Aims and Progress of the Training & Workforce development WG

Nicola Mulder, Duncan McCannell (co-chairs)

On behalf of the WG

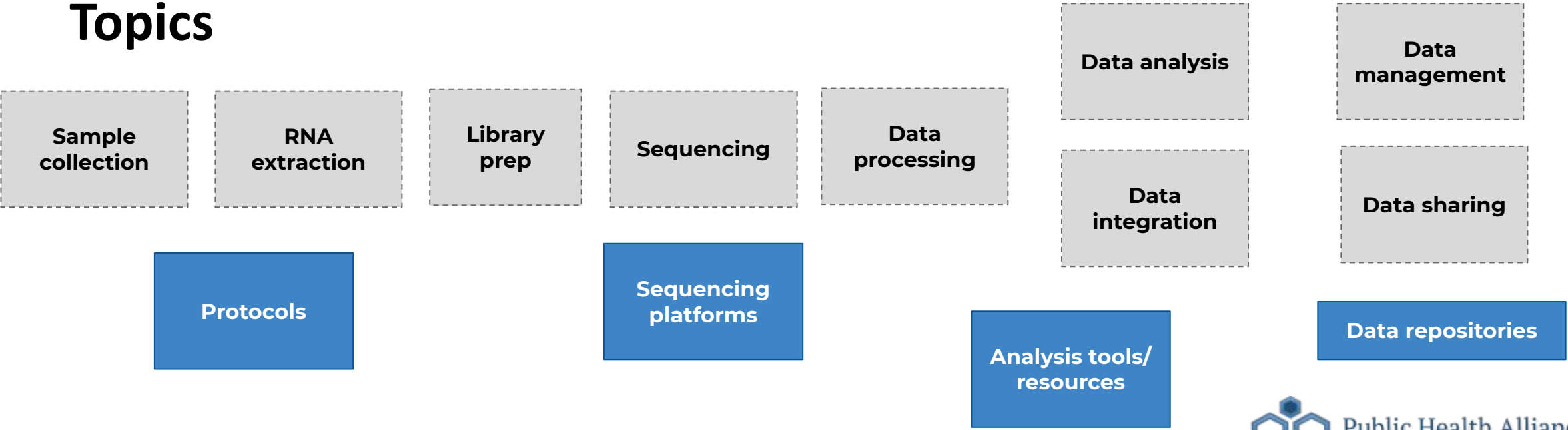Public Health Alliance for Genomic Epidemiology

TWD WG vision

To develop training standards and resources that will help to create a workforce able to effectively implement pathogen surveillance and epidemiology.

- Need to design general and domain specific training on specific topic areas eg. bacterial, fungal, viral pathogens, vectors etc, and identify/tailor courses for different stakeholders.
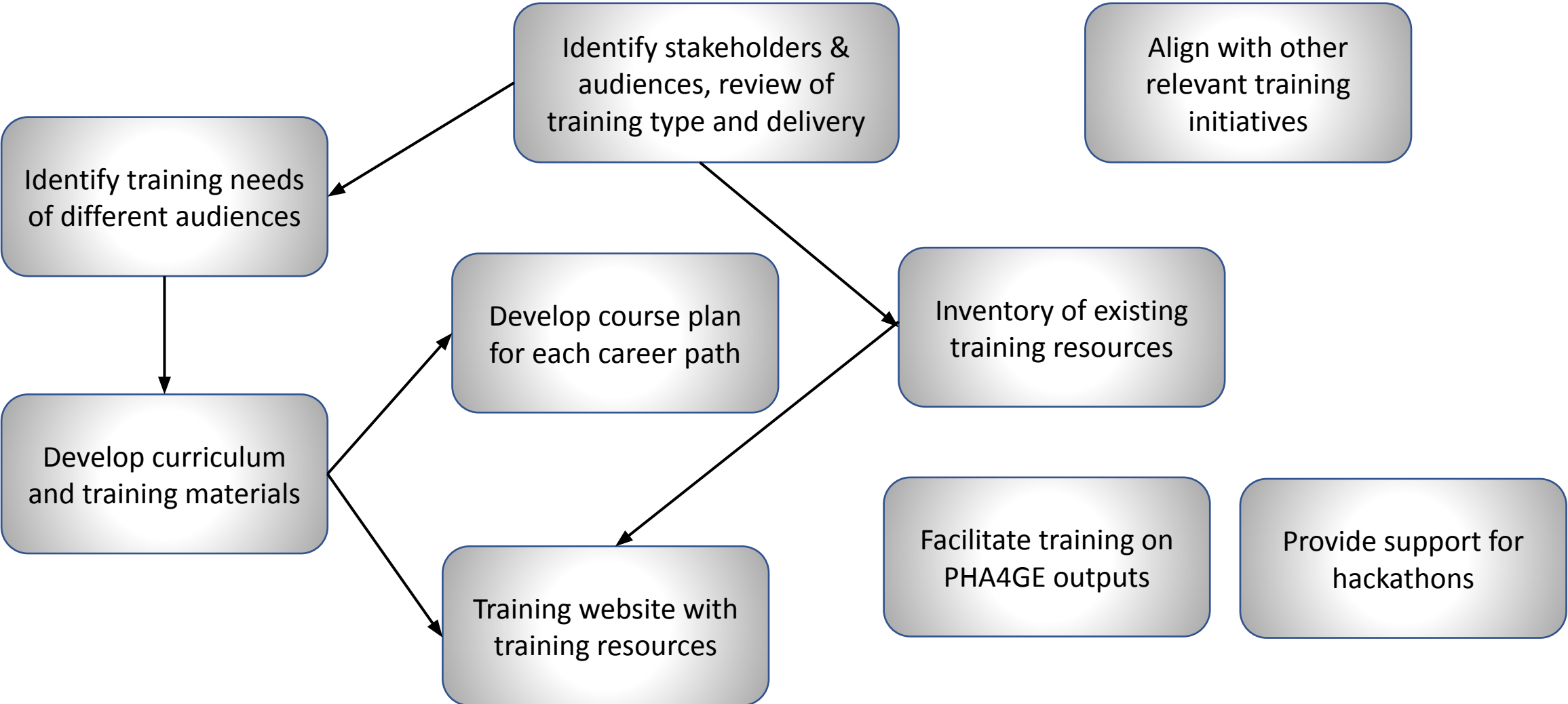- Need to train external stakeholders on the standards and outputs of the PHA4GE consortium

Training Audiences

| Lab technicians | Epidemiologists | Bioinformaticians, IT staff | | Trainers | Healthcare workers | |
| Genomics researchers | Allied public health practitioners | Public health officials |

Topics

| Sample collection | RNA extraction | Library prep | Sequencing | Data processing | Data analysis | Data management |

| | | | | | Data integration | Data sharing |

Protocols

Sequencing platforms

Analysis tools/ resources

Data repositories

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Brainstorming session

Proposed activities

- Manage training content on the PHA4GE website

- Develop training resources for the PHA4GE community

- Collate information on existing training opportunities and materials

- Develop standards for pathogen training

- Support the other PHA4GE working groups with their training needs

Progress to date

- Updated PHA4GE TWD WG website
- Engagement with other PHA4GE working groups
- Defined training metadata to be collected
- Developed survey for those involved in pathogen genomics training

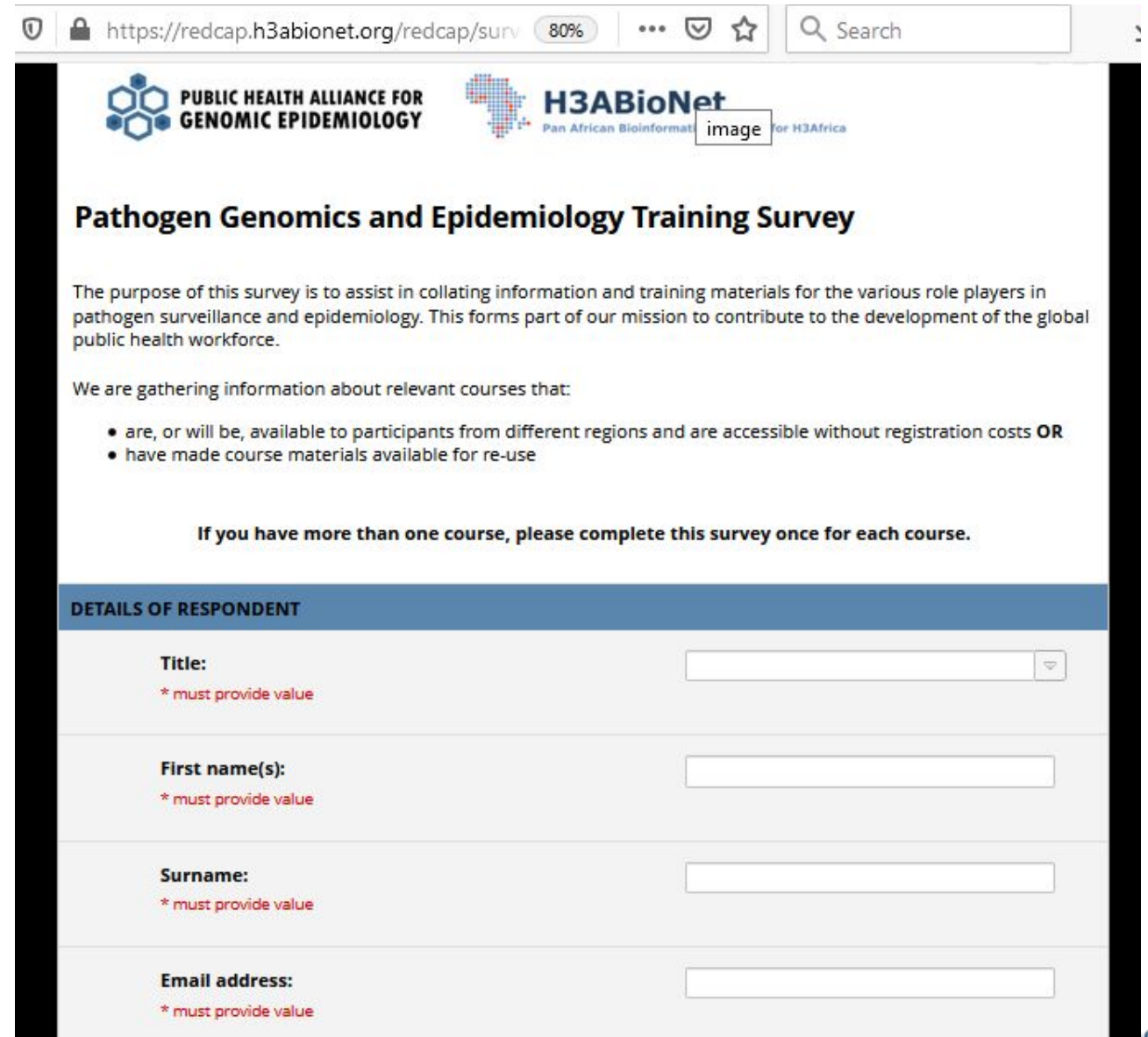# TWD WG website

Engagement with other stakeholders

- PHAGE Ethics WG
  - Discussed how to incorporate ethics into proposed training courses
- PHA4GE Infrastructure WG
  - Need for Sys Admin training
  - Use H3ABioNet Sys Admin "How to" guides
- NGS Academy
  - Overlapping aims in landscaping analysis

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Trainer survey

Organisation name
Course title
Region, time zone
Focus area
Main topic(s) covered (or link to course outline)
Level (introductory/ advanced, etc.)
Area (wet lab/ bioinformatics)
Fomat (Available at any time or presented live)
Target audience
Duration (and frequency, where applicable)
Course is open to/appropriate for participants in other regions
Course materials are available for re-use
Relevant links (hyperlinked)
Additional training courses required by the organisation (areas they may require training courses)

Collating information

Making training FAIR

- Information about training events should be findable
- Where possible training materials, datasets, VMs should be available
  - Metadata about course should be comprehensive
  - Describe objectives, outcomes, audience, etc.
  - Put training materials somewhere that is findable and accessible, use and license information
- Map data to bioschemas
- Help to guide users to most suitable courses and content

Conclusions and next steps

- WG is still new, but done some engagement internally and externally

- Survey will provide into on existing training efforts

- Will need to identify gaps and work with stakeholders to fill them

- Develop/adopt standards for training in public health space

- Support training and dissemination of PHA4GE standards

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- WG members:

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