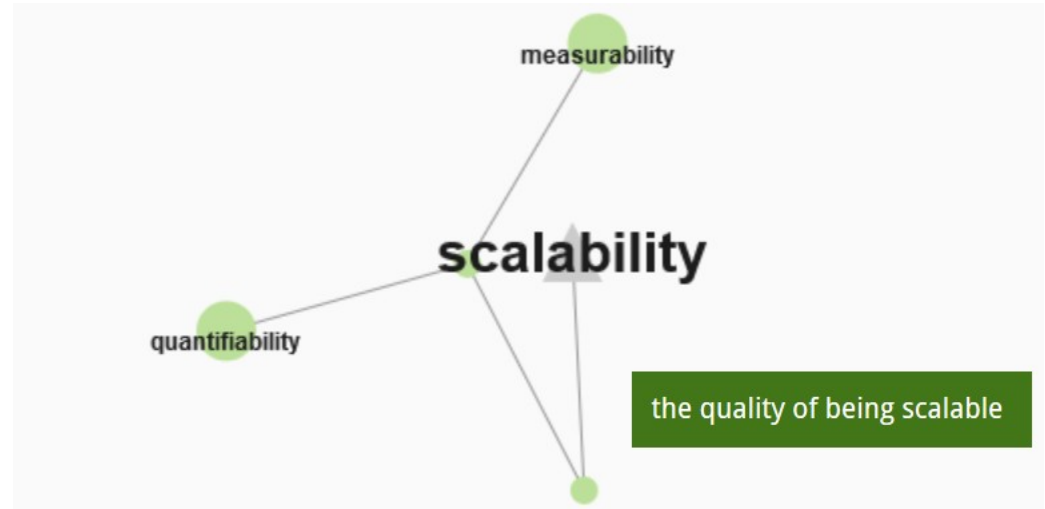




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Scalability discussion session
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EUROPEAN ARC
ALMA Regional Centre || Italian



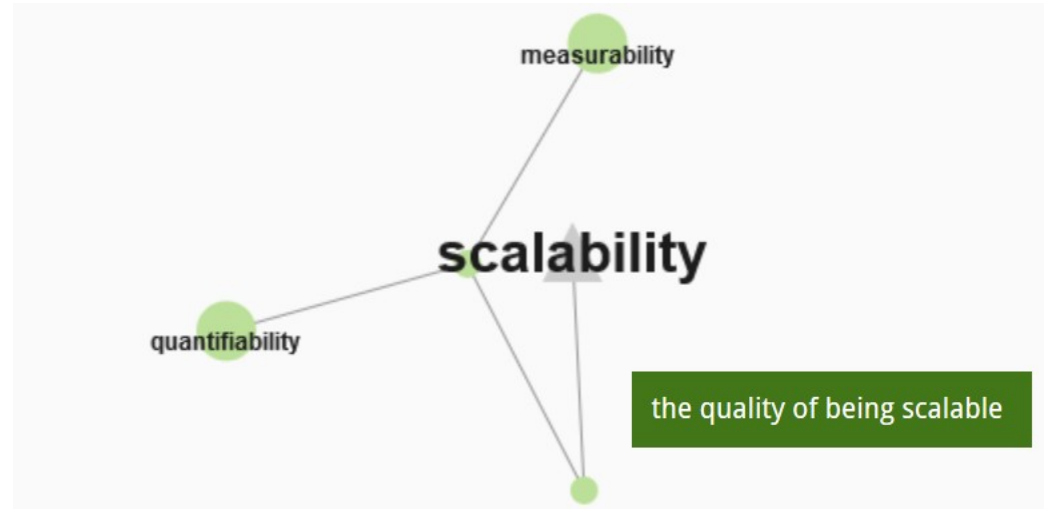
Administrative scalability: The ability for an increasing number of organizations or users to easily share a single distributed system.

Functional scalability: The ability to enhance the system by adding new functionality at minimal effort.

Geographic scalability: The ability to maintain performance, usefulness, or usability regardless of expansion from concentration in a local area to a more distributed geographic pattern.

Load scalability: the ease with which a system or component can be modified, added, or removed, to accommodate changing load.

Generation scalability: The ability of a system to scale up by using new generations of components.



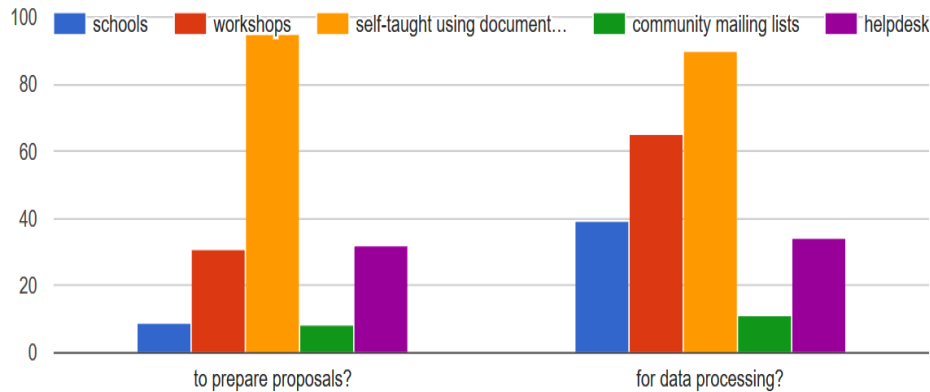
It requires a model to grow to reach the requested size to fill the gaps
It needs to know what is the requested size and how big is the gap...

It requires us the effort to measure and quantify
what we have and what we want to achieve in terms of

- community
- staff skills
- data storage
- data handling and science exploitation



What is your preferred way of training...

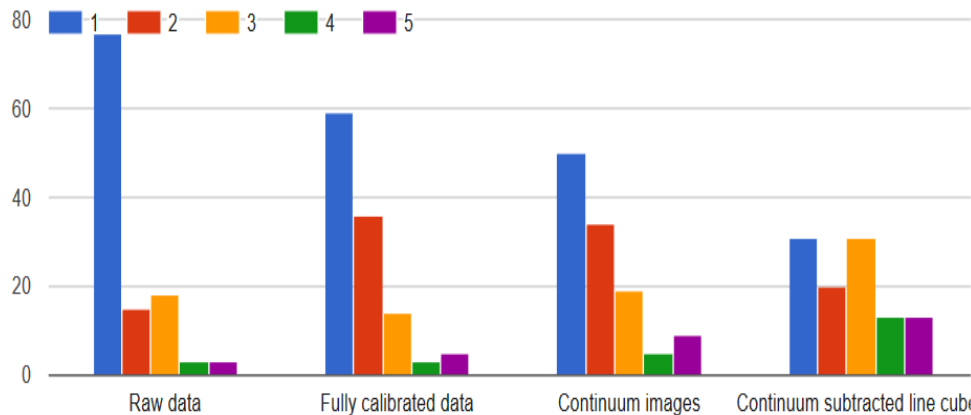


The questionnaire depicts a community that is not used to ask for any help...but used to handle its own raw data

SKA will require that users

- UNDERSTAND the limits
- TRUST the products
- “BRING THEIR CODE TO THE DATA”

Rate what would you like to find in an archive (1=necessary, 5=useless)



SDC will be the first point of contact

Has to demonstrate

- TRUSTABILITY
- FLEXIBILITY
- EXPERTISE

and hide the difficulties...

IT REQUIRES TIME....

- How would be SKA day0?
- What are we doing in the meantime?



ARC nodes network as model for interaction? Much more “the best we have now”, but...

The ARC have duties for telescope commissioning and data QA...
SDC would mostly serve their community receiving the data as they are.

ARC operates from raw data to advanced products...
SDC will mostly concentrate on advanced products.

ARC handled larger data wrt previous facilities...
SDC will handle larger data than anything else.

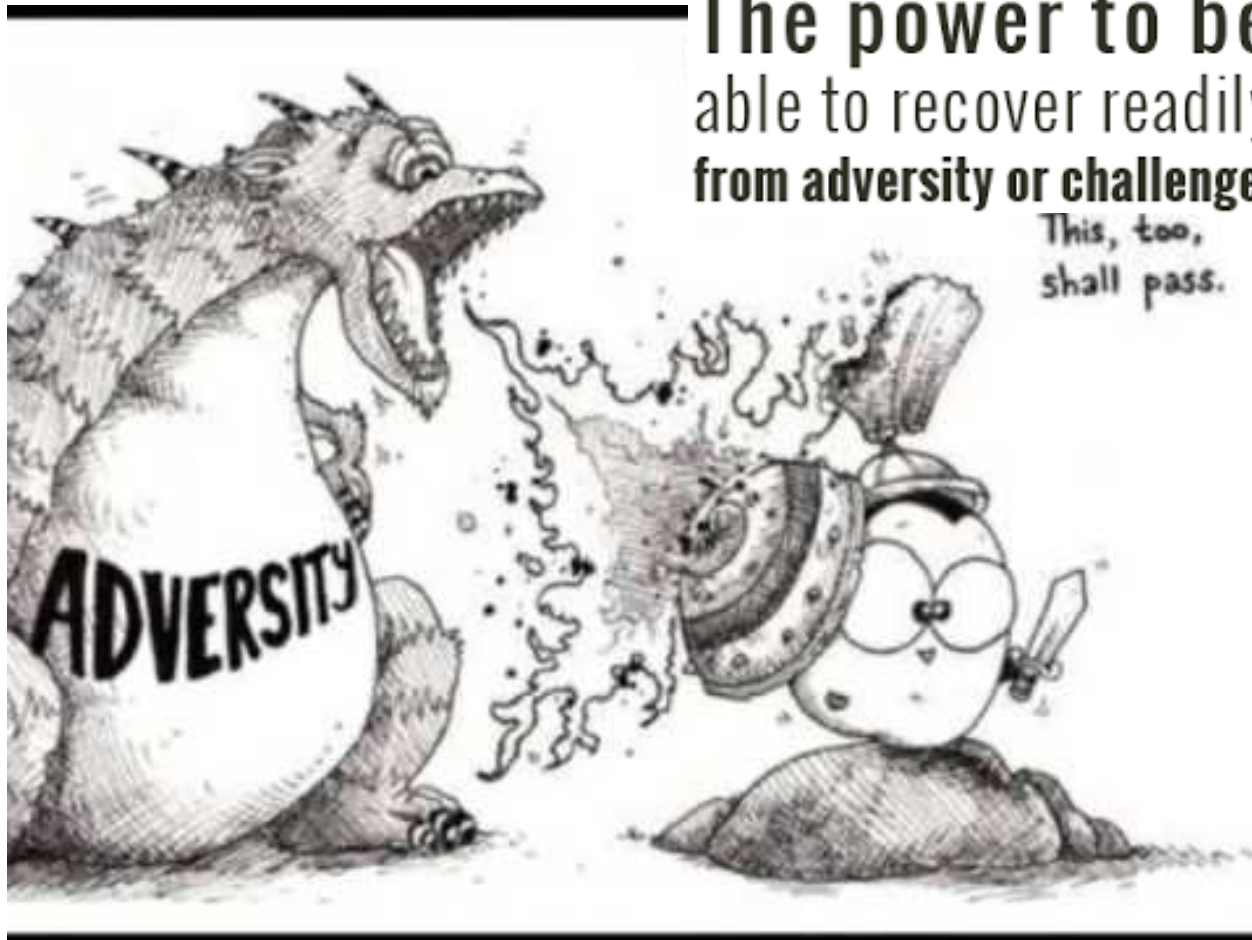
ARC grew with the telescope and their community.
After 6 years of ALMA the community has changed and the ARC is going to
adhere to new needs (more archive mining, more observing modes...
Some initial “errors” are being amended...
SKA data size and costs does not allow much room for afterthought,
SDC needs a well-organized machine from the beginning, but flexible
enough to face future changes...

RESILIENCE

[ri - zil - yuh ns]

The power to be
able to recover readily
from adversity or challenge.

This, too,
shall pass.





Which is the real GAP?

Data size?

New tools to be built?

Network velocity?

New staff skills?

User mentality???

We have a lot to learn from the ARC story and errors,
but SDC would be something new from many perspectives...
Can we quantify it? Can we SKAle, or we'd better JUMP THE GAP?