DIGITAL COMPETENCE CENTER

UNIVERSITY OF TWENTE.

INTRODUCTION TO CLOUD COMPUTING

DCC THEMATIC SESSION ON CLOUD COMPUTING

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Cloud computing is the on-demand availability of computer system resources, especially **data storage** and **computing power**, *without direct active management* by the user

Cloud Computing Services

- **Software** as a Service (**SaaS**)
  [On-demand software]
  - Provider supplies the infrastructure and platforms that run the applications
  - User uses provided applications through an interface

- **Platform** as a service (**PaaS**)
  - Provider supplies the infrastructure, services, and tools that allow the user to deploy applications
  - User deploys applications and alters settings of the application-hosting environment

- **Infrastructure** as a service (**IaaS**)
  [On-demand hardware]
  - Provider supplies the infrastructure
  - User deploys and run arbitrary software, including OS

- **Function** as a service (**FaaS**)

Currently we are using one!

- R Studio Cloud
- Matlab Online
- Authorea
- …

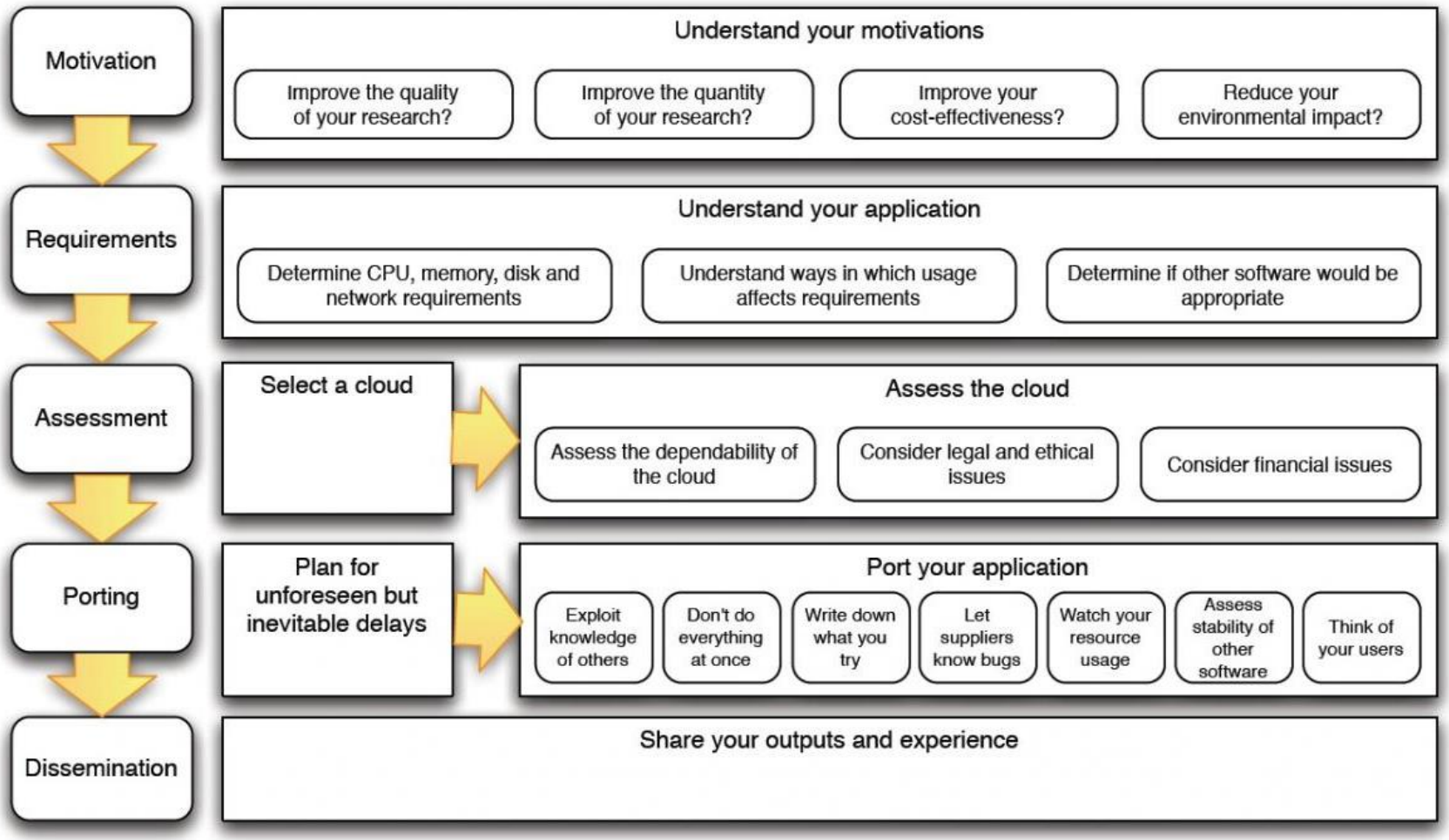
e.g. **ITC Computing Platform**

- Google Colab
- Amazon SageMaker
- Azure ML Studio
- ...

e.g. **LISA VRE**

- Microsoft Azure
- Amazon AWS
- Google Cloud
- …

Moving to the Cloud



Source: [Best practice for using cloud in research (Hong et al., 2018)]