PMC21

Project Management Convention for GN4-3 & GN4-3N

GÉANT

Managing Innovation in GN4-3 and the GÉANT Community

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Tim Chown, Jisc (WP6)
Claudio Allocchio, GARR (GCC)

Agenda

11:00 - 11:25 - Why, what, how we manage innovation

　　　"Innovation and Incubators" - a WP5 and WP6 view

　　　WP5 perspective

　　　WP6 perspective

　　　Lessons learnt - what works, what does not

　　　　　What we can do towards the Period 2 review and GN5
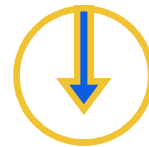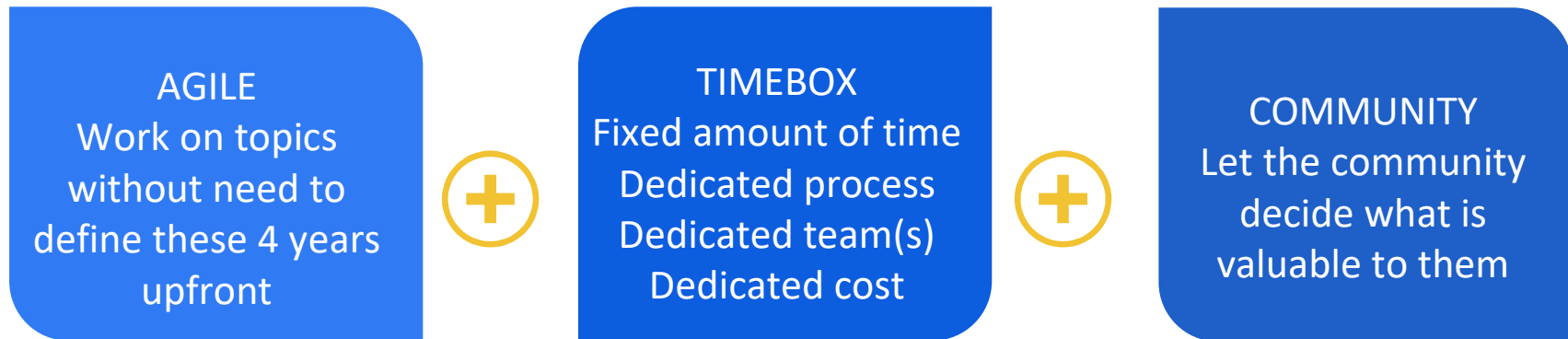
　　　Aside: the GÉANT Innovation Programme (a few words from Claudio)

　　　　　Some open questions for the plenary discussion that follows

11:25 - 11:50 - Plenary discussion - led by Tryfon

Incubator: WP5 approach to manage innovation

AGILE
Work on topics without need to define these 4 years upfront

➕

TIMEBOX
Fixed amount of time
Dedicated process
Dedicated team(s)
Dedicated cost

➕

COMMUNITY
Let the community decide what is valuable to them

TRUST & IDENTITY INCUBATOR

WP5 Incubator in the big picture

Service lifecycle in GN4-3

GN4-3 Technical Annex → Funding Process → Service Design/Deployment → Service Transition → Service Operation → EoL

New Request gate
Start Design/Dep gate
Start Production gate
Beta gate
Production gate
EoL gate

Methodology
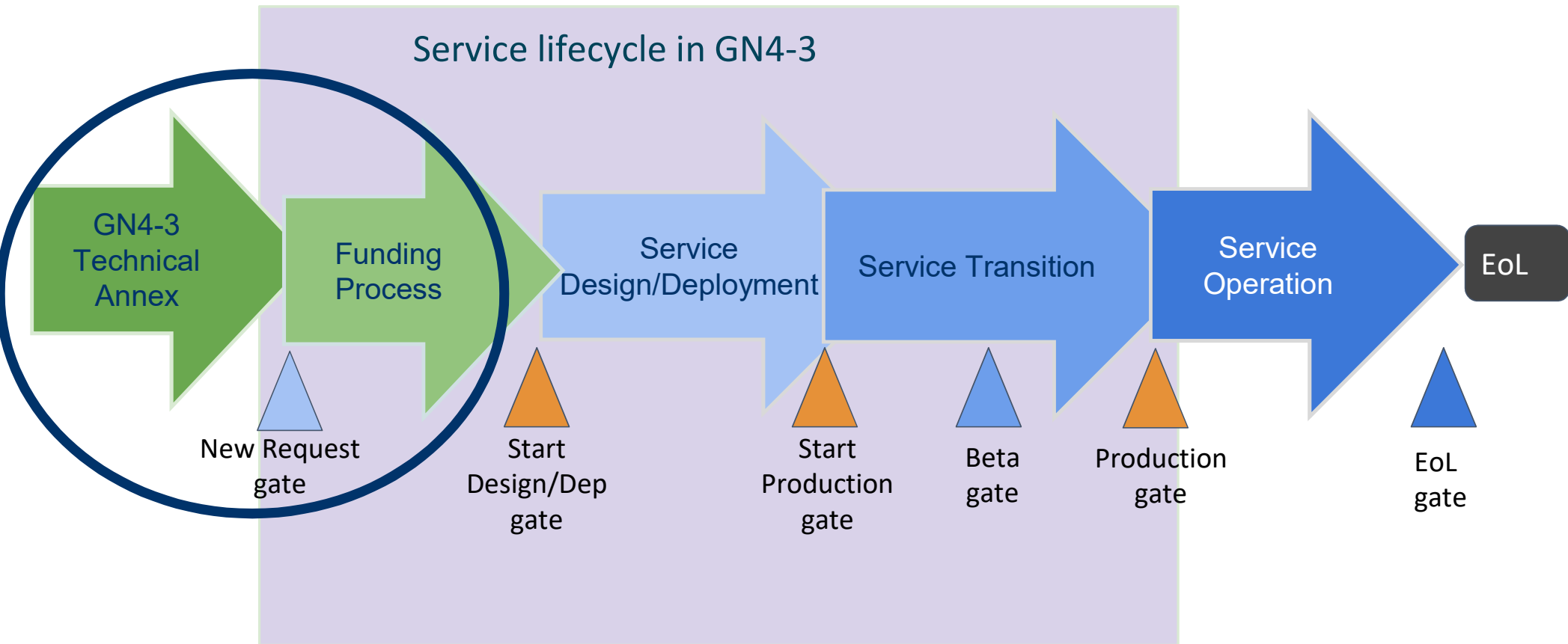
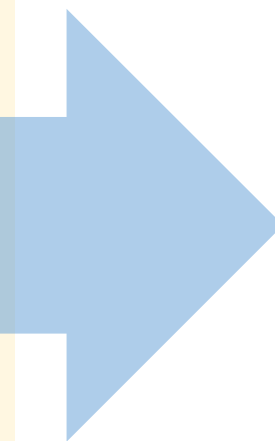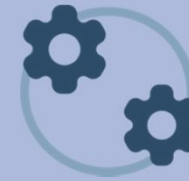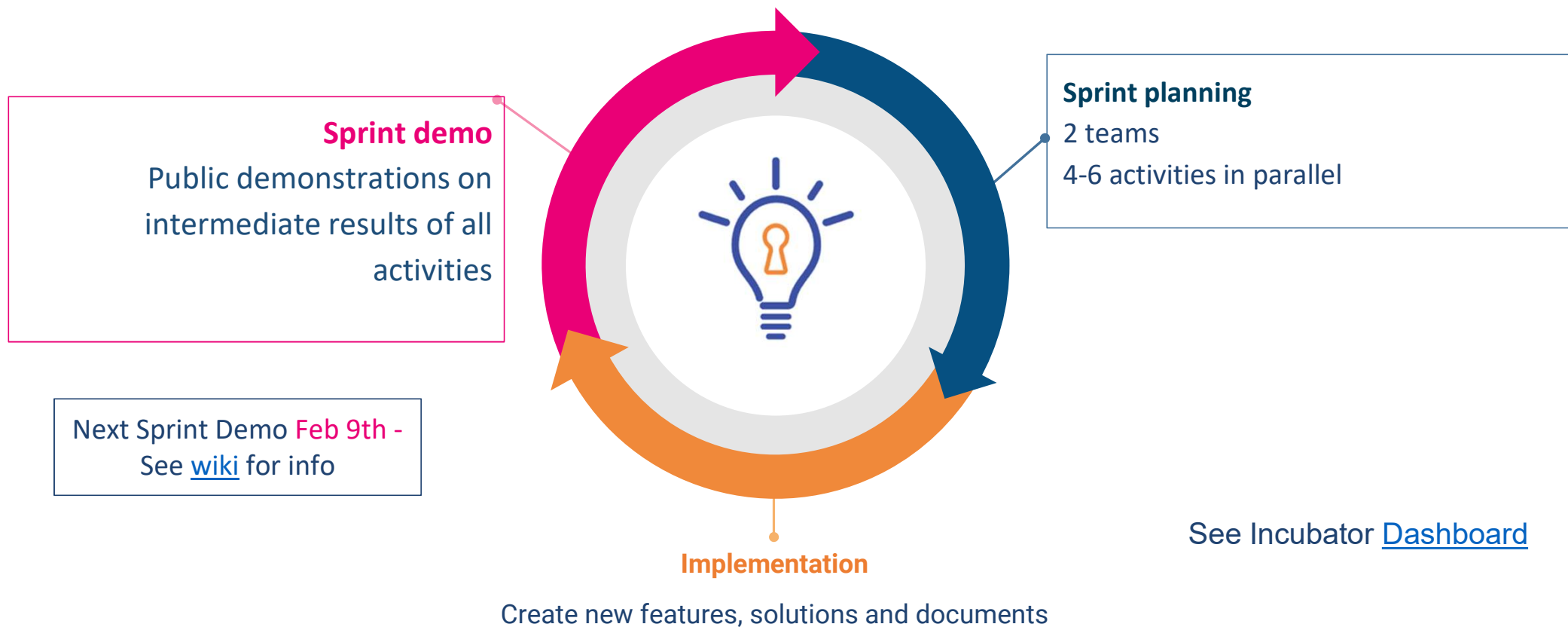| Collect proposals for incubator topics	Review and prioritise the proposals	Choose topics for the next cycle	Define goal, stakeholders, results	Work on topic, 6 sprints with demos	Finalize topic handover results/close topic
Service Owners GÉANT project T&I community member	Main Incubator Board (MIB)	Incubator Lead + WP leaders	Principle Investigator	Incubator Core Teams MIB feedback	Incubator Activity Teams

T&I Incubator Cycles

1 month sprints -> 6 month cycles

Sprint demo
Public demonstrations on intermediate results of all activities

Next Sprint Demo Feb 9th - See wiki for info

Sprint planning
2 teams
4-6 activities in parallel

Implementation
Create new features, solutions and documents

See Incubator Dashboard

WP5 Incubator Handover of Results

Type of results

- Business Cases / Other type docs
- Proof of Concept
- Technology assessment
- Dead end

Documents

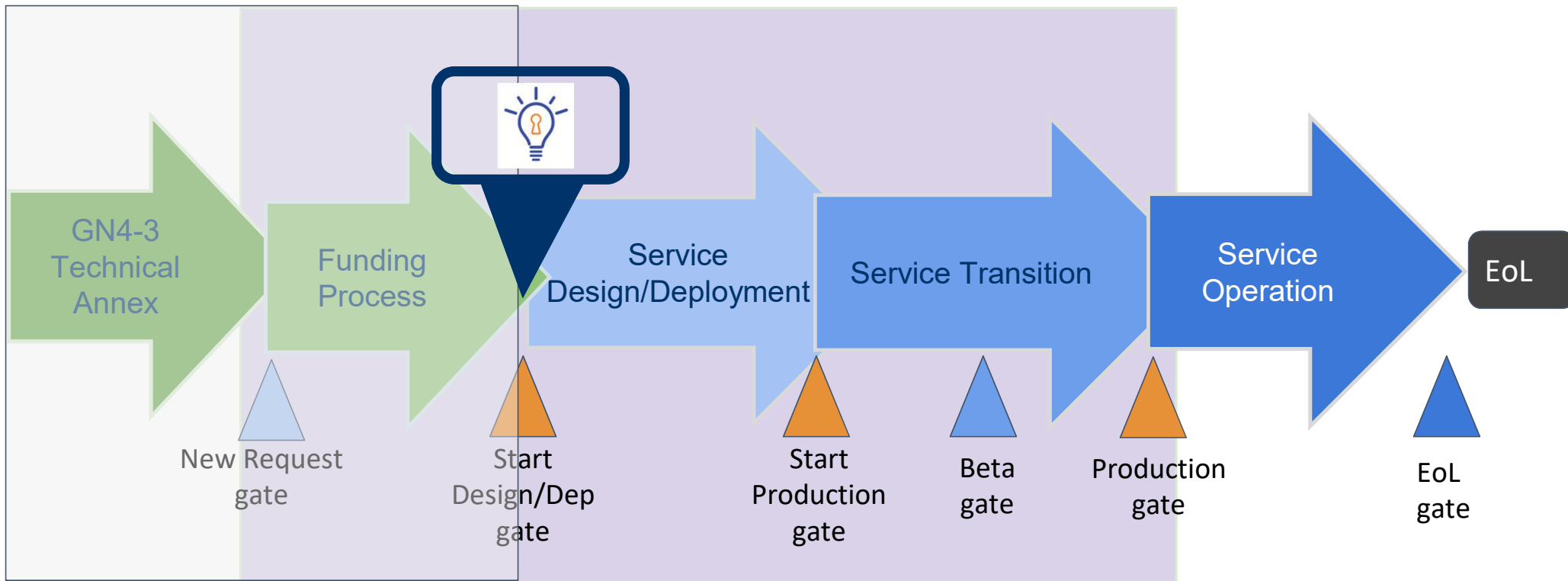Maintained in the wiki
Available to the community

Technology assessment

Results promoted in the T&I community

Proof of Concept

Moved to services in WP5 from where the requests originated OR start design gate preparation

When WP5 Incubator Results and PLM

GN4-3 Technical Annex

Funding Process

Service Design/Deployment

Service Transition

Service Operation

EoL

New Request gate

Start Design/Dep gate

Start Production gate

Beta gate

Production gate

EoL gate

WP5 Incubators Dashboard

https://wiki.geant.org/display/gn43wp5/Incubator+Dashboard

Engaging the community

DEVELOPING THE NEXT GENERATION OF T&I PRODUCTS AND SERVICES FOR THE EUROPEAN NREN COMMUNITY

TO FIND OUT MORE CONTACT GLAD@GEANT.ORG

GÉANT

TIM
TRUST & IDENTITY
MENTORSHIP PROGRAMME

The Trust & Identity Mentorship programme brings together ambitious young talents, T&I experts and NREN mentors to pioneer new ideas in the Trust & Identity incubator

In collaboration with GLAD team (GÉANT L&D)

https://wiki.geant.org/display/GIG/TIM+Programme

Innovation and incubators in WP6
(Network Technologies and Services Development)

WP6 does not have a specific incubator Task like WP5

  Nor a process for managing a recurring incubator cycle in the way WP5 does

Rather we started with a wide range of subtasks as prioritised by the GPPC

  Many subtasks are at the **incubator level** (as defined for PAIR reviews / D1.10)

  Most incubator level subtasks were **front-loaded** to avoid "drift" for four years

  OAV (72MM) and Network Telemetry (65MM) have flexibility over four years

  Production service subtasks have four years of funding allocated

  No unallocated budget set aside

Aside: multiple definitions / interpretations of "incubator"

Incubator level work - as per PAIR / D1.10 - early stage work, not service development or production

The WP5 incubator - a Task using fixed 6 month cycles, pre-NIF, as explained by Licia

The WP6T3 subtask, with a fixed team, now renamed and looking at new monitoring approaches

Incubators - drawn from the reviewers' commercial experience / point of view

WP6 (sub)task overview, with the three PAIR classification levels

T1: Network Technology Evolution

- Low Latency networking (LoLa)
- Optical Time and Frequency Networking (OTFN)
- White box networking
    - ~~CPE – Normandy, RENATER~~
    - Internet Exchange Point (IXP), RENATER
    - CPE, FUNET – on-going
    - Data centre, GRNET
    - White box performance testing, PSNC
- Router for Academia, Research and Education (RARE)
- Data Plane Programming (DPP)
- Quantum Key Distribution (QKD)

Production   ~~Stopped / paused~~
Service development   ~~work items~~
Incubator   New focus groups

T2: Network Services Evolution and Development

- Service Management Platform
- Orchestration, Automation and Virtualisation (OAV)
    - Architecture
    - Training
    - Wiki with the Community Portal
    - Campus Network Management as a Service (CNaaS)
    - ~~Data Transfer Node Infrastructures (DTN)~~
    - ~~Terminology~~

T3: Monitoring and Management

- perfSONAR
- perfSONAR Consultancy
- Performance Measurement Platform (PMP)
- Network Management as a Service (NMaaS)
- WiFiMon
- Network Telemetry (was "Incubator" - 65MM over 4 years)

Supporting innovation and agility in WP6

Innovation in part comes from incubator level validation of new technologies against R&E use cases, e.g. white boxes, QKD, data plane programming, ...

Innovation to improve existing services is done within subtasks as "business as usual"

Any additional resource secured via Change Requests (small, drawn from WP6 travel)

Agility implies processes to conclude/stop/extend existing work or to start new work

We have used Focus Groups to explore new OAV topics in Task 2

Some work items will simply complete as planned, e.g. white box evaluations

We have extended RARE, but not yet started any additional new WP6 work topics

Extending or stopping existing work in WP6

We worked with the PMO on such processes to extend or stop/park existing work

Based on tangible results, clear goals, and **clear NREN interest** (5+ NRENs)

We have used this process, e.g. to justify the additional funds for RARE

Measuring formal NREN interest / commitment isn't easy!

NRENs "vote" on proposals during the project proposal phase

How do we measure formal commitment over the full 4 year duration?

And how do we know NRENs will use / deploy our project outputs?

Do we need earlier co-design? More frequent NREN consultation?

Starting new work items in WP6

We have looked at defining a process to start new work items in WP6

     A blend of the WP5 approach, the IETF approach, and the project NIF

     Not used yet

     Q: how should new proposals be solicited? The project clock is ticking!

Additional new work items would need to draw on unallocated budget (MM)

     We currently have no unallocated budget (except for our travel pot)

     Recovering WP6 NREN underspend to create unallocated budget is hard

     Current projection of 500k EUR WP6 underspend across 34 organisations

     We need agility in resources to support agility in our work plan

Differences between how topics are selected in WP5 and WP6

WP5

Topics are periodically proposed by community members throughout the project

Topics are evaluated and prioritized by a T&I incubator board (senior staff).

4 to 6 topics get selected per 6 months activity cycle

There is a standing team which works on topics, subject matter experts join in if needed

There is no need for specific funding (already available)

WP6

Work items are proposed by NRENs in the project preparation phase

Selection of work items directed by the GPPC based on their evaluation and NREN feedback

WPLs directed to fund all work items; resulted in "thin" funding across wide range of subtasks

WPLs encouraged to front-load incubator level work; max two year evaluations

No funds set aside for new work later on

What is working well? What is problematic?

WP5

+ Allows for trying many different ideas in a short time frame
+ Well suited for delivering results like a prototype or PoC
+ Failure is an option, as not too many resources will have been wasted

- Engaging with NRENs to collect new ideas & feedback is hard
- Creating new services out of incubator work is challenging
- NRENs resources are always scarce

WP6

+ Doing lots of innovation / evaluations in many incubator level subtasks
+ High interest in incubator level events
+ Process to extend/stop existing work based on outputs and NREN interest

- No unallocated budget for new work
- Recovering NREN underspend is hard
- Difficult to determine formal NREN support and intent for uptake

Some takeaways / lessons learnt

WP5

Great improvement compared to past projects

Clear process helps to guide a potentially unpredictable activity

However, we still lack the ability to quickly convert a service opportunity identified in the incubator into output - do we need a 'beta' programme for T&I services?

WP6

Use clear language to describe "incubator" work

Ensure clear processes exist for starting new work and extending or stopping existing work

Set aside enough funds for new work to be started

Have the means to confirm initial and ongoing formal NREN interest towards ensuring uptake

Take a service-oriented view when required: What is the service? Who are the users? What is the value?

Aside: the GÉANT Innovation Programme - introduction

The GÉANT Innovation Programme is a unique opportunity to enable initial development, establish a proof of concept or testing of new ideas, with lightweight, administrative constraints.

As part of the GÉANT Community Programme (GCP), the GÉANT Innovation Programme offers funding of up to EUR30k for research projects carried out by any legal entity belonging to the GÉANT Community. The total funding reserved by the GÉANT Association adds up to EUR300k.

Who can apply?
Member NRENs from the GÉANT Association or legal entities from one of its 'connected institutions', including universities, research or education institutes or institutions connected to an NREN are welcomed and eligible for funding under this programme.

Aside: the GÉANT Innovation Programme - evaluation and outputs

Evaluation Process

Proposals will be evaluated by a 2 step procedure, by a group of subject matter experts coming from the GCC, TF and SIG Steering members, and GN4-3 WPLs and TLs. Key evaluation points are innovation, tackling of a clear issue or achievement, and the possibility to continue as a standalone activity or into existing ones.

What is delivered?

A final report is the only formal deliverable. It will contain results achieved (or reasons why the goal was not achieved, or reason why a different result than expected was achieved), and a proposal on how to carry on.
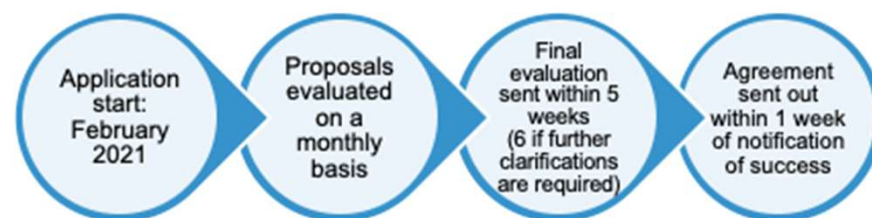
More information:
Infoshare: 23 Feb 2021 – 11:00-12:30 CET
See https://events.geant.org/event/503/

Contact: Gyöngyi Horváth
<gyongyi.horvath@geant.org>

Aside: the GÉANT Innovation Programme - relationship to GN4-3

How does the Innovation Programme relate to projects (including GN4-3), incubators etc?

Getting proposals to the most appropriate place

During the evaluation process, proposals which may fit better in other initiatives will be encouraged to try applying or coordinating there. It also works viceversa, if other activities believe the Innovation Programme is a better fit for what they see.

Funding

The funding (300k EUR) comes from the NRENs, not GN4-3

Some support is provided by the GN4-3 project (WP3)

We might view the funded Innovation Programme projects as one form of incubator.

1. Provide a global vision and plan for Incubators. Incubators are an excellent idea, but it is not clear if the pursued innovation is ad-hoc or driven and planned in line with the strategic roadmap of the project. In future iterations the project should detail the strategy that the incubator will follow. It will be important to show in the next periodic reports the lessons learnt from Incubators.
2. Run a business model analysis prior to new service development. Perform SWOT analysis, market analysis, to understand the investment needed (and the operational costs that would be required), and the return of the investment (again, in the GÉANT context not just monetary terms), and this will help to decide, justify and prioritize the investments
3. Be disruptive – not business as usual
11. Find and develop new services that enhance and put in value the GÉANT network

Keep these in mind in the upcoming discussion

Some open questions for the plenary discussion

How do we best handle innovation across the project? What do other WPs do?

How do we align innovation to strategy? How much top-down control is needed?

Is there a one size fits all incubator? If not, how closely can we align across WPs?

How can we be more disruptive?

How can we be best in line with NREN expectations and get their engagement

How can we be more flexible with budget to support agility in our work items?

How can we best track NREN interest in work items through a 4 year project?

How can we be most sure NRENs will use project outputs?

Thank you
Any questions?