

- I What data do we have?**
- II Examples of articles**
- III My personal interests**



Tuuli Utriainen
Chamonix 22.2.2019

I What data do we have?



I What data do we have?

**DATA since
6 years**

CBI x 5

I4C x 3

RCA x 2

...

pre and post surveys (online)

special surveys (offline)

project evaluations

team's documentation, video, prototypes...



I What data do we have?

DATA FROM..

MENTORS (CERN & external)
TEACHERS
ORGANIZERS
STUDENTS



Eng., design, economy, fashion...
BA, MA, PhD
Europe, US, Asia, Australia
Hackathon, extensive course

...

What was your expectation regarding the CERN mentoring?

Formula Bar

	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	
	How comfo	Why?	As a design	Why?	How did the	Why?	What was	What was y	How effecti	Why?	Did you pre	Why?	Feasibility (Viability (wi	Desirability	Impact (will	Other
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II Examples of articles



II Examples of articles

SO FAR:

Container Challenge – Prototyping Distributed Collaboration (2014)

Proceedings of E&PDE 2014, Design Education and Human Technology Relations, University of Twente, The Netherlands

Distributed Experiments in Design Sciences, A Next Step in Design Observation Studies? (2015)

Proceedings of International Conference on Engineering Design (ICED 15) Vol 2: Design Theory and Research Methodology Design Processes, Milan, Italy

Mixing Design, Management and Engineering Students in Challenge-based Projects (2016)

12th International CDIO Conference, Turku, Finland

Challenge Based Innovation – translating fundamental research into societal applications (2017)

International Journal of Learning and Change

Mapping remote and multidisciplinary learning barriers: lessons from challenge-based innovation at CERN (2017)

European Journal of Engineering Education

Technology and need as starting points for innovation - experiences from multidisciplinary student teams (2017)

American Society for Engineering Education

Triangulation of Three Different Research Methods when Capturing Participant Data During Engineering Education (2017)

American Society for Engineering Education

Pain points of design team work: Mapping experiences in remote and co-located environments (2017)

CERN IdeaSquare Journal of Experimental Innovation

II Examples of articles

Data for e.g.:

Motivations in hackathons: Participants vs. organizers
(ATTRACT Young Hackathon 2018)

How ideas effect project outcomes: Types, amount and timing
(I4C 2018)

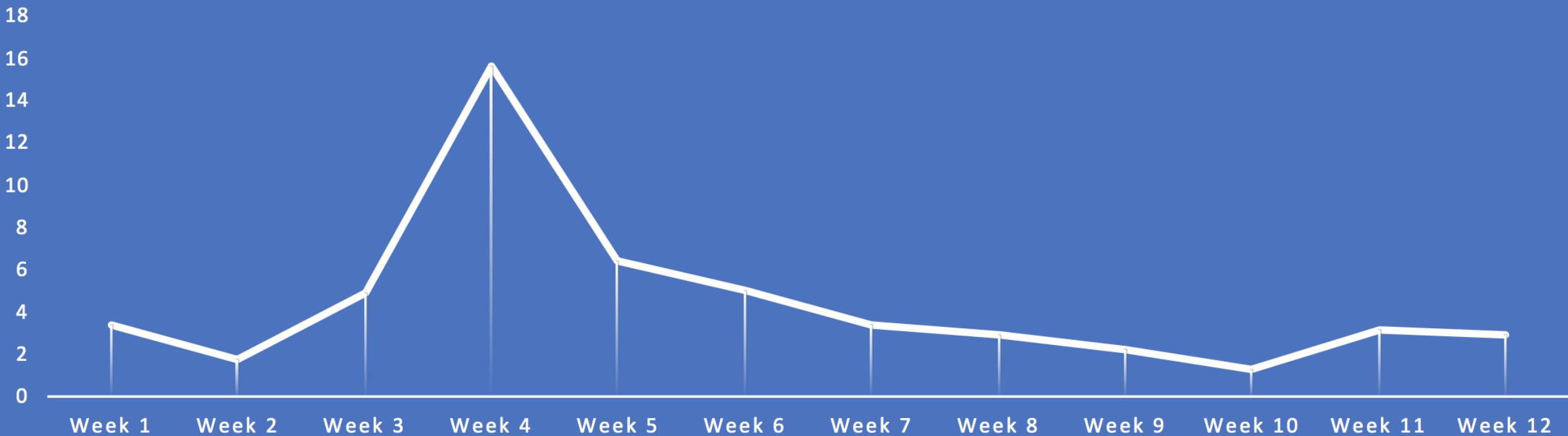
Organized vs. serendipitous meetings in innovation collaboration (Talking with strangers)
(Laurea 2018, -2019)

Network view for innovation collaboration: Projected stakeholder map vs. materialized interactions
(CBI 2019)



I4C2018

AVERAGE IDEAS PER WEEK



II Examples of articles

FYI:

CIJ submission as a deliverable (I4C, TUDelft)

III My personal interests



III My personal interests

OPEN DATA – offering anonymized set for different scientists?

Process for collaboration? ++pov

MA/PhD students to work with us on data?

My own PhD

researcher in residence?



III My personal interests

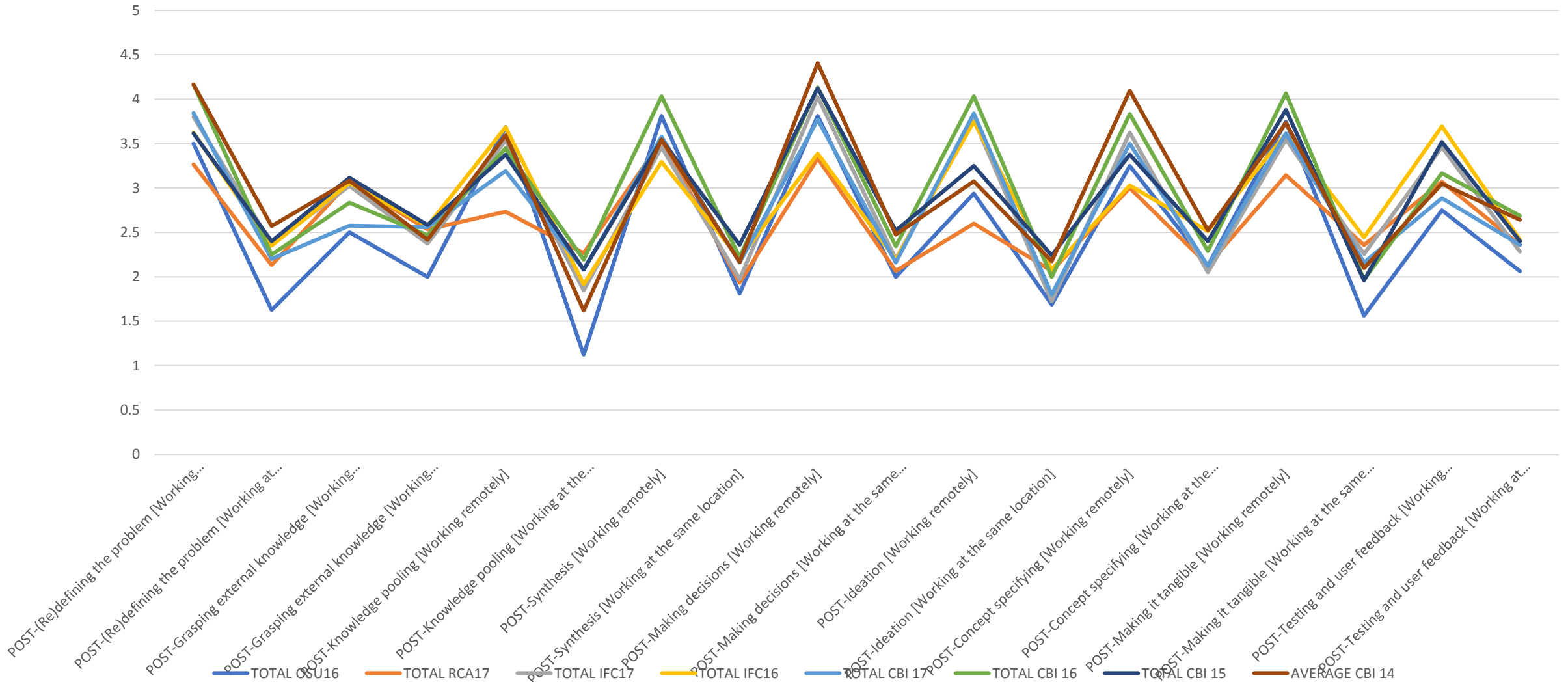
Innovation collaborations



III My personal interests

**“How difficult is X for your team...
online/offline?”**

III My personal interests



III My personal interests

**Making the data dance
...in the form of a PhD**