

# National strategy

- Cloud services should always be considered
- And chosen where they are cheapest and most expedient
  - Information security must be catered for

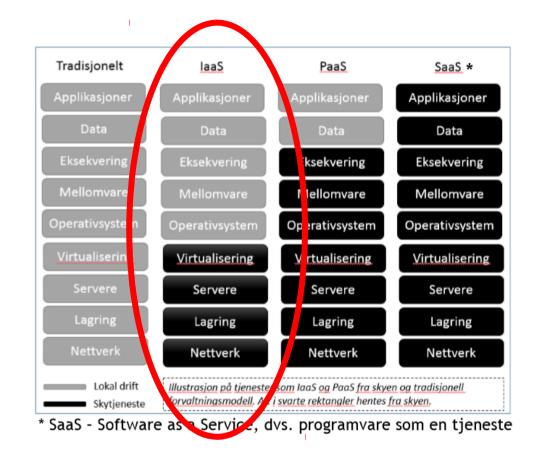






#### Cloud technology and services

- The Cloud Computing concept refers to physical components, software, services, business models and delivery models.
- It represents a paradigm shift for production, distribution and use of IT services



• Example: Infrastructure as a Service (IaaS) - buy datacentre functionality over the Internet instead of investing locally.

#### Why choose cloud services?

- Very fast to set up
- No cost to set up a small instance
- Easy scaling
- IaaS: Flexibility

• ...

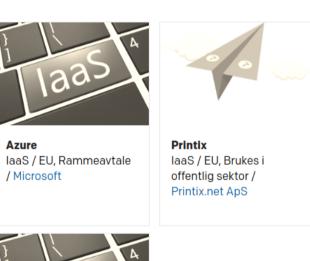
# You can do it yourself!!!

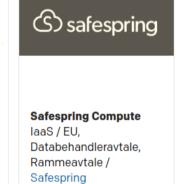
Now.

## Sector suppliers

UH-sky, https://www.uninett.no/sky

- Safespring
- UH-laaS







## UH-sky: OpenStack laaS

- Set up CLI
  - Install openstack command-line interface
  - Log in on web GUI to get the API password
  - Set up CLI
- Use CLI
  - Make a machine
  - Log in on the machine
  - Attach storage
  - Make a new machine and move the storage to that machine
- Play around
  - E.g. install a graphical software package
  - Or install a web server
  - Or install your workflow tools

My lesson notes are at

https://arnsteio.github.io/UH-laaS-mini-workshop/







#### Install command-line interface

#### Windows:

- Install Python.
- Ensure that Python directory is defined in the PATH environment variable, then run (as admin):
- C:\>pip install python-openstackclient

#### Linux

- apt-get install openstack-cli
- or
- apt install python3-openstackclient
- or
- apt install python-dev python-pip
- pip install python-openstackclient

### Why not use cloud services?

- Compliance issues. Data protection
- Legacy systems
- SaaS / PaaS: inflexibility
- Uncertain costs
- Skill set