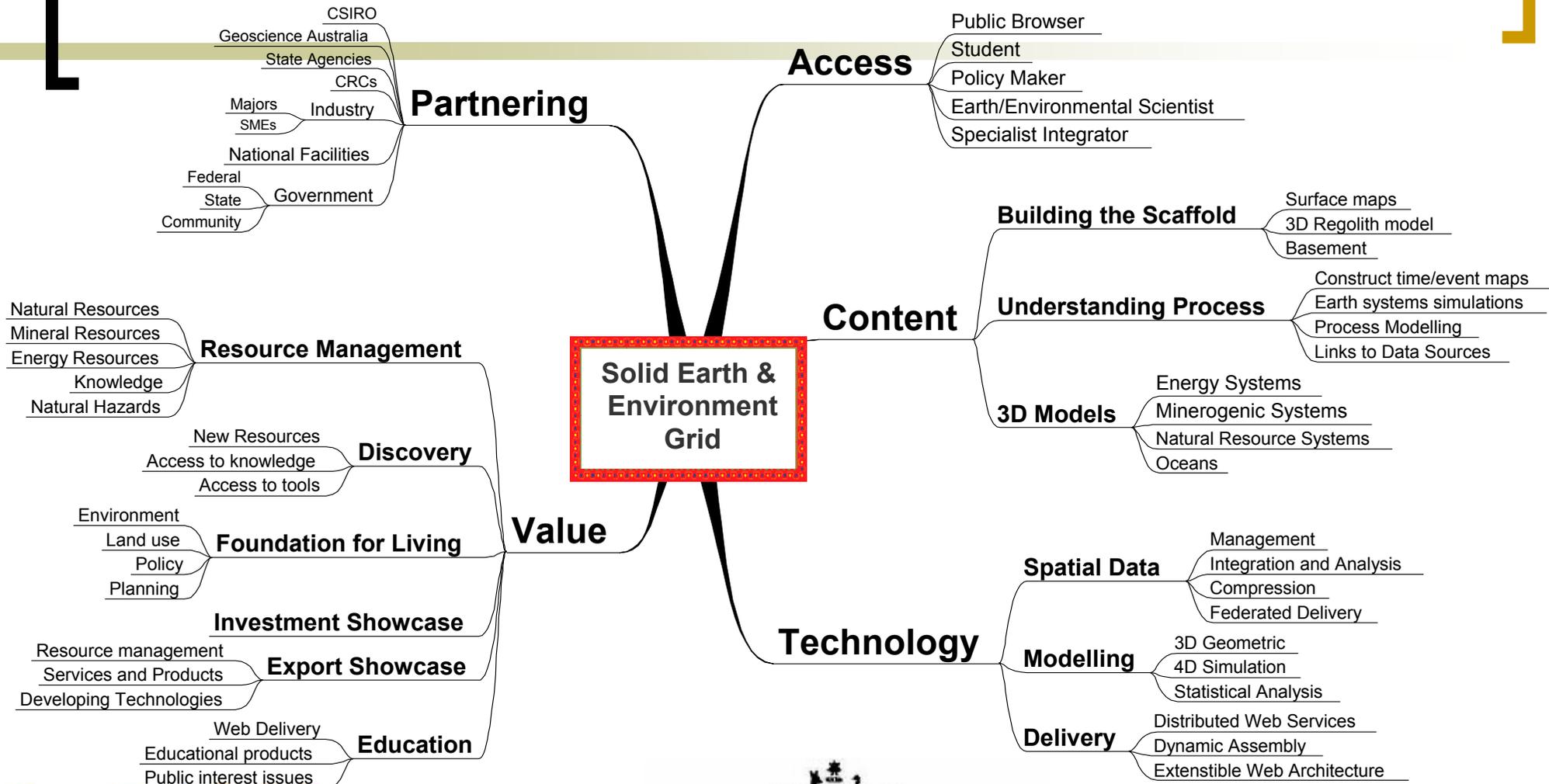
- What makes our “community” different is its need for 3D spatial data / info / knowledge.
- Spatial information conventionally displayed in maps.
- Therefore, what we really need is a 3D “map”
- But virtually all of our data is acquired on the surface → 3rd dimensions is very data poor →
- 3rd dimension MUST be based on interpretation / knowledge in order to deliver value in a realistic time frame.
- Sub-surface information and knowledge underpins key decisions in water, land-use, minerals and energy.....



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A vision for the SEEGrid Map?



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Running commentary from participants (minuted JE)

-Statement from the floor “Still unclear What and Why”

- Value Proposition-being able to make the best decision at the right time using current knowledge and being able to drill down through the decision process to the supporting data
- This value proposition applies across the board, whether policy, deciding where to drill, land use issues, etc.
- Statement-we are “early adopters” in the area of grid technologies so let’s not waste time and money recreating the wheel, but capitalise on existing infrastructure programs
 - Big advantages to application of the technologies to our domains (earth and environmental sciences)
 - Improve the information/data sets that we use for compliance/ability to use computational networks
 - Improve access and speed to data and computational processing
 - Improve precision and accuracy of processing products
 - Reduce costs (?data storage, govt geospatial data policy already free or cost of transfer, what about proprietary data and processing tools?-these issues can be accounted for in architecture)
 - Increase the value for discovery and land use management



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Running commentary from participants (minuted JE)

- Should the ASDI (Australian Spatial Data Infrastructure) take the lead here?
 - General consensus already operating well, any way forward for a SEEGrid could not happen without support/guidance of ASDI and its community; not a “funding body” per se
- Technologies within reach-core challenge is the data-huge effort and cost to “get ready”
 - Some discussion about the distinction between “data grids” and “computing grids”-agreed
 - Data management infrastructure happening now, especially through GGIPAC (government geologists’ information policy advisory committee) and the interconnection between the states/territories and commonwealth agencies-make sure they have continued support from management, earth science community (industry, uni, consults, etc) to pursue new data models arising from the grid work (eg CSIRO xmml and architectures)
- Some concern that there currently are NO impediments to people using the data NOW, and that not everyone wants/can access the large data sets though internet, they like CD/DVD media, want tables, etc. , therefore the changes required for data delivery are stepwise to capture grid technologies,
 - Eg. All geophysical data sets will be streamed by Dec 2003
 - Prompted a lot of discussion, some concern expressed by those vested with delivery by these target dates without additional support
 - Is it good enough to “let things roll along as they are” or do we need to fast track some things?
- State perspective (geoscience)-within 2 years most surveys will provide all data free (most already are; most data sets available) so the challenge is not “can we get the data” but “**how to value add**”
 - Here, heres, challenge thrown to SME and research community to take advantage
 - Industry reps say “we already do”



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Running commentary from participants (minuted JE)

- Are we really talking about the grid here or web services? Delivery of data can be done through web services without the GRID, but if you want to have federated, but distributed data bases seamlessly accessible, then we are.
- If the commonwealth and state surveys are here to service industry, then why doesn't industry tell us this is what they want? Response to their needs is generally pretty good
 - Some responses that not all industry is aware of potential or current services, big companies are and many are managing internally with "grid architectures and data repositories", government is also a major client of the data as are the research community-so consensus that need cooperative/collaborative stakeholders across sectors
 - Comment from consultant-industry want value added products; return from industry-we make our own do you want them back!
 - Untouched territory as to who has the responsibility for data, for value adding, for implementation, etc-clearly govt role to maintain and facilitate access to data, however, industry can assist by adhering to formats and eventual inclusion of proprietary data; huge issue of university data repositories; value adding is responsibility of a variety of stakeholders from the govt (maps/models are knowledge products), research agencies, uni's, consultants, industry-question is how to continually upgrade data/knowledge base from all stakeholders
 - Partnering –something like a national project for the SEEGrid would facilitate this if structured properly
- New area-issues of training users to effectively access and use the data-total agreement from data providers
- But different stakeholders, increasing data, encapsulation in web services, data versus knowledge argument-the real issue here is there is no coherent view on the SEEGrid Architecture and data models (big eruption of discussion)



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Running commentary from participants (minuted JE)

BEST architecture for SEEGrid

- ASDI has an architecture, should we implement a cookbook pattern so that people have a common data model? Need a cross disciplinary team to design the architecture (so that domains are comfortable that they are outliers)
- What is required to facilitate the decision making process here? If we get the data standardised and the grid happening, the opportunity for value adding across all stakeholders will follow!
- Back to some grid definitions as “communities of practice, access to services that support people networks”, enable sectors to do their jobs more efficiently and effectively
- E-government is already a reality with xml “business to business” and “government to government” clearing houses, interoperability protocols, shouldn't the science community fall in line?
- Discussion of harmonization between operational and governance issues
- Some universities already have an architecture, are serving geophysics data
- Discussion started to pick up, lots of local discussion, difficult to minute

•Some closing words-as earth and environmental scientist the earth, the Australian continent is more than just our laboratory-it's our life support system (OK, so I paraphrased a bit here!) the issue is that we need to understand the earth as a complex system in 3D, present our knowledge in a mix of 2D, 3D and temporal maps and models, “viewed from the same datascape” and underpinned at all times by reliable and accessible data. To move this forward we need to set up a working group across stakeholders, work with the ARC networking grants, and put a project together.

•AGREED-point of contact Lesley Wyborn at Geoscience Australia



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