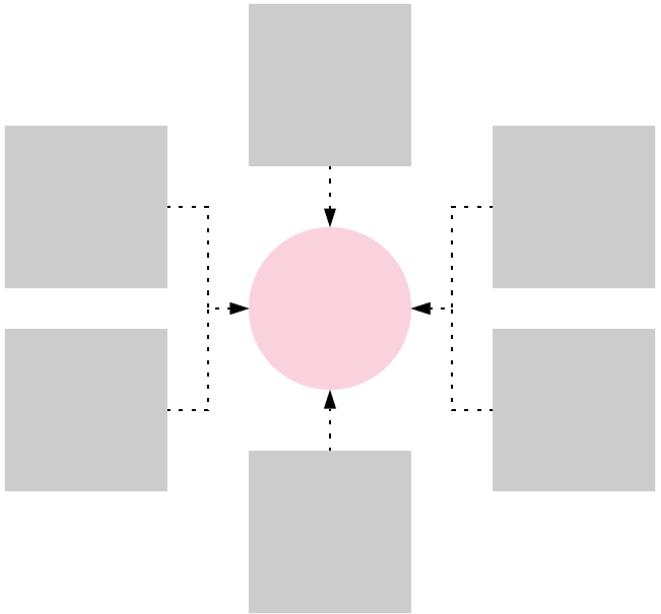
Insight driven product management

Jun Huh - Business Innovation and Growth

Overview

- Peek behind the curtains
- Examples of recent product developments in NeSI
- What do we mean by insights?
- See researchers' perspective
- Alignment and validation to deliver value

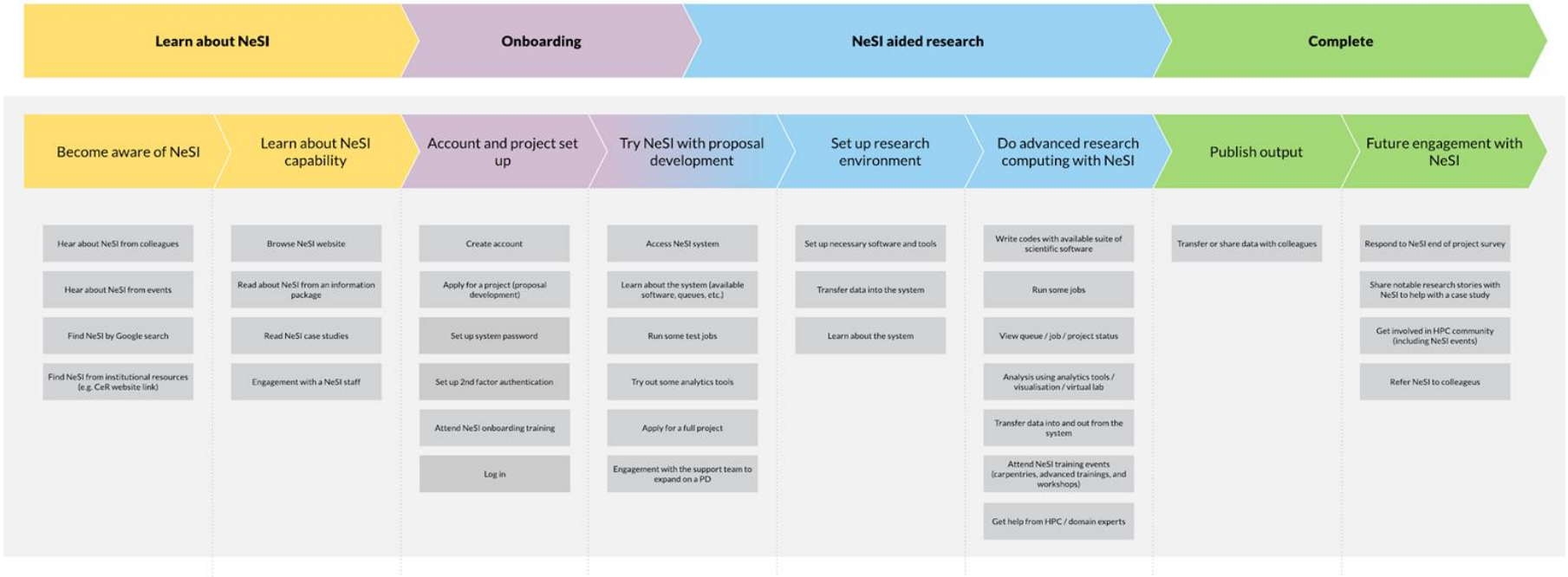


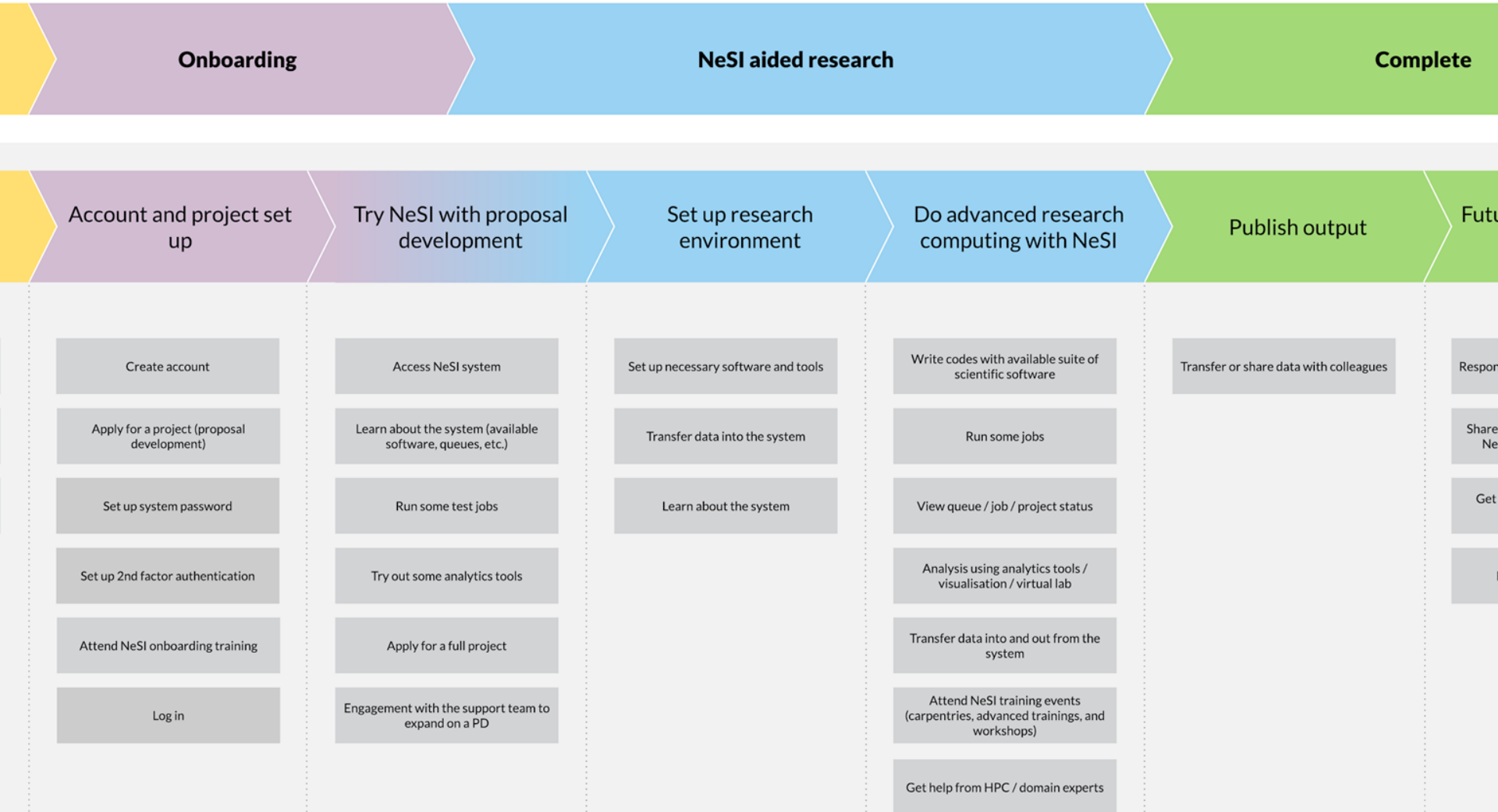
Using metrics to diagnose onboarding issues

NeSI user journey

- Very high level
- Common internal language
- Metrics and ideas
- Funnels, variations, feedback loops

NeSI user journey

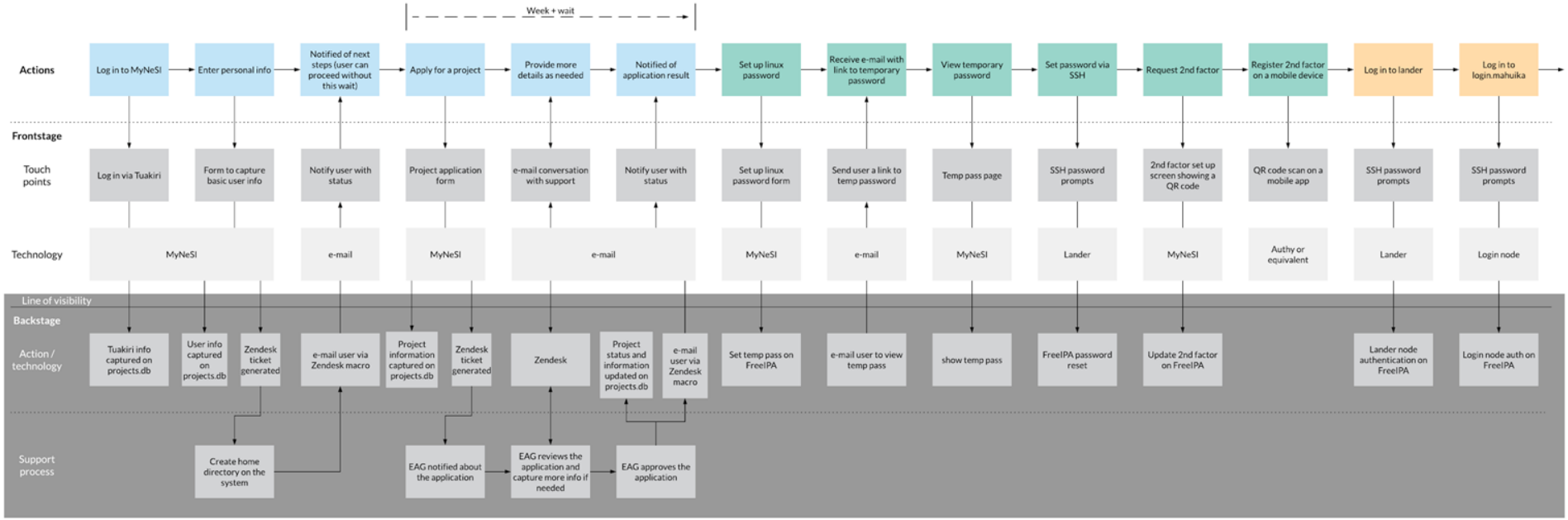



Onboarding
NeSI aided research
Complete
Account and project set up
Try NeSI with proposal development
Set up research environment
Do advanced research computing with NeSI
Publish output
Futu
Create account
Apply for a project (proposal development)
Set up system password
Set up 2nd factor authentication
Attend NeSI onboarding training
Log in
Access NeSI system
Learn about the system (available software, queues, etc.)
Run some test jobs
Try out some analytics tools
Apply for a full project
Engagement with the support team to expand on a PD
Set up necessary software and tools
Transfer data into the system
Learn about the system
Write codes with available suite of scientific software
Run some jobs
View queue / job / project status
Analysis using analytics tools / visualisation / virtual lab
Transfer data into and out from the system
Attend NeSI training events (carpentries, advanced trainings, and workshops)
Get help from HPC / domain experts
Transfer or share data with colleagues
Respon
Share
Ne
Get

NeSI new platforms onboarding horror story

- Brought attention to the extent of the problem to the whole team
  - User survey results
  - Feedback from training workshops
  - Platform system and services logs
  - User support tickets
  - Anecdotes from researchers and team members

NeSI service blueprint - onboarding



High levels of frustration for some users

‘*Resetting your password and logging in is probably the most user-hostile experience I've ever had.*’ - an anonymous NeSI user

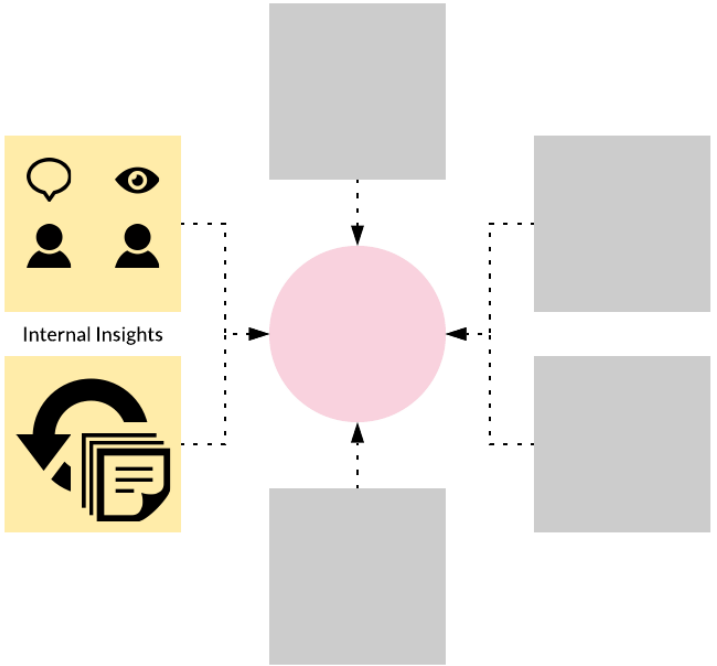
- 20+ negative feedback messages specific to the login process in our survey results since migration
- Hundreds of support tickets in the first half of 2019, taking in some cases days to resolve logins
- Training workshop sometimes taking over an hour to get all users logged in
- Compounding issues - poor login prompt, MobaXTerm bug, sensitive lockout mechanism - mapped back to the service blueprint

What's new?

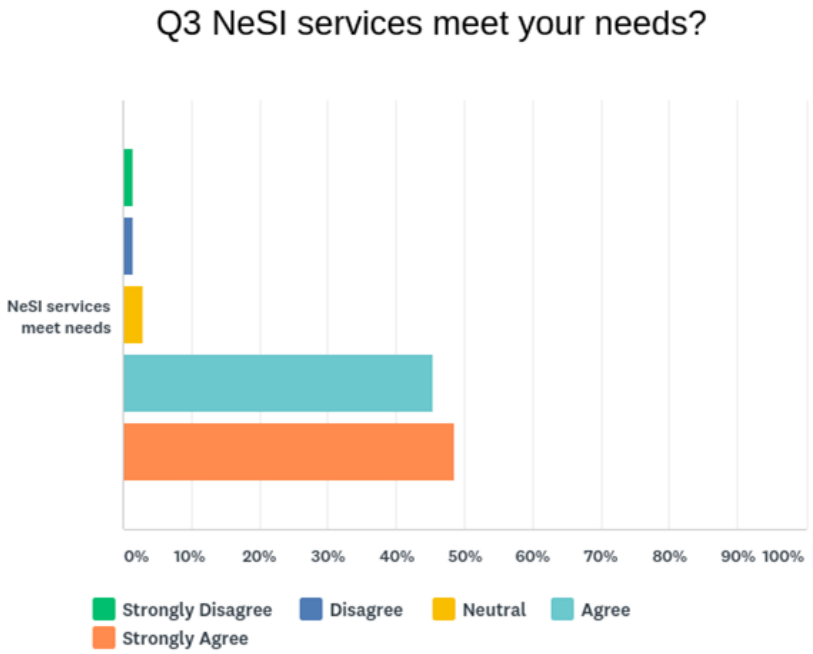
- What happened since then
  - Improved UX on MyNeSI
  - Shell prompts fixed
  - Monitoring system has been set up
- Comparison of July vs November numbers
  - Password setting process multiple retries (and they don't raise a ticket) 20+ -> 5
  - Log in related tickets reduced from multiple times a day to around one a week
- Removing the cognitive fatigue

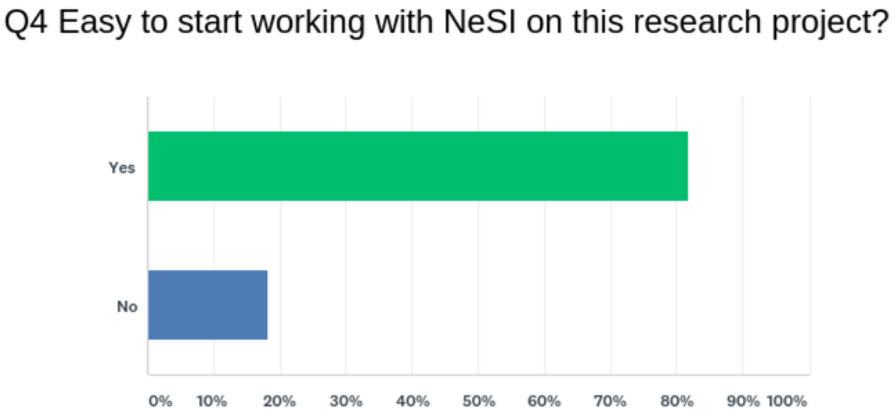
Insights as what users say and what users do

- Eyes and ears
- What channels do we have?
  - Tickets, surveys, analytics, audit, and monitoring
- What are they saying now?
  - Broader themes: allocation process, long queue, adapting to changes from Pan
- “Listen to what users complain about, not their solution”
  - This is a bit different for us.



End of allocation survey Q3 2019





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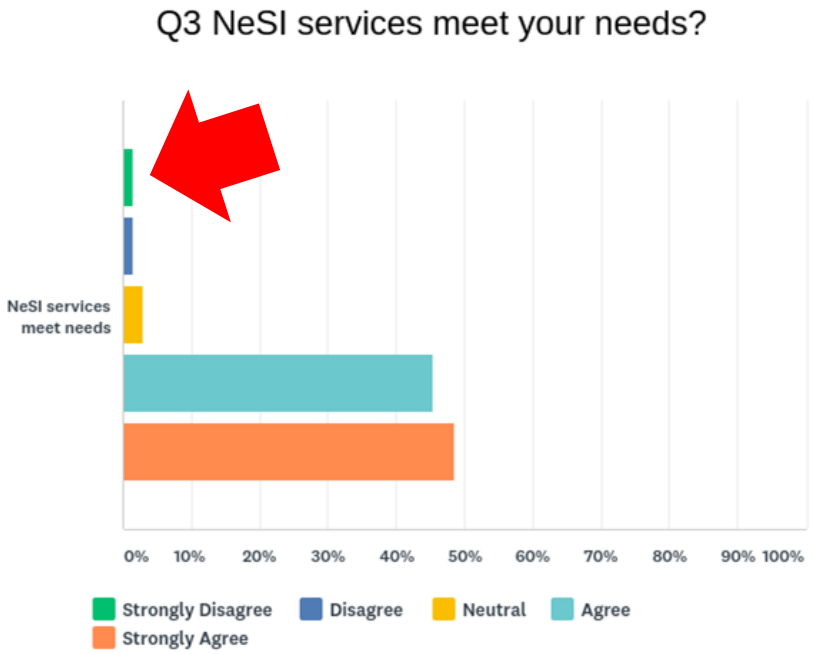
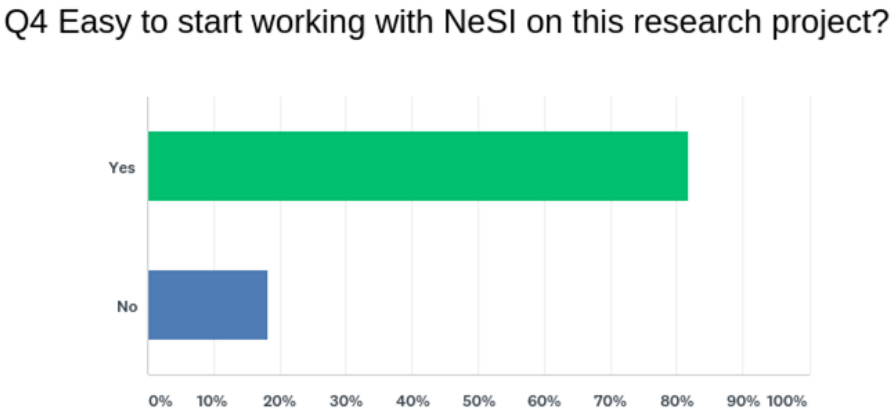
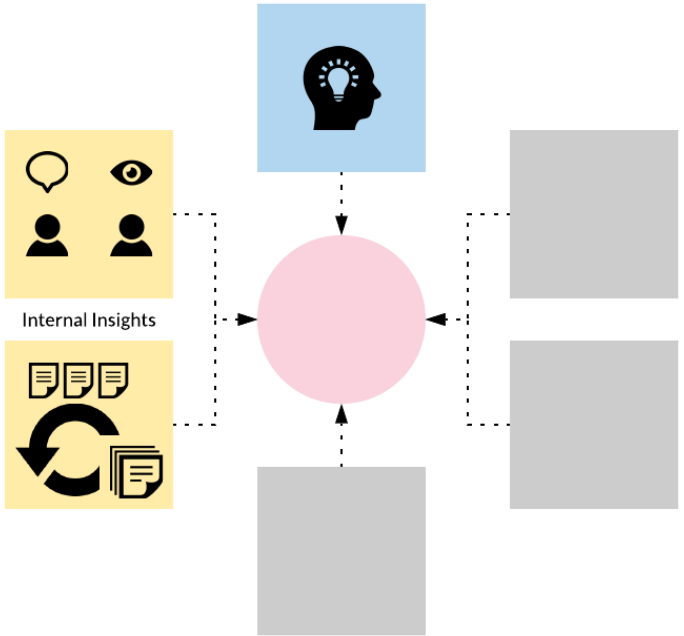




External insights (learning from others' mistakes)

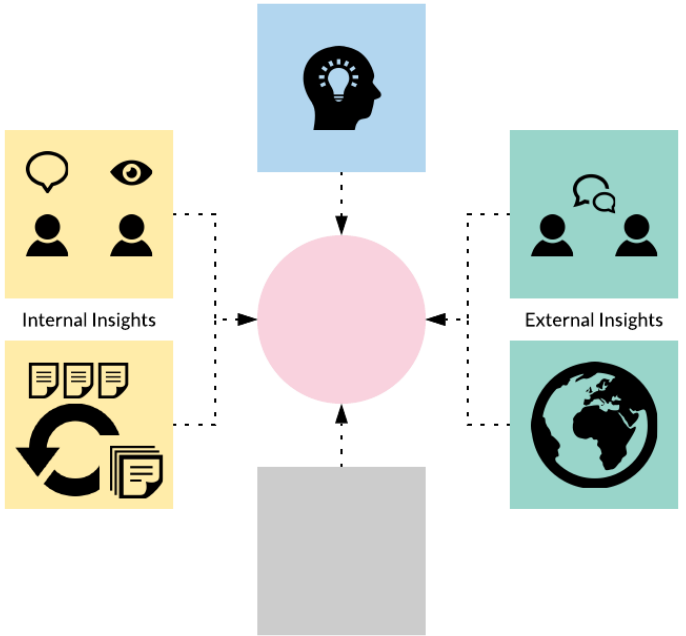
In-house knowledge

- Team members with diverse expertise
  - HPC knowledge
  - Domain specific
  - Product design and UX



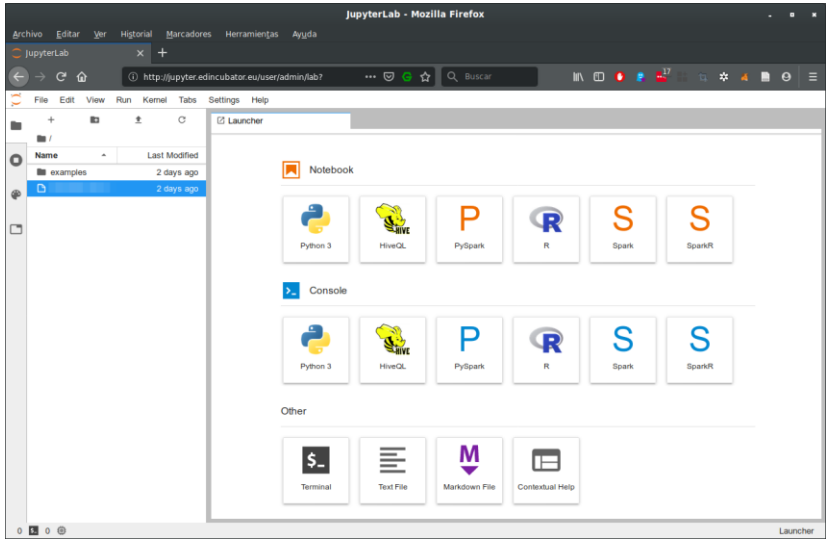
Aligning with external insights (leading metrics)

- What other institutions are doing
- Best practices from various research domains
- What research leaders say
  - Future facing consultation activities



Cloud - JupyterHub

- JupyterHub
  - “It is a multi-user Hub that spawns, manages, and proxies multiple instances of the single-user Jupyter notebook server.”
- Workshop yesterday by Chris Scott
  - Using JupyterHub dev environment
  - GPU and machine learning

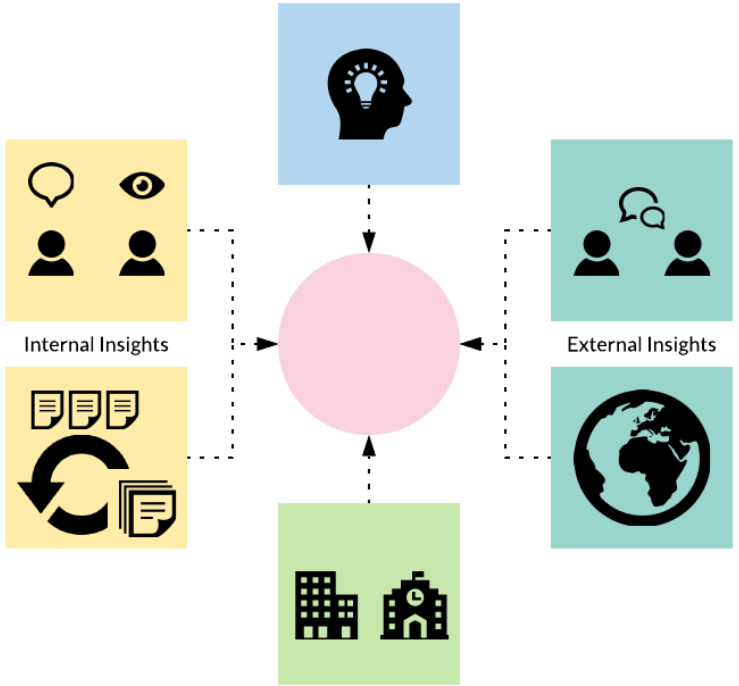


Cloud - Visualisation / VMs / Virtual Labs

- Visualisation for graphic intensive tools
  - Experiments by Wolfgang
  - Not packaged/productised
    - need expert consultation for access
- Internal devops
  - Hybrid solution
- Using well established resources
- Various containerisation support for easily reproducible research environment

Relationship based approach

- Complex and evolving requirements
- Another example of looking at best practices, but tailoring to local needs



Relationship based approach: Data Repository with GA

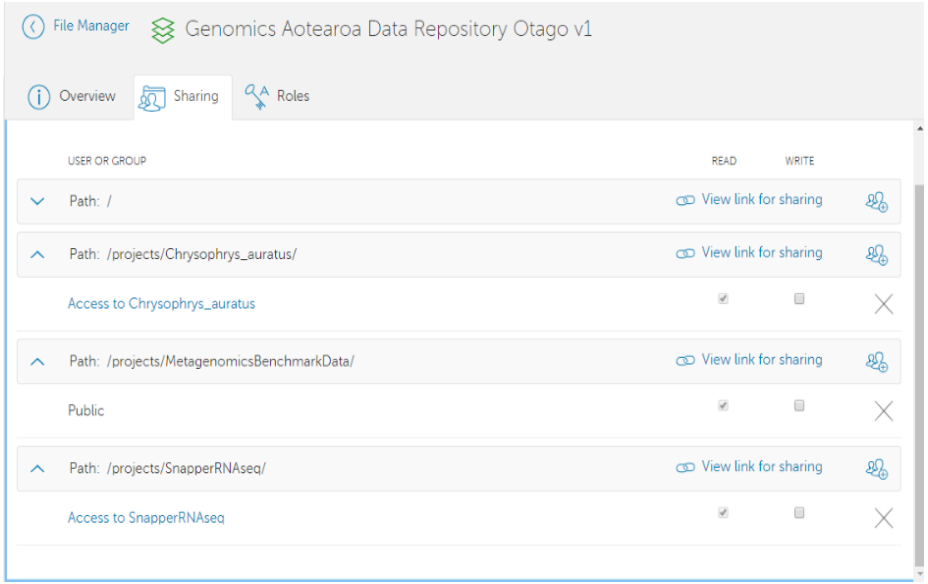
Data Repository

Growing Expectations to Manage

- 2018 - Started off as something simple and open
- Early 2019 - Hosting snapper data sets listed on GA’s data page
- July 2019 - Non-GA data hosted (Prof. Paul Gardner)
- October 2019 - Kakapo data moved back onshore from Australia
- Since then - kokako, manuka...

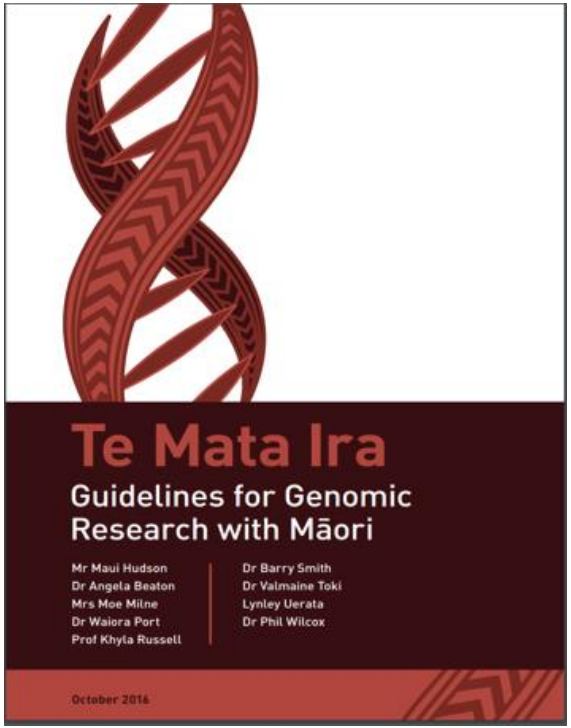
Pioneering: prototyping together

- First use case: Snapper data on AARNET Cloudstor
- Agreement on use of Globus for Group/Access management
- Otago, then NeSI repository



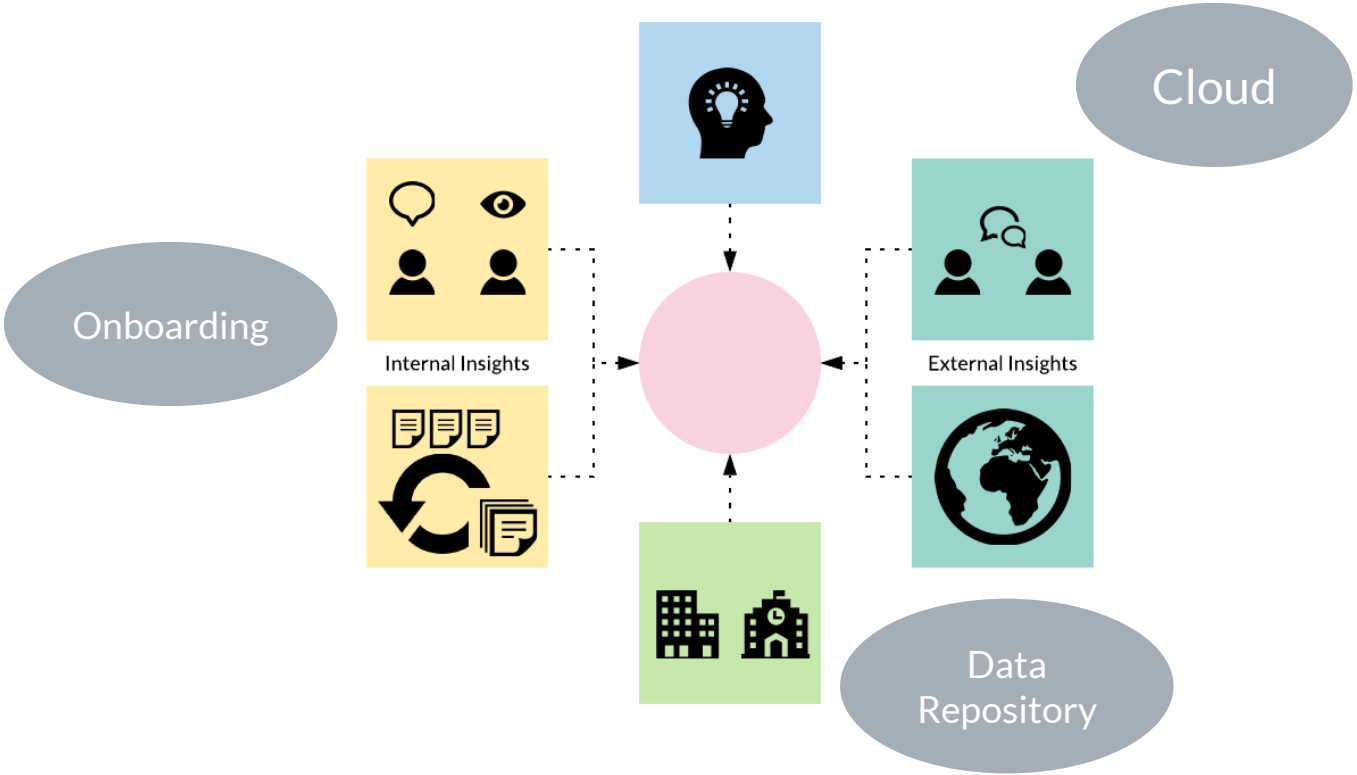
Sensitive data

- Developing relationship with Vision Mātauranga Coordinator Ben Te Aika
- Refining approval workflows and continue to consult and improve
- "*…to manage data storage and access within a Māori values context, something that is different from the standard 'public repository' or 'open access' philosophy*". https://www.genomics-aotearoa.org.nz/about/maori-genomics



Wrapping up

Summarising different types of insights



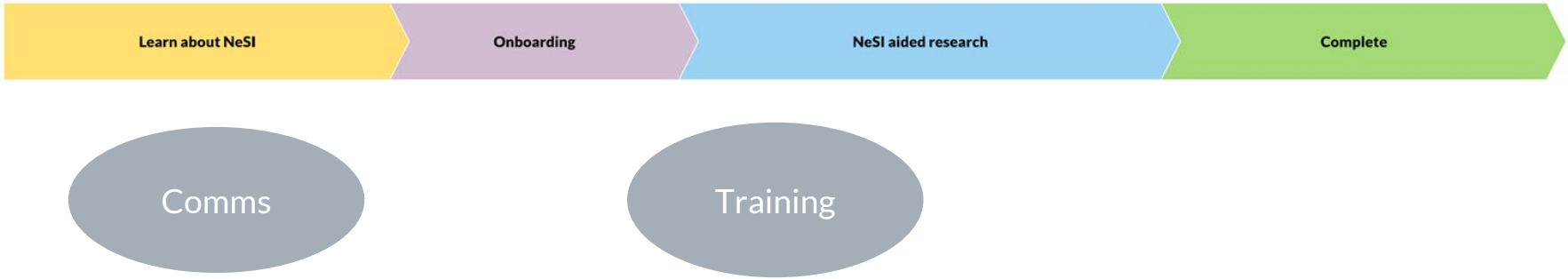
Mapping the work back to impact areas

Onboarding

Cloud

Data Repository

Mapping the work back to impact areas



Different personas, journeys, and blueprints

- Using different frames to simplify
- Acknowledging the complexities underneath
- Innovation often happens in the edges or outside of the norm - every researcher brings something unique for us to solve, and the frameworks we built is relevant as a foundation, a simplified starting point to help us think clearly

Thank you