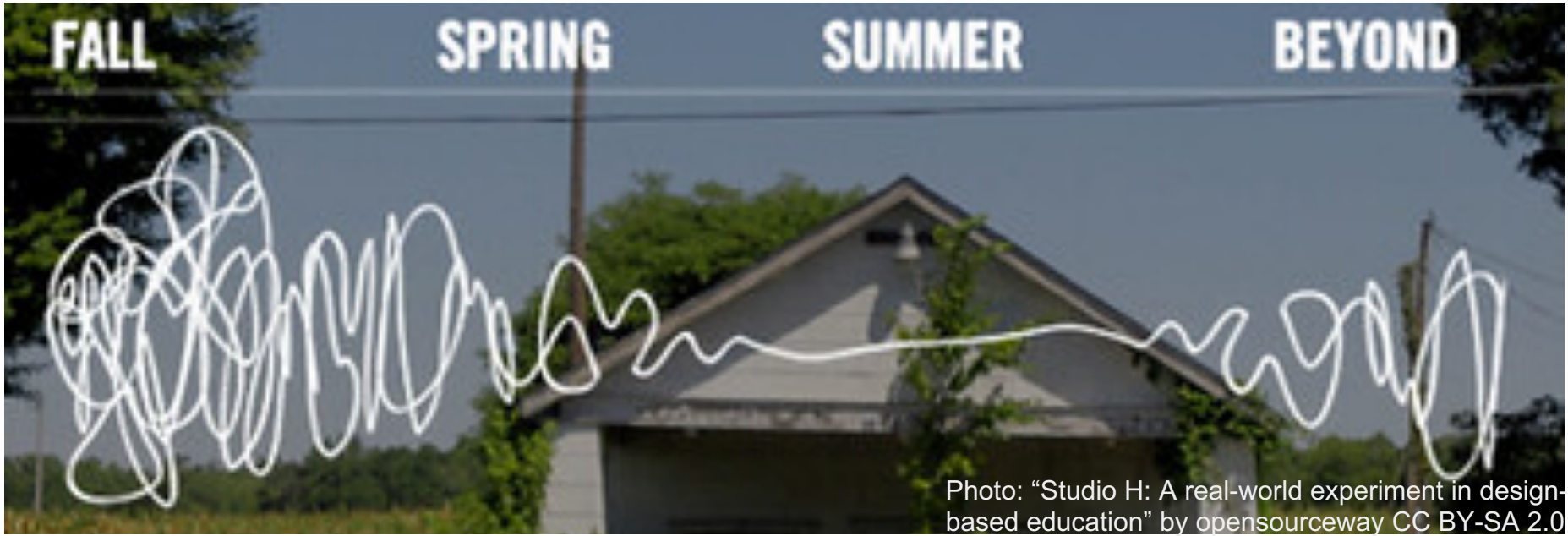

NRENs responses to emergency distance education

Experience from Norway, Slovenia, Netherlands and Croatia

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TF-EDU 5th Meeting, 29.10.2020.

country	Norway	Netherlands	Slovenia	Croatia
NREN	UNIT	SURF	ARNES	CARNET
Education level	HE	HE	primary and secondary schools HE	primary and secondary schools HE
No of member institutions	220	110 (research, HE, vocational, uni-hospitals)	1600+ (250.000 users)	1300 schools (520.000 users) 200 HE
No of employees	200	373 (2019)	50	150
Annual budget in million EUR (appr.)	115 (47 turnover + contracts)	200	5-6 + inf.& eq.	15 */without major projects/*

Norway, UNIT

Key challenges

- **Uncertainty** of the situation, creating a heavy mental load and stress for most people in society
- **Technical** (heavy load on systems caused downtime/unavailability – minor issues and passed quickly)
- **Skills** (not knowing how to use the tools optimally)
- Now: similar challenges

What worked?

Previous experience and services

- ✓ Many tools and experiences with the use of LMS, digital assessment, plagiarism checkers, video-conferencing etc (handled moving lectures to video format pretty well)
- ✓ LMS and digital assessment quite established
- ✓ Most exams (~70%-80%) already digital before the pandemic
- ✓ Having a common and established SIS system
- ✓ More joint procurements (smaller tools)

Pre-existing collaboration model with the HE sector - frequent communication and meetings, strong and close relationship with the HE sector.

Netherlands, SURF

Key challenges

- Video tools in high demand - we made an enormous effort to negotiate good conditions and arrange a contract, so that institutions can **now safely use ZOOM**
- Many **ad hoc** decisions have been taken because of the pressure. Now comes the realization that this 'excuse' can no longer be used.
- Putting out the fires.

What worked?

Discussion, community

- Created an overview of tools that can be used in education - identify the most common tools for various functionalities.
- Community engagement – Q&A and experience by community
- Make room for questions and also deal with them ad hoc - insight into what can be done differently/better.
- DPIA for online proctoring

Putting things into perspective

- Opened discussion about ad-hoc decisions - looking at the terms and conditions of the applications that have been purchased quickly – what choices need to be made
- A bit more perspective on the future – “but everyone is still in crisis mode.”

Slovenia, ARNES

Key challenges

- **SHIFT** from experimental/complementary digital tools to total dependency (all edu levels)
  - need to (re)organize teaching/learning process,
  - confusion about tools (what to use and how)
- **10-100x rise** of (over)load on many services (LMS, email, VoD, videoconferencing, AAI):
  - collapse of Moodle (quickly reconfigure the architecture for scalabilitiy, lack of servers but main sufferload is on people)
  - VC challenge (HE) - old services (Adobe Connect, Pexip) not scalable (licensing model), alternative - Jitsi
- Identity management (AAI) & new tools (Zoom, Jitsi etc.)

What worked?

Tough decisions

- Leave Jitsi and buy Zoom (4schools + Universities the same)
- Scaling of Moodle - new territory, lacking experience; another short collapse, now optimizing

Skills:

- Teacher training and best practice sharing (webinars) a success story
- Expanding local "evangelists" model
  - experienced early adopters (pedagogical skills schools/university)
  - teacher/user training – practice sharing
  - huge demand for workshops, webinars and MOOCs covering this.

Croatia, CARNET

Key challenges

Scaling up digital infrastructure

- Explosion of Moodle and AAI service
- Distributed set of systems (Moodle, MS Teams, Yammer, G Suite for Edu)
- Increased relying on commercial clouds (security, privacy, data)

Digital divide

- 4% report no access, 26% had to share equipment (sample – parents)
- Skills developed primarily for the use of technology in the classroom not for fully online
- Lack of dig. learning materials (vocational)
- Support for the entire education system (1 million users – teachers, children, parents –1/4 of Croatia population)

What worked?

Hybrid approach

- centralized-decentralized actions
- schools choosing platforms - for students had to be one-stop shop
- AAI@Edu.Hr nation-wide authentication protocol - all students and teachers

Monitor, research and evaluation

- Many lessons (MoE, CARNET, academic partners)
- From emergency distance education *(spring) to* flexible **A, B, C models** (fully f2f – hybrid – fully online) (autumn)

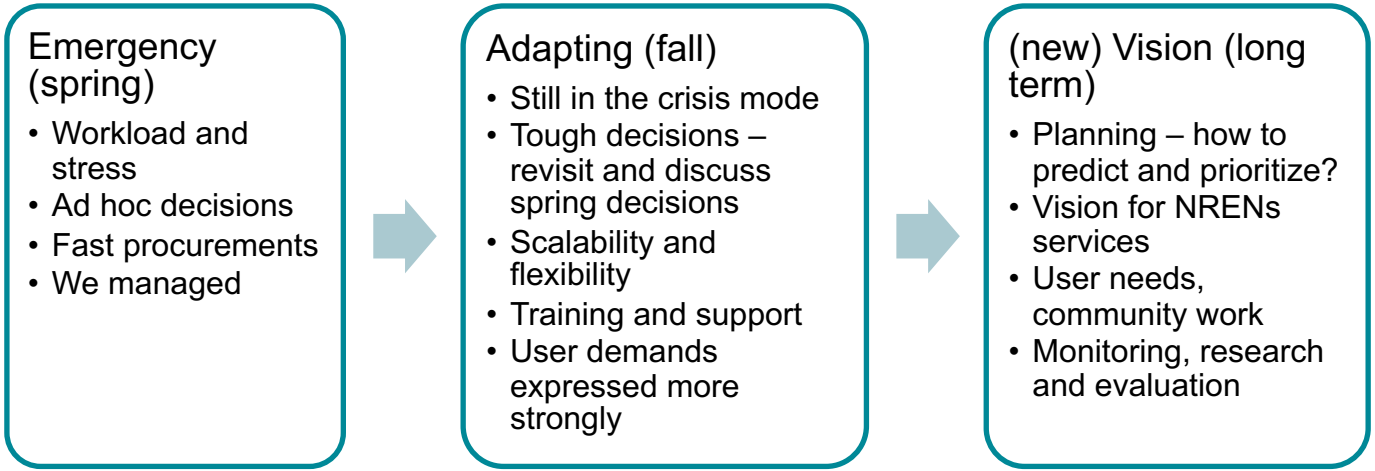
Getting ready

✓ e-Schools (2015-22), School for Life (2018-20)
✓ Equipment, OER, teacher training, services

Challenges #1-3

- #1 Scaling up the digital infrastructure
  - On NRENs side (Croatia, Slovenia)
  - Educational institutions (Netherlands)
  - System providers (Norway, f.ex. VC)
  - Fast procurements (decisions and consequences?)
- #2 Skills
  - Teachers, students (schools, univ)
    - Different set of skills
    - Acquired experience, digital competence, self-confidence and even changed attitudes
  - NRENs – lack of people
- #3 Emotional and psychological capabilities
  - Workload, stress – “fatigue, burnout and even physical pain reported from teachers” (Bilić Meštrić et al, EDEN, 2020)
  - High enthusiasm, effort and time investments BUT difficult to maintain over longer time periods.

Challenge #4. From ad-hoc to strategic planning



Updated or new action plans and roadmaps (Norway, Croatia, Netherlands, Slovenia)

What is the role of NRENS in supporting EC's Digital Education Action Plan?