EPI: Enabling Personal Interventions.

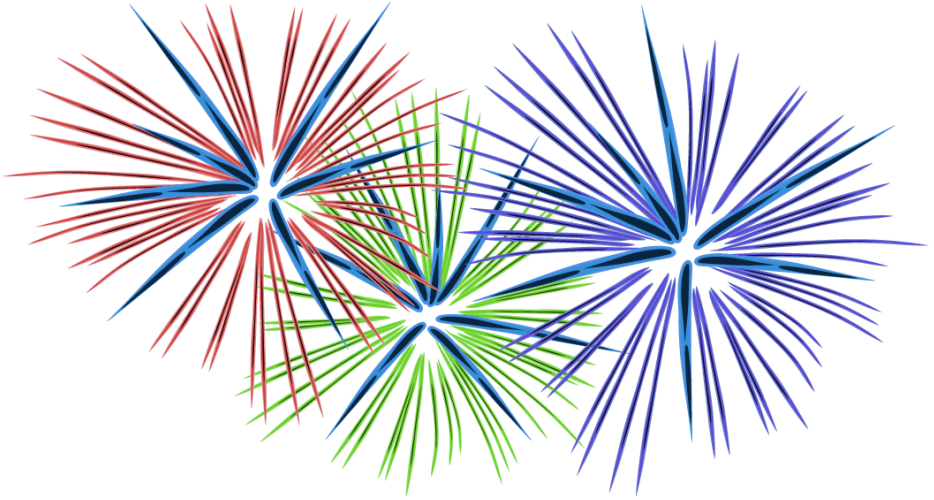
Kick off meeting

April 25th, 2019

Agenda

Nr	Item	Who	Duration
1	Welcome and reminder overall project goal	Cees	15 min
2	Update on project structure	Josine	15 min
3	Update on PhD status	PhD supervisor/promotor	60 min
4	Drinks		

1. Welcome



1. Project goal

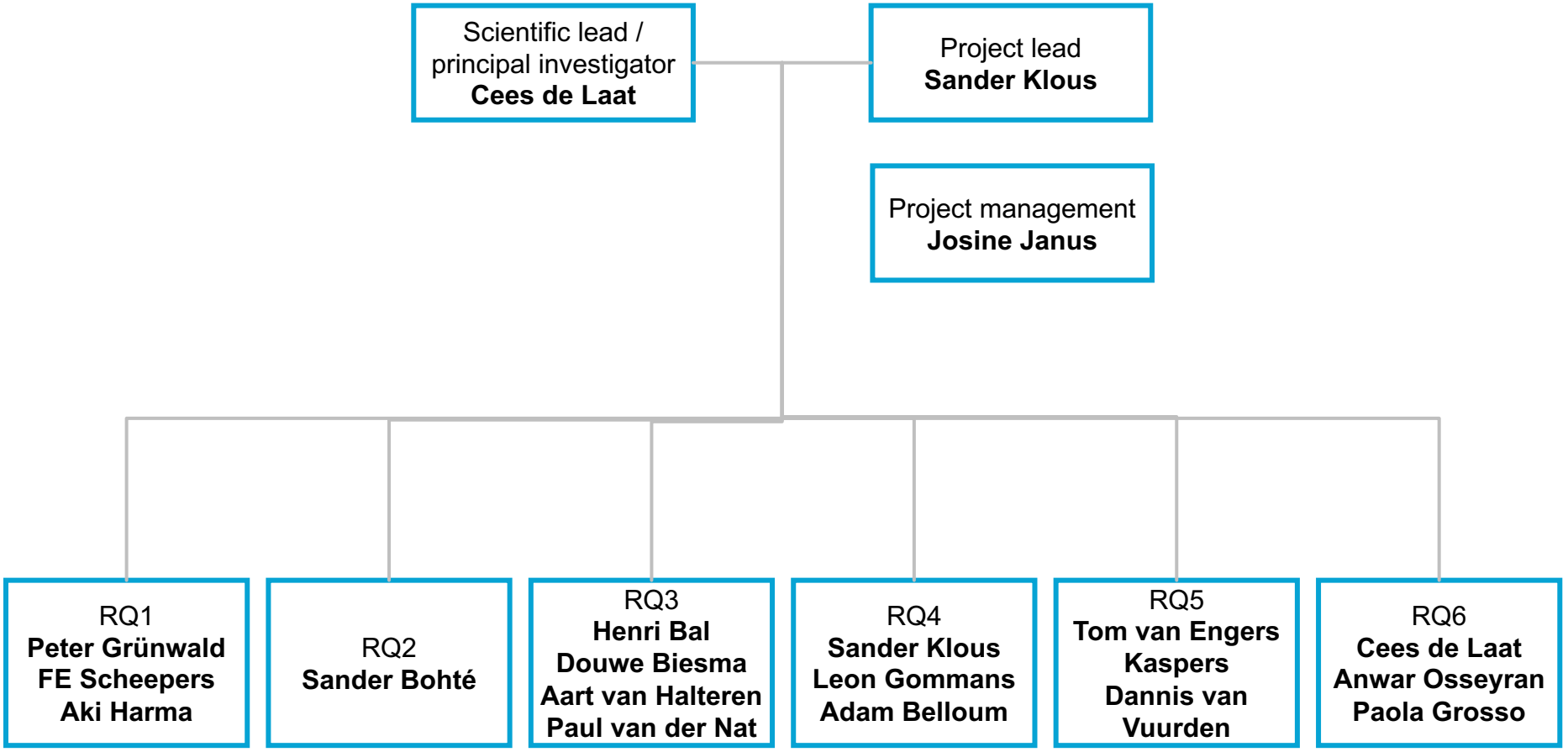
“The overall aim of this project is to explore the use and effectiveness of data driven development of scientific algorithms, supporting personalized self- and joint management during medical interventions / treatments.

The key objective is to use data science promoting health practically with data from various sources to formulate lifestyle advice, prevention, diagnostics, and treatment tailored to the individual, and to provide personalized, effective, real-time feedback via a concept referred in this proposal as a digital health twin.”

1. Research questions

- **RQ1: Dynamically Analyzing Interventions based on Small Groups: how can we determine, based on as little data as possible, whether an intervention does or does not work for a small group or even an individual patient?**
- **RQ2: Dynamically Personalizing the Group: how can we identify effective intervention strategies and optimize personalization strategies applicable for different patient and lifestyle profiles via dynamic (on-line) clustering of patients? Can those clusters be adapted as new data about patients and results of interventions come in and as other data may be removed or modified?**
- **RQ3: Data and Algorithm Distribution: what are the consequences of a distributed, multi-platform, multi-domain, multi-data-source big data infrastructure on the machine learning algorithms and what are potential consequences on performance?**
- **RQ4: Adaptive health diagnosis leading to optimized intervention: how can we enhance self- / joint management by dynamically integrating updated models generated from machine learning from various data sources in state of the art health support systems that based on personal health records, knowledge of health modes and effective interventions?**
- **RQ5: Regulatory constraints and data governance: how can we create scalable solutions that meet legal requirements and consent or medical necessity-based access to data for allowed data processing and preventing breaches of these rules by embedded compliance, providing evidence trails and transparency, thus building trust in a sensitive big data sharing infrastructure?**
- **RQ6: Infrastructure: how can the various requirements from the use-cases be implemented using a single functional ICT-infrastructure architecture?**

2. Project structure – proposed governance



2. Project structure – proposed meeting structure

Frequency	Type	Who	Goal
Twice a year	Conference	Everybody	• Update on RQ's by lead (names in structure) • Decide whether there are parts of the project that are suitable to move into production
Bimonthly	Group meeting	PhD's, daily supervisors, project management	• Discuss bigger picture • Determine areas of cooperation • Discuss distribution of work
Monthly	Informal meeting	PhD and/or supervisor, project management	• Keep track of consistency of project • Determine opportunities
Additional	TBD	Project management, TBD	• Coordination of work moving into production

3. Update on PhD status

- What will the PhD do?
- How is supervision going to be arranged?
- How is the response to the vacancies that were published?
- Sharing candidate information (if suitable)

RQ	Name	UvA	VU	CWI	Philips	Surfsara	UMCU	Antes	St. Antonius	PMC
1	Dynamically Analyzing Interventions based on Small Groups			x	x		x	x		
2	Dynamically Personalizing the Group			x						
3	Data and Algorithm Distribution		x						x	
4	Adaptive health diagnosis leading to optimized intervention	x								
5	Regulatory constraints and data governance	x								x
6	Infrastructure	x				x				

4. Drinks

Thank you