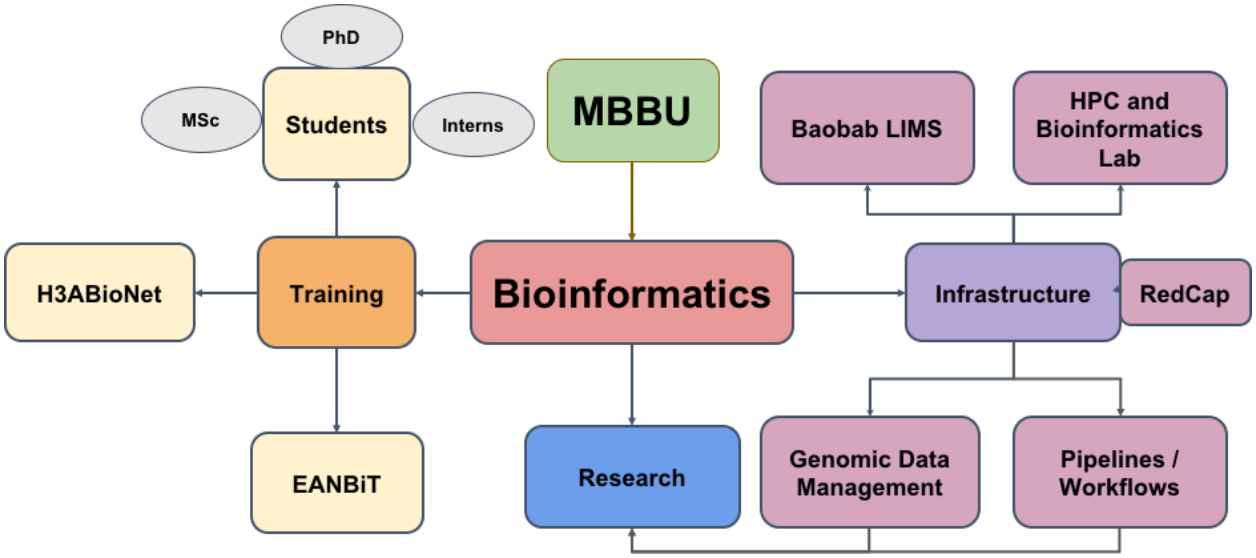
MBBU Bioinformatics Team Strategic Planning

Background

In recent years Bioinformatics has become a central tool in research, especially with the increase in the amount of genomics data being generated for research. The Bioinformatics team, under the MBBU department, met to strategize. In this strategic meeting we sought to understand the history of Bioinformatics at icipe, who we are, and chart the way forward towards delivering on its mandate.

The Bioinformatics team is involved in training, research and infrastructure development, as visualized in the flow diagram below.



Strategy

Bioinformatics Group	
Mission (purpose)	To lead and support cutting-edge bioinformatics research and data management at *icipe*.
Vision	To become a vibrant, productive, innovative, and flexible bioinformatics training,

(Picture)	research and data management hub	
Values	• Integrity • Excellence • Collaboration	
Goals		
	Goal	**Plan**
Short-Term	**Infrastructure:** • Establish data management and electronic data capturing platforms • Provide adequate compute resources via the high performance computing (HPC)	• Make LIMS and RedCap fully operational and adopted • System admin to upgrade the HPC to latest systems • Write a policy on the use o f the HPC
	Research • Establish active Bioinformatics and computational biology research programs • Student research projects	• Compete for research Grants to establish independent research • Collaborate with researchers within *icipe* • MSc and PhD fellowships • Offer bioinformatics support to students
	Training • Increasing Bioinformatics and computing skills • Build our training capacity (focus on the trainers)	• Organise structured training -- workshops, seminars, etc -- to build capacity • Participate in the Carpentries training and other train the trainer courses
Long-Term	Achieve our vision on infrastructure, training and research capacity	
Key Results	**Infrastructure:** - Scientists in all fields at *icipe* have improved data management - Streamlined genomics data management - Functional electronic data capture system - Adequate computing resources **Training:** - Enthusiastic bioinformatics community in East Africa	

	- Students and researchers within icipe are equipped with basic bioinformatics and computing skills **Research:** - Internationally recognised research output - Improved research data tracking and sharing within *icipe*
Strategy	
Insights	The purpose of this strategy is to create a shared vision and mission as a Bioinformatics team at *icipe*. A shared vision and clear roles would focus our efforts to what is important and impactful. The strategy meeting also brought together Baobab LIMS stakeholders to brainstorm on how to move the project forward to adoption. We applied design thinking techniques: empathy, ideation, and prototype. Finally, the strategy meeting sought to lay down policies on the use of the HPC.
Resourcing Sustainability	The Bioinformatics team is composed of the Head of Animal Health Theme, Head of Molecular Biology and Bioinformatics Unit, a Bioinformatician, a project manager (EANBiT H3ABioNet), 2 interns and 2 MSc students. The team is currently funded through research grants but we are also exploring project and institutional buy in, as we grow as a team.
Metrics	To track our progress towards our strategy, we will use the following metrics: ● Size of the Bioinformatics team ● Publications ● Number of training events ● Number of students supported ● Number of students and scientists making use of the infrastructure supported by the Bioinformatics team ● Fully implemented and adopted LIMS system before the end of the year