

Theory

Formative (converge) vs Summative (diverge)

- [y2019p7q8 \(a-e\)](#)

Three waves

- [y2019p7q9 \(a\)](#)
- [y2020p7q9 \(a\)](#)

Visual displays

Goal-oriented

Limitation: Wicked Problem

- [y2018p7q6 \(a,b\)](#)

Smart System

Bayes Theorem

- [y2018p7q6 \(c\)](#)
 - improve the system usability adaptively
- [y2018p27q8 \(a\)](#)
 - when new, no prior basis

Evaluation

- [y2019p7q9 \(b\)](#)
 - w.r.t three waves
- [y2019p7q8 \(f-h\)](#)
 - reliability

Efficient

First wave, Controlled experiments (Speed and accuracy), e.g. KLM A/B Test (Summative Empirical)

- [y2018p27q8 \(c\)](#)
 - practical steps
 - the data, how to analyse
 - and the kind of recommendations to make
- [y2019p7q9 \(d\)](#)
 - viscosity

- [y2020p7q9 \(e,f\)](#)
 - strengths and weakness

Meaningful

Second wave, ethnography (Empirical)

- [y2020p7q9 \(b\)](#)
 - empirical, observation of a phenomena in the world
- [y2018p27q8 \(b\)](#)
 - formative, how

Complex System

CDN

- [y2018p27q8 \(a\)](#)
 - Hidden dependencies ↑ viscosity ↑ visibility ↓
 - mitigation
- [y2019p7q9 \(c,d\)](#)
 - premature commitment / viscosity ↓ hidden dependency ↓
 - notational activity (exploratory design, open)
- [y2020p7q9 \(c-d\)](#)
 - role-expressiveness/secondary notation ↑ diffuseness ↑
 - notational activity (search)