Significance of the User Support Process in ESGF (e-Science Infrastructures)

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Sessions Keynote

4th ESGF & UVCDAT F2F Conference 2014

User Support Process in ESGF

- Tool builders vs. Tool users
- Why is the user support process in ESGF significant?

- Because:
  - User needs <u>HELP</u> in using systems or service e.g. interacting with the ESGF to get the desired results
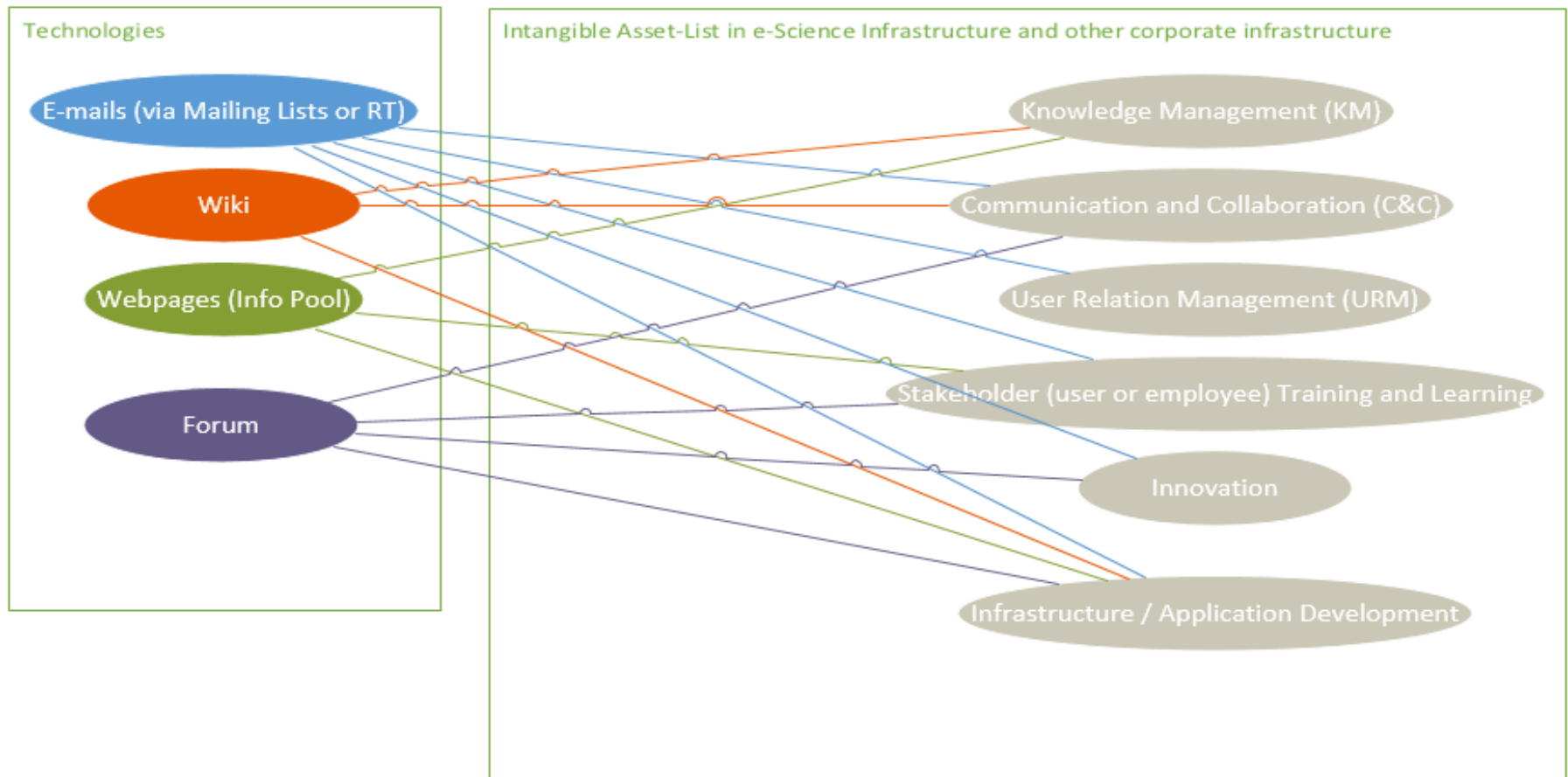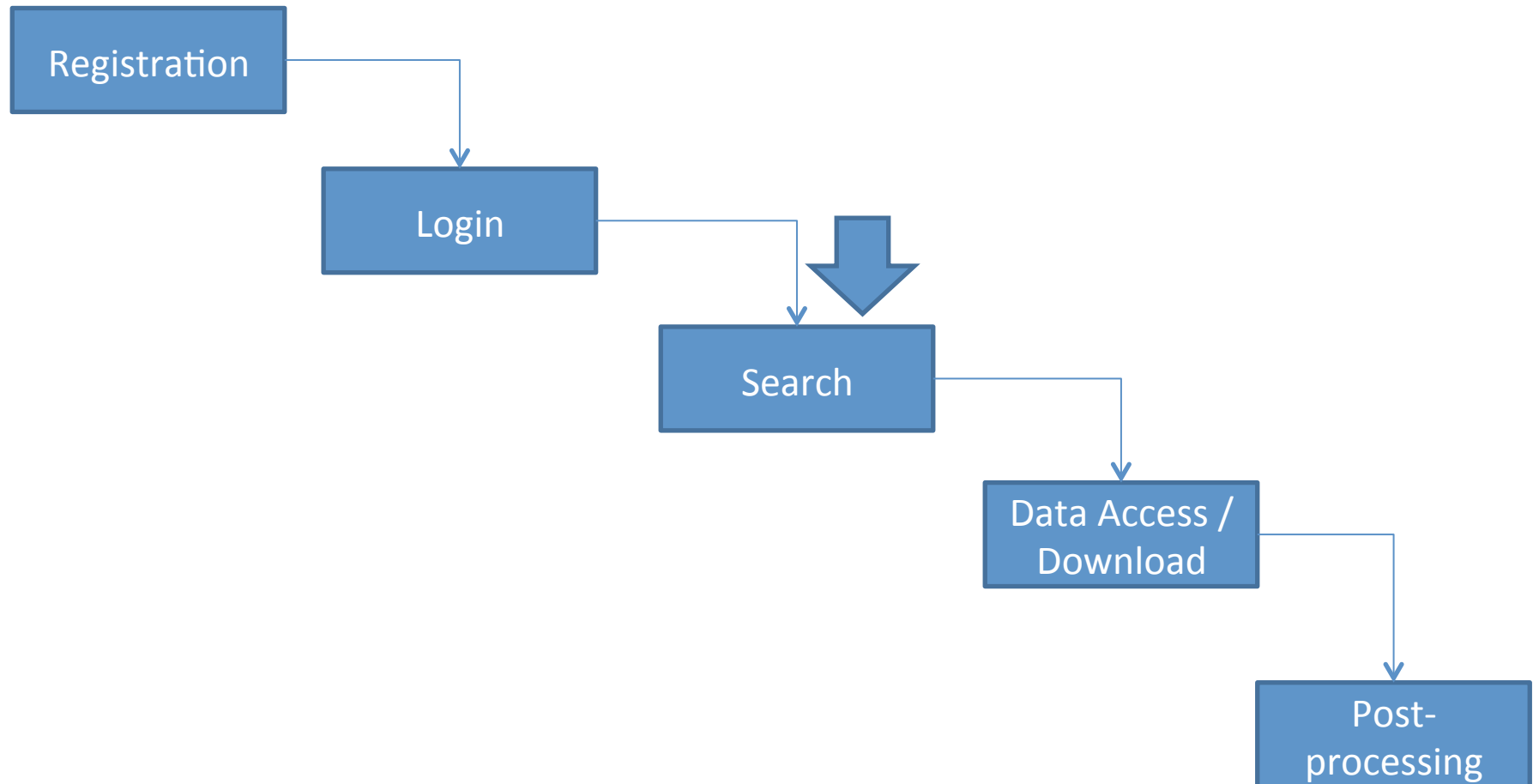
Is it enough?

User Support Process creates Assets

- *Development*
- *Innovation*
- Improved *usability and user experience*
- Converting the *data into knowledge* (DIKW)
- *Collaboration* and *communciation*
- *Training* and *Learning*
- Attracts *Communities*
- *User* & *Staff Satisfaction*

Current Technologies used in the User Support Process

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Workflow of ESGF Users to access Data

Registration

Login

Search

Data Access / Download

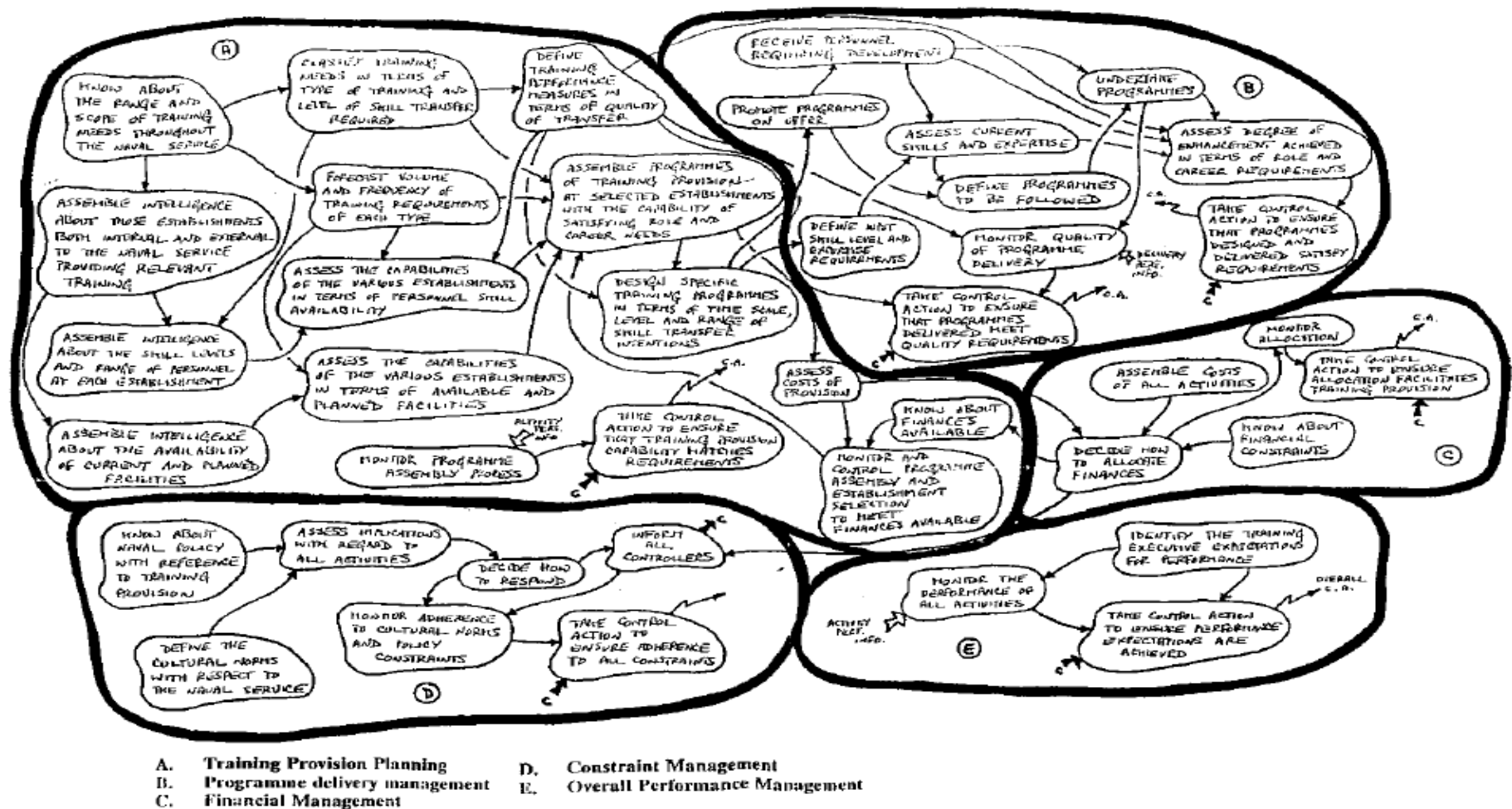Post-processing

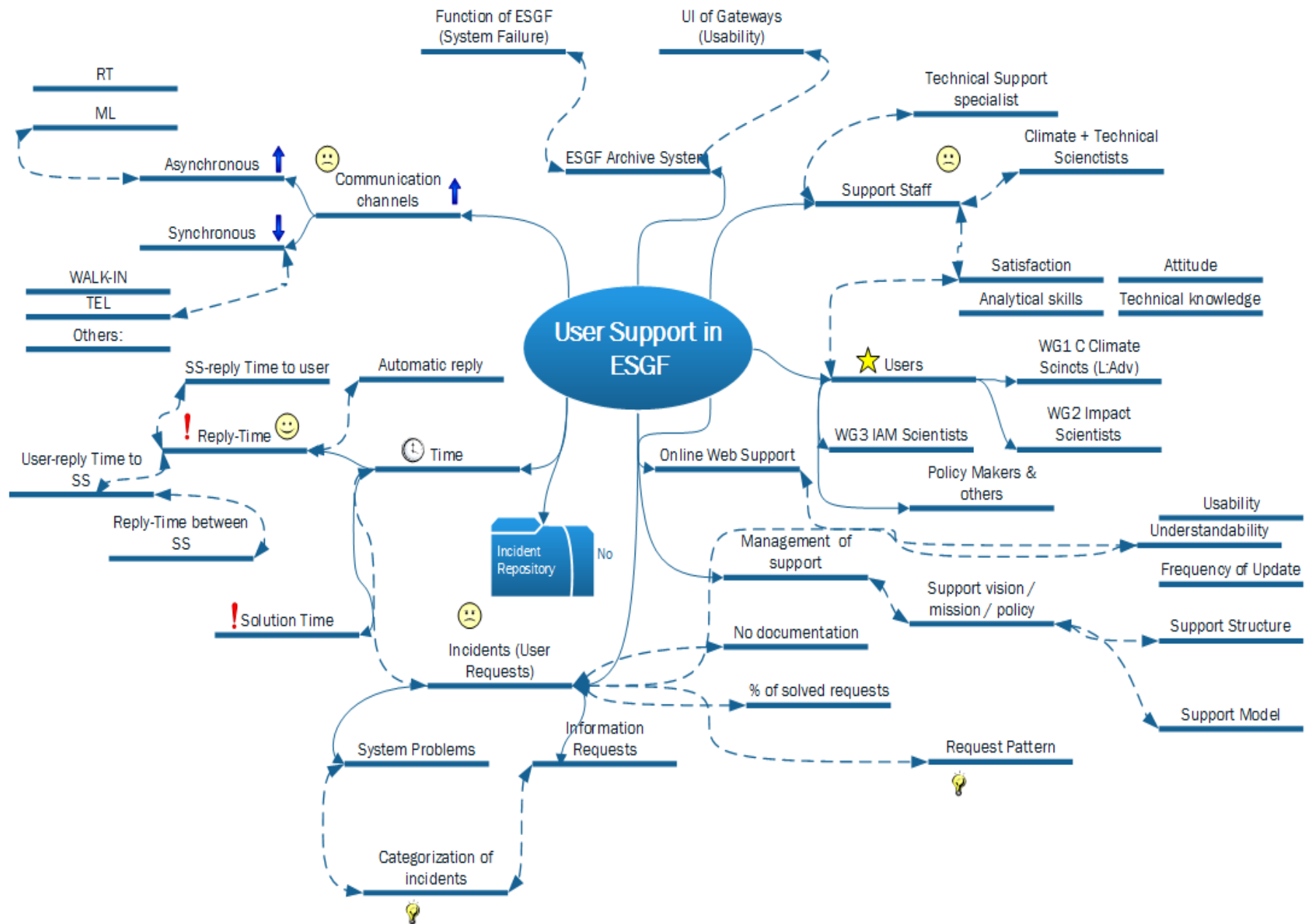4th ESGF F2F Conference 2014

ESGF User Support Process

- AS IS (What we have?)

- TO BE (What we can / want to achieve?)

Example of SSM- Training System [Wilson 2001]
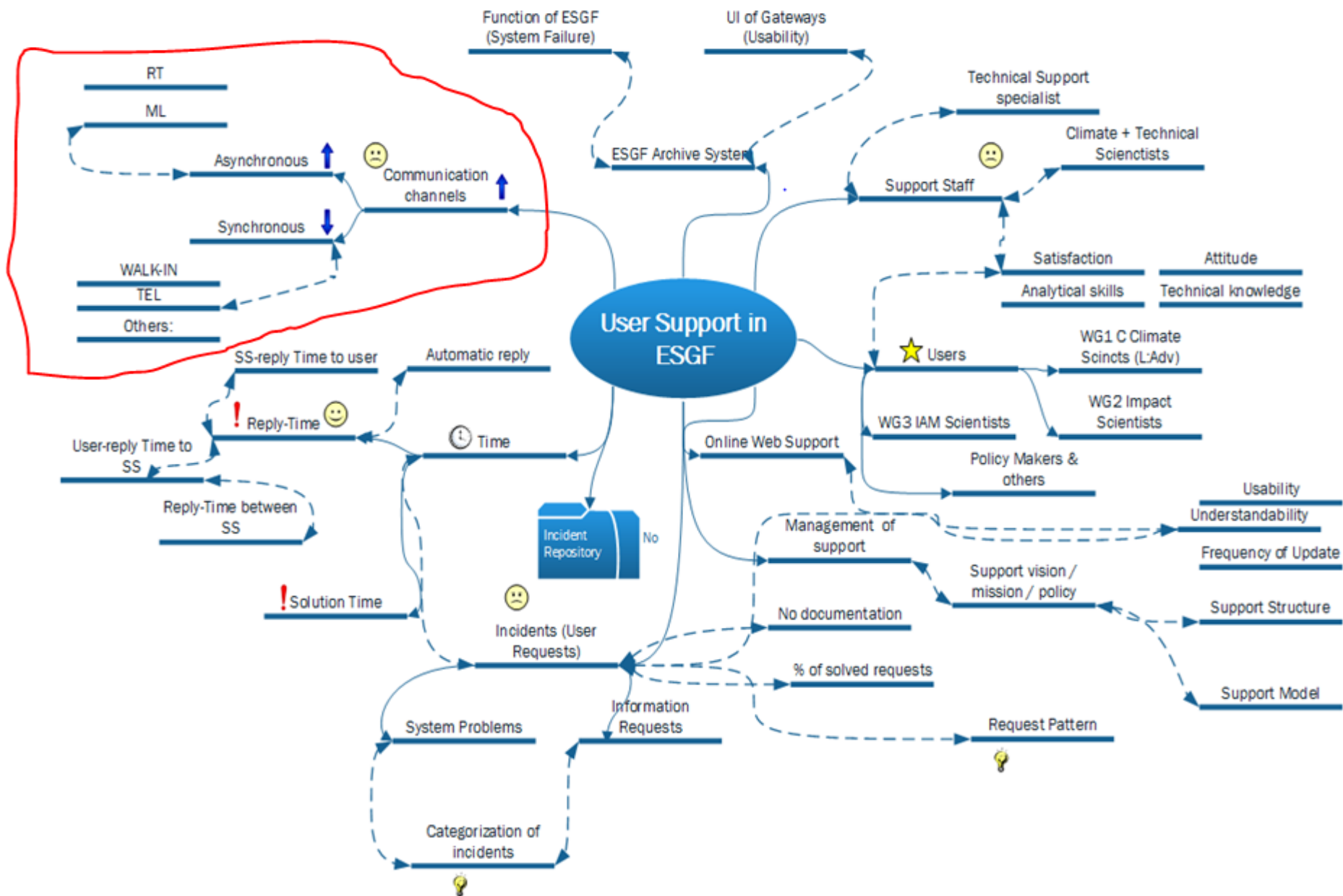

A. Training Provision Planning
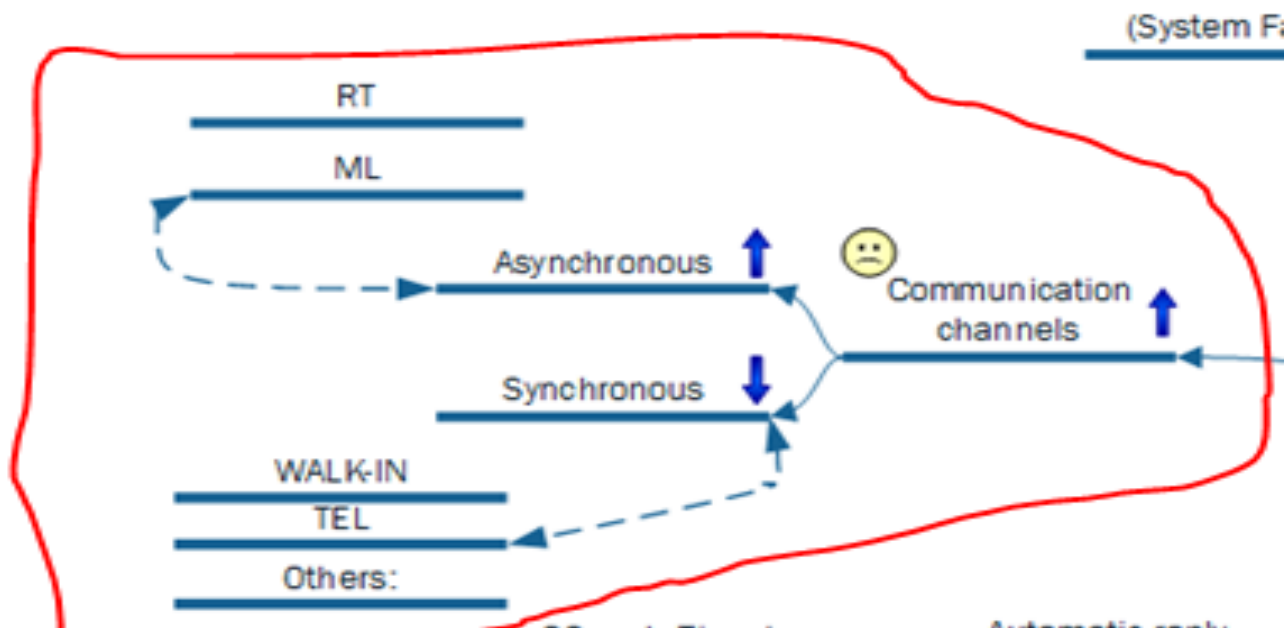B. Programme delivery management
C. Financial Management
D. Constraint Management
E. Overall Performance Management

Current User Support Process

User Support in ESGF — mind map diagram

Central node: **User Support in ESGF**

- Function of ESGF (System Failure)
- UI of Gateways (Usability)
- ESGF Archive System
- Technical Support specialist
- Climate + Technical Scienctists
- Support Staff
  - Satisfaction
  - Attitude
  - Analytical skills
  - Technical knowledge
- Communication channels
  - Asynchronous
    - RT
    - ML
  - Synchronous
    - WALK-IN
    - TEL
    - Others:
- Users
  - WG1 C Climate Scincts (L:Adv)
  - WG2 Impact Scientists
  - WG3 IAM Scientists
  - Policy Makers & others
- Time
  - Automatic reply
  - SS-reply Time to user
  - ! Reply-Time
  - User-reply Time to SS
  - Reply-Time between SS
  - ! Solution Time
- Incident Repository — No
- Online Web Support
- Management of support
  - Usability
  - Understandability
  - Frequency of Update
  - Support Structure
  - Support Model
  - Support vision / mission / policy
- No documentation
- % of solved requests
- Request Pattern
- Incidents (User Requests)
  - System Problems
    - Categorization of incidents
  - Information Requests

User Support in ESGF

Function of ESGF (System Failure)
UI of Gateways (Usability)
ESGF Archive System

RT
ML
Asynchronous
Synchronous
Communication channels
WALK-IN
TEL
Others:

Technical Support specialist
Climate + Technical Scienctists
Support Staff
Satisfaction
Attitude
Analytical skills
Technical knowledge

Users
WG1 C Climate Scincts (L:Adv)
WG3 IAM Scientists
WG2 Impact Scientists
Policy Makers & others

SS-reply Time to user
Automatic reply
Reply-Time
User-reply Time to SS
Time
Reply-Time between SS
Solution Time

Online Web Support

Usability
Understandability
Frequency of Update

Incident Repository
No

Incidents (User Requests)
Management of support
No documentation
% of solved requests
Support vision / mission / policy
Support Structure

System Problems
Information Requests
Request Pattern
Support Model

Categorization of incidents

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Communication

- Asynchronous: Textual, mainly via e-mail and Request Tracking (>80%)

User queries

Legend:
- answered user mails
- request not pursued by staff
- spam
- staff mails

Data shown: 77.53%, 13.77%, 2.83%, 5.87%

Problem #	Problem Description
P1	different *understanding* of the term <u>*user support*</u> amongst stakeholders
P2	*lack of agreement* amongst the stakeholders who *the end-users* of the ESGF are
P3	*unclear role definitions*, compensation and accountability for the staffs of federated partner institutions performing user support
P4	*no central recorded documentation* or a storage area of procedures
P5	*no optimal use of human resources*
P6	*no allocation of budget for end user support*: Responsibility vs. allocated amount

Problems (continued)

P7	*no defined methods of user support management* and they are not used e.g. SLAs, KPIs, OLAs
P8	*heterogeneous situation* regarding user support practice and culture at every participating partner organization in ESGF
P9	*missing combined overall user support strategy* for the federated ESGF
P10	need to *professionalize IT user support process* (missing structures in user support) – (organise, communication)
P11	*lack of integration* and connectivity of the user support process with other processes in the ESGF e-Science infrastructure

FeUSE Framework

- <u>Fe</u>derated <u>U</u>ser <u>S</u>upport <u>E</u>nhancement Framework
- A framework to enhance user support

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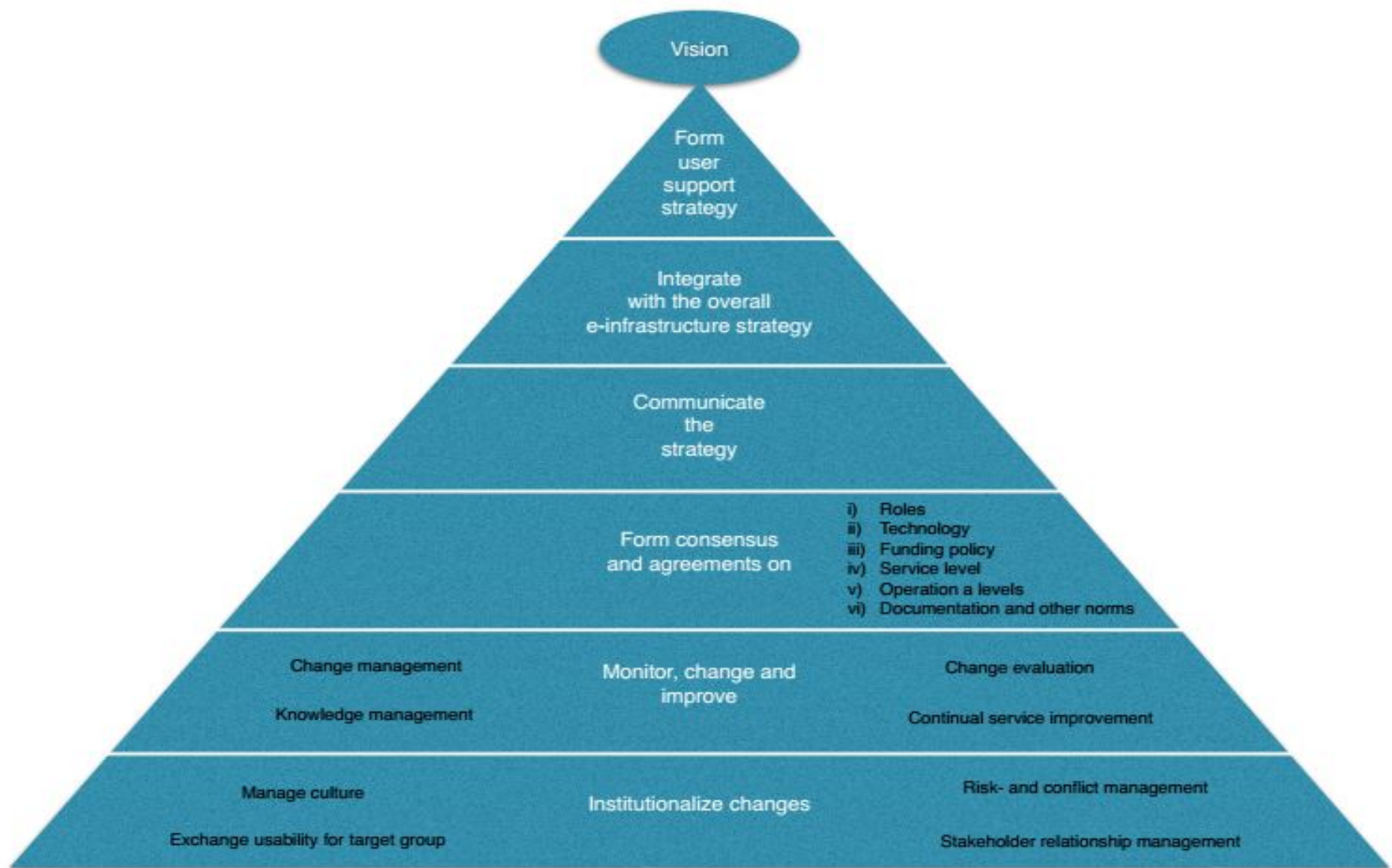
Conclusion

- Holistic perspective: When all parts of a system are put together they achieve properties what individual parts may not have
- Top scientists are doing petty tasks, thus leading to wastage of resources
- Handling of simple and routine queries can be transferred to technicians like FLS
- User support process in ESGF is needed to be streamlined.
- Communication needs to be transparent
- UI of ESGF needs to be more intuitive

Conclusion (continued)

- It needs standards as well as money to put it in a right direction

- User support system in ESGF is the main collaborative part between the federating partners and the different stakeholders

- There is a need to measure the user support process. Metrics are needed to be introduced.

Phenomenon

Engineering

Measurement

Science

Modelling

….analogy to climate science
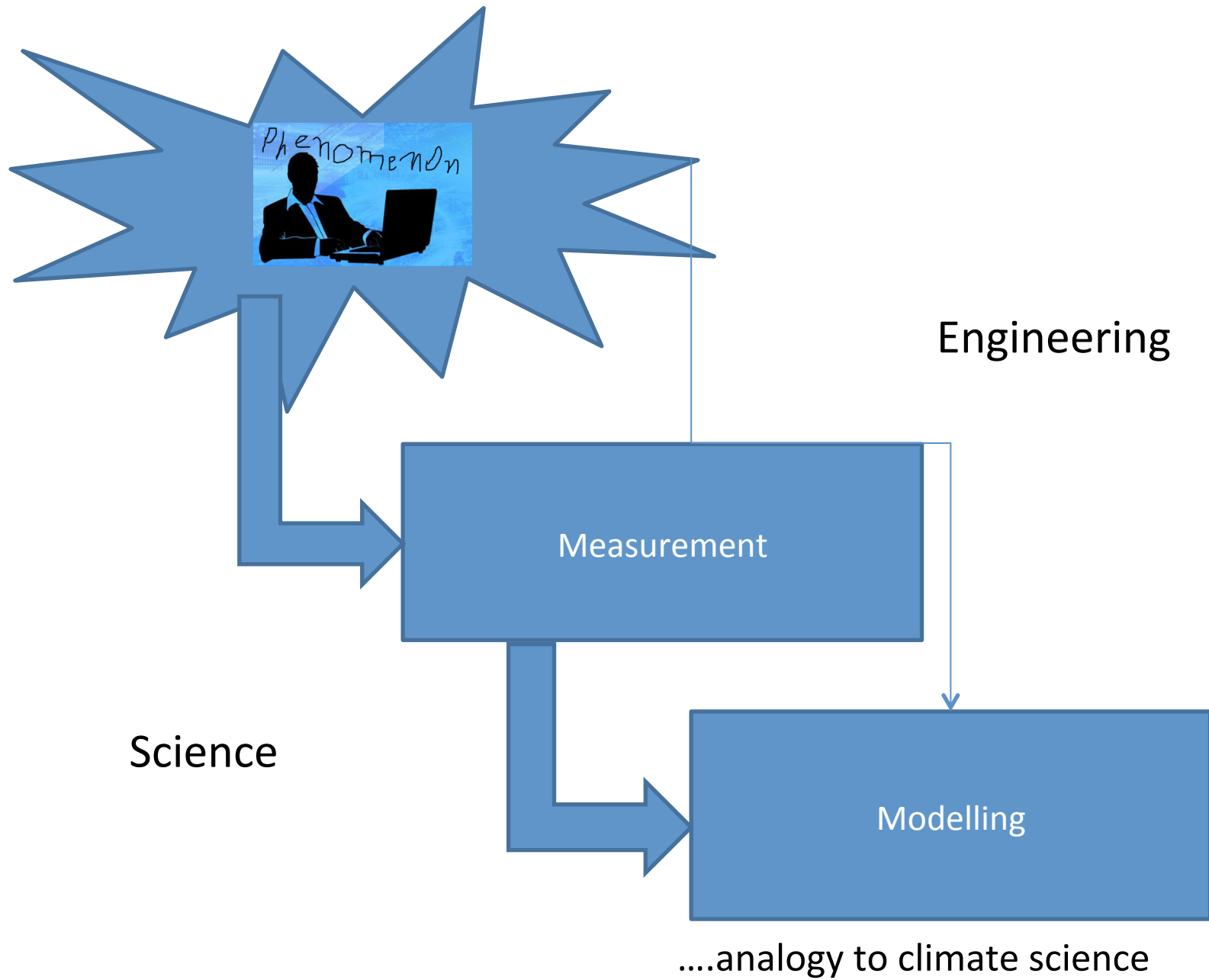
Focus Group Study

- After each day of conference
- You are invited!

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Thanks!
Your Questions and Feedback are Appreciated!

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