Designing New Learning Spaces

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Designing New Learning Spaces

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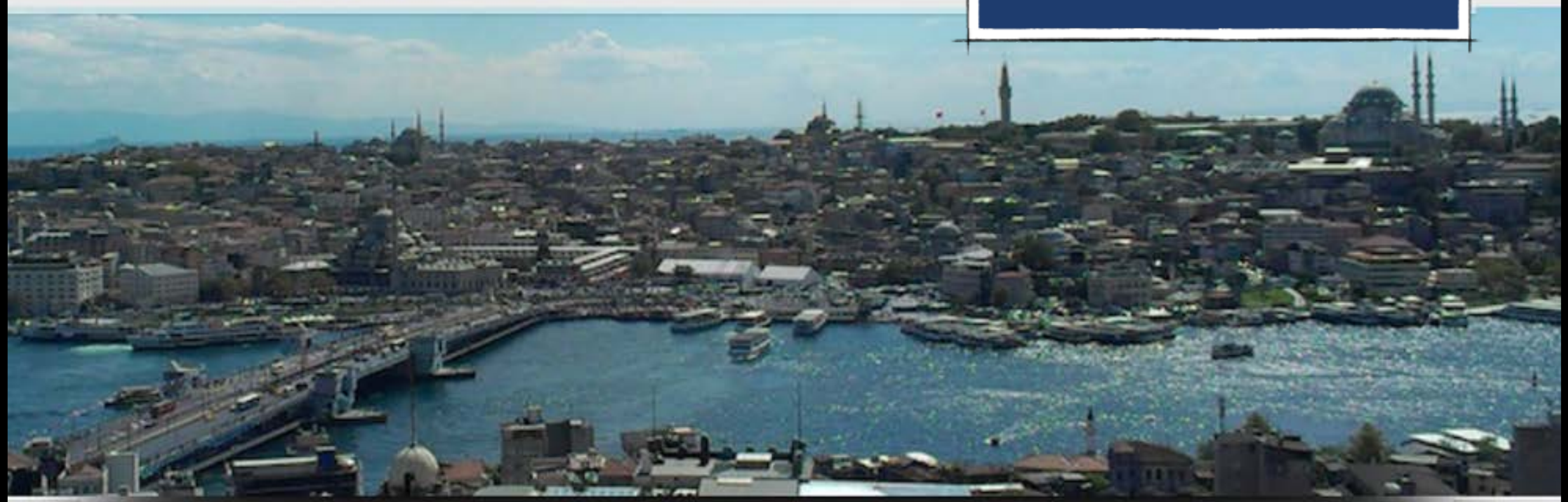
The 13th World Conference on Mobile and Contextual Learning

Stay tuned

MARKETING

Home News Call for Papers Committees Location



13th World Conference on Mobile and Contextual Learning

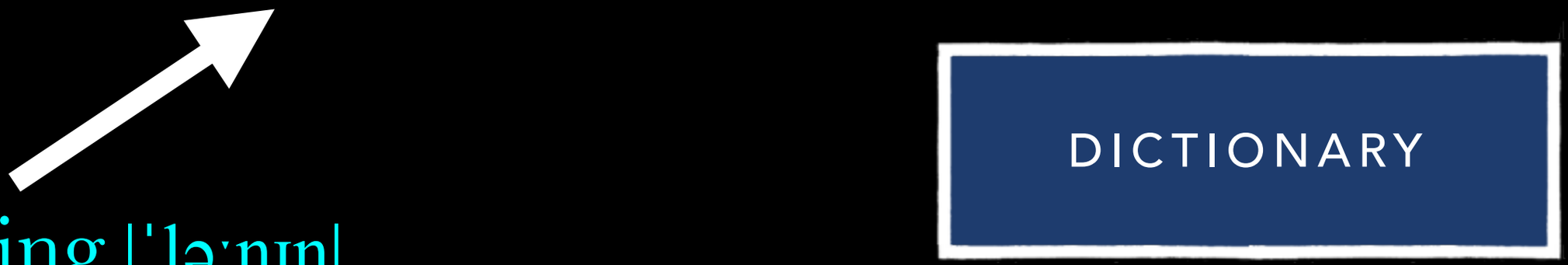
Nov. 3 - 5, Kadir-Has University, Istanbul, Turkey

We invite you to the 13th World Conference on Mobile and Contextual Learning. This year the conference has the focus topic "Mobile as mainstream – towards future challenges in mobile learning" and we are expecting a wide range of contributions representing the diversity of the mobile learning community.

Days	Hours	Minutes
241	23	53

Register now!

unintentional |ʌnɪnˈtɛnʃ(ə)n(ə)l|
adjective
not done on purpose: *the translation added a layer of unintentional comedy*.



learning |ˈlə:nɪŋ|
noun [mass noun]
the acquisition of knowledge or skills through study, experience, or being taught: *these children experienced difficulties in learning* | [as modifier] *: an important learning process*.

LEARNING SPACES

OPEN EDUCATIONAL RESOURCES

iTunes U, Youtube EDU, …

Coursera, edX, OpenLearn, Futurlearn

GLOBE, Ariadne, ODS, MACE, Sharetec, MELT…

NEW INTERFACES

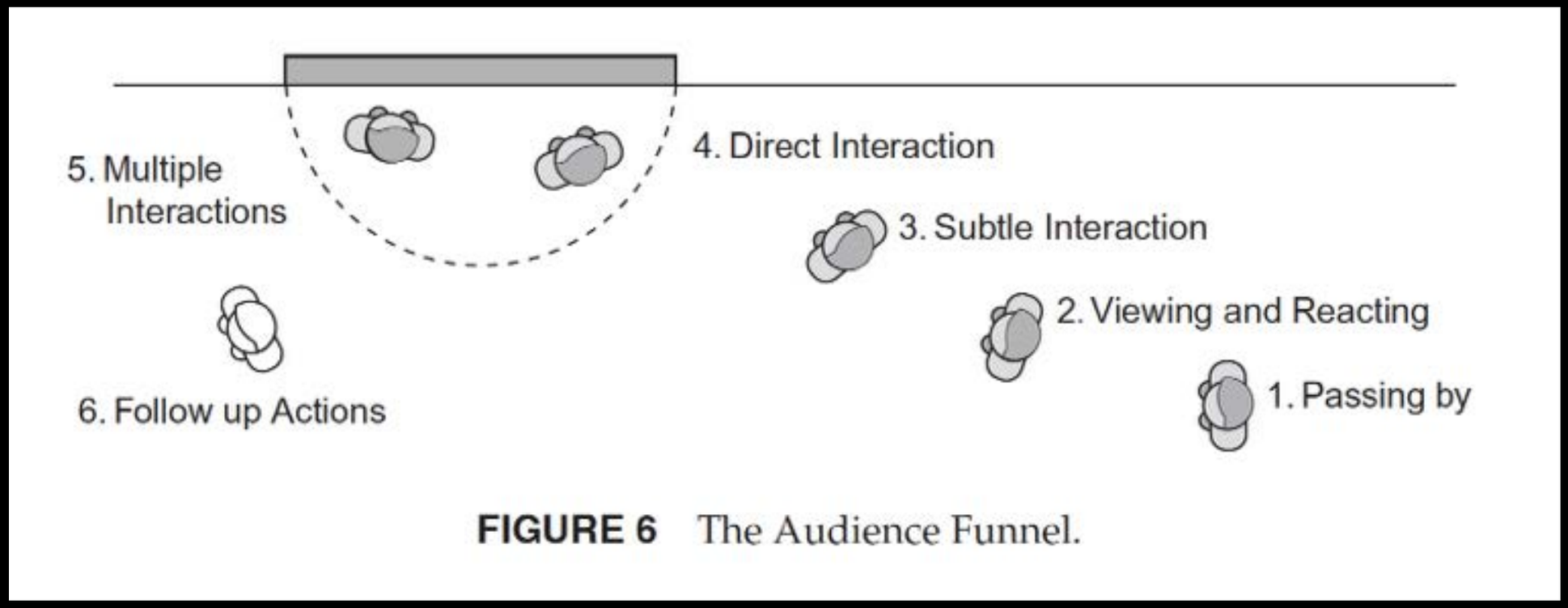


FIGURE 6 The Audience Funnel.

Augmented Reality

Tangibles, Sensor-Based Interfaces, Tabletops

Situated Displays, Ambient Displays, Public Displays

"The most profound technologies are those that disappear. They weave themselves into the fabric of everyday life until they are indistinguishable from it."

–MARC WEISER

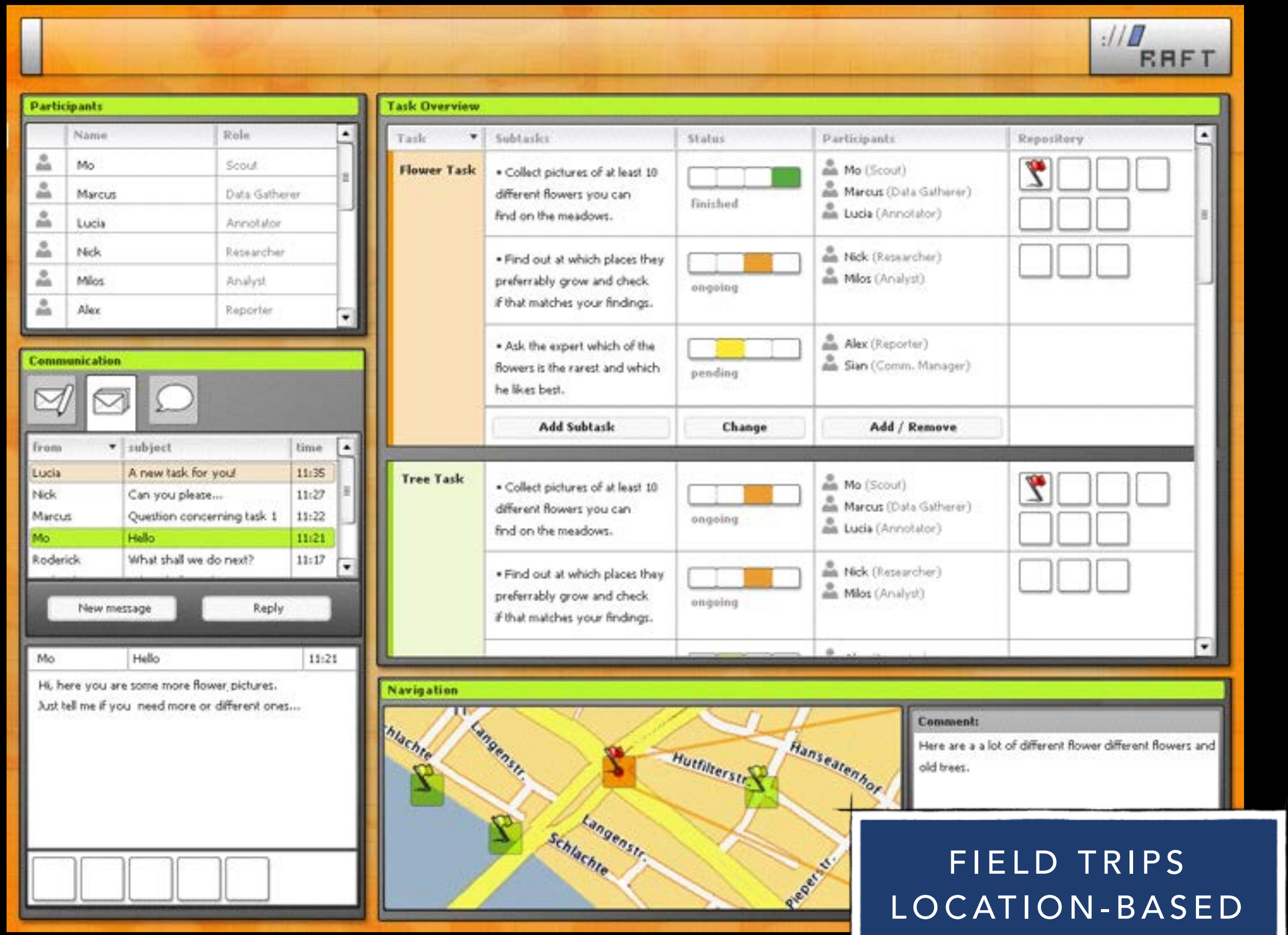
HOW TO CREATE LINKS BETWEEN DIGITAL AND PHYSICAL

#1 LINKING THE WORLDS

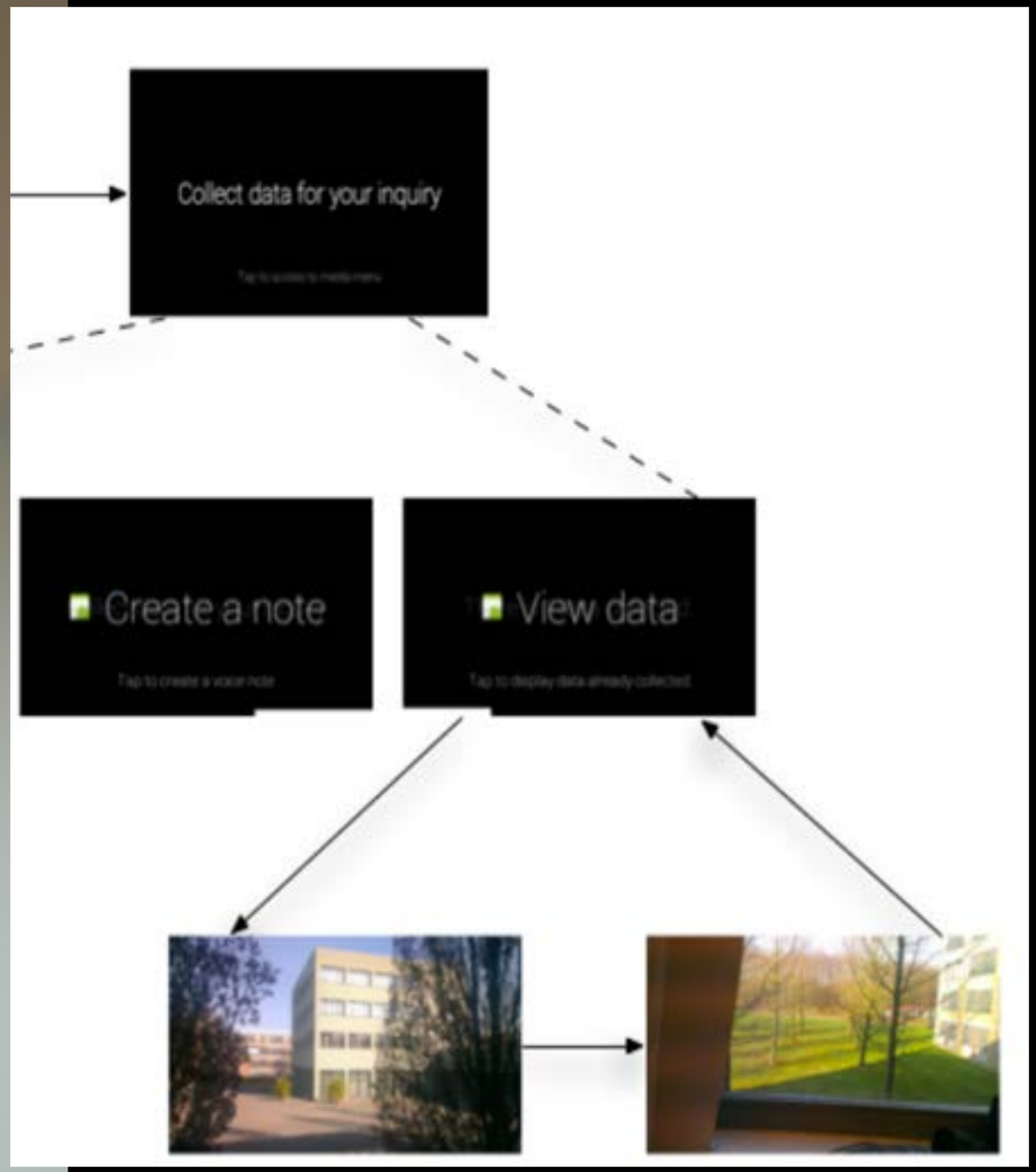
SEAMS IN LEARNING SUPPORT
(WONG ET AL, 2011)

- Formal and informal learning;
- Personalized and social learning;
- Across time; locations, social contexts
- Combined use of multiple device types;
- Physical and digital worlds
- Multiple learning tasks knowledge synthesis

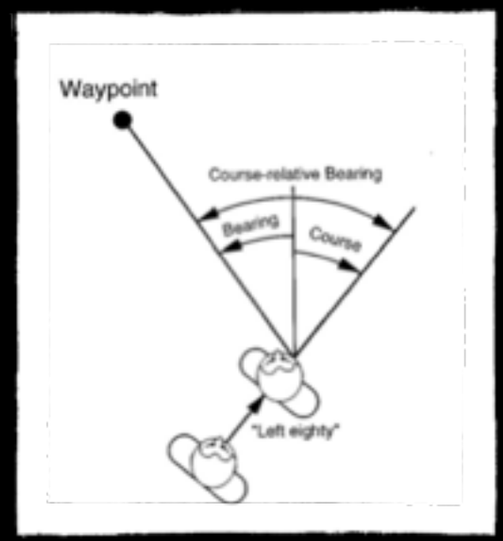
Wong, L.-H., & Looi, C.-K. (2011). What Seams Do We Remove in Mobile Assisted Seamless Learning? A Critical Review of the Literature. Computers & Education, 57(4), 2364–2381. doi:10.1016/j.compedu.2011.06.007



FIELD TRIPS
LOCATION-BASED



"Suarez, A., Ternier, S., Kalz, M., & Specht, M. (2014). GPIM: Google Glassware for Inquiry-Based Learning. In C. Rensing et al (Eds.), Proceedings of the 9th European conference on Technology Enhanced Learning - EC-TEL 2014: Open Learning and Teaching in Educational Communities, LNCS 8719 (pp. 530-533). Graz, Austria.."

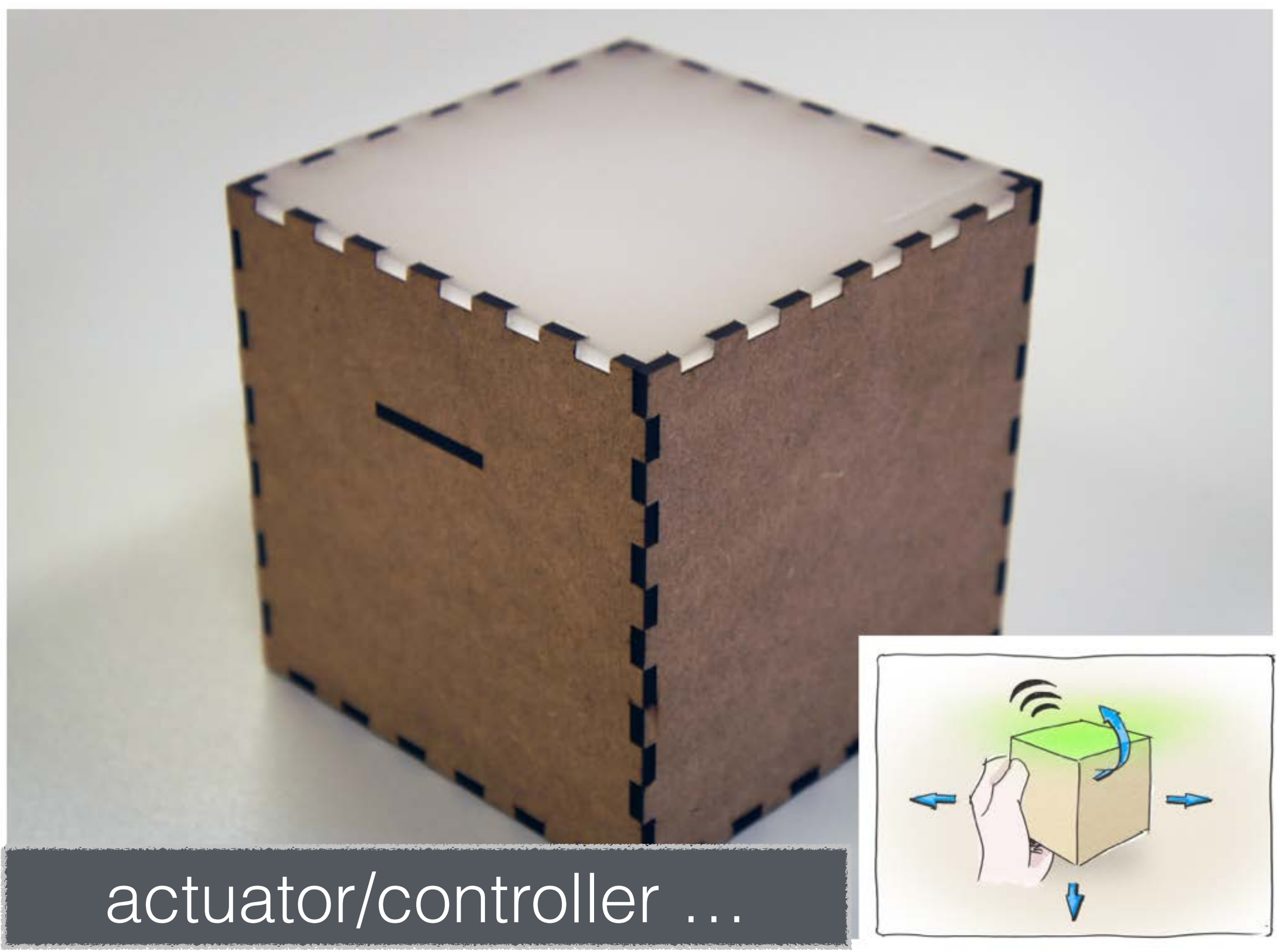


audio augmented spaces ...

mæve

MACE | EVERYVILLE
interactive installation at the Venice Biennale '08

objects as controllers …

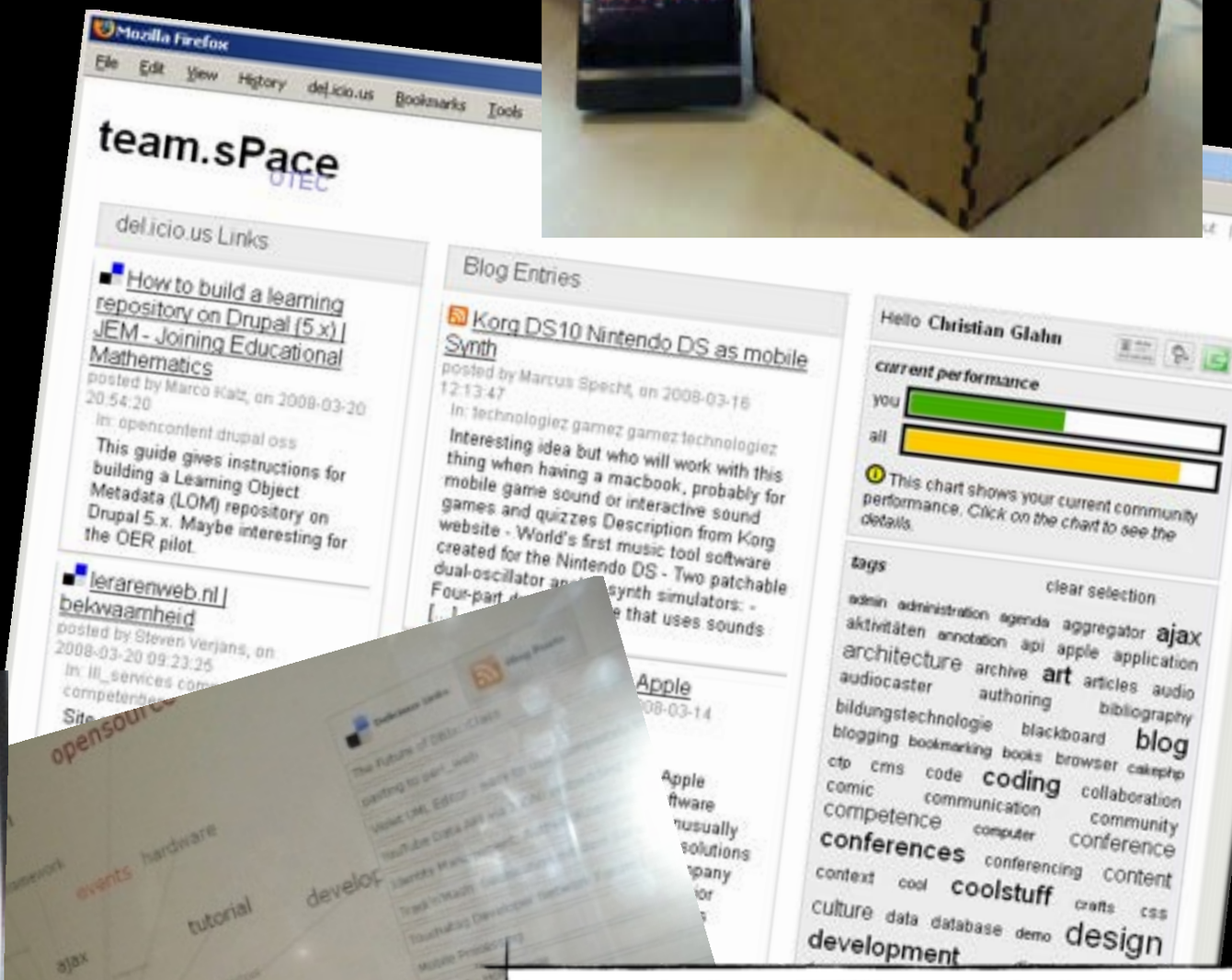


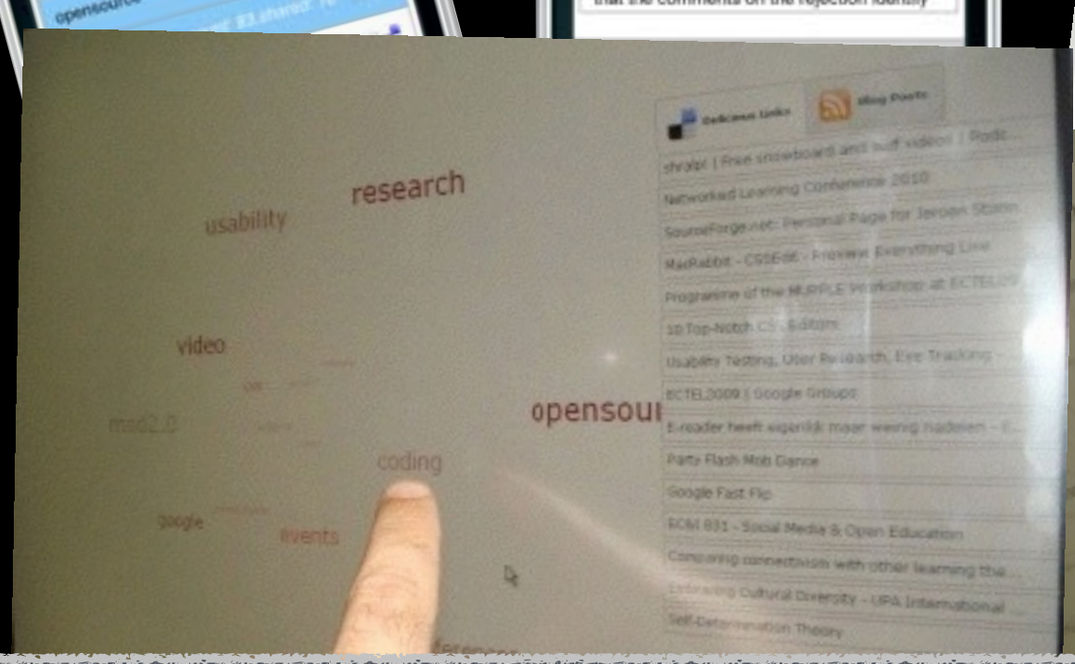
actuator/controller …

HTTPS://WWW.YOUTUBE.COM/WATCH?V=RL-JAII4IN8

embedded trackers …

MULTI-DEVICE OUTPUT





AGGREGATION AT SOCIAL SPOTS

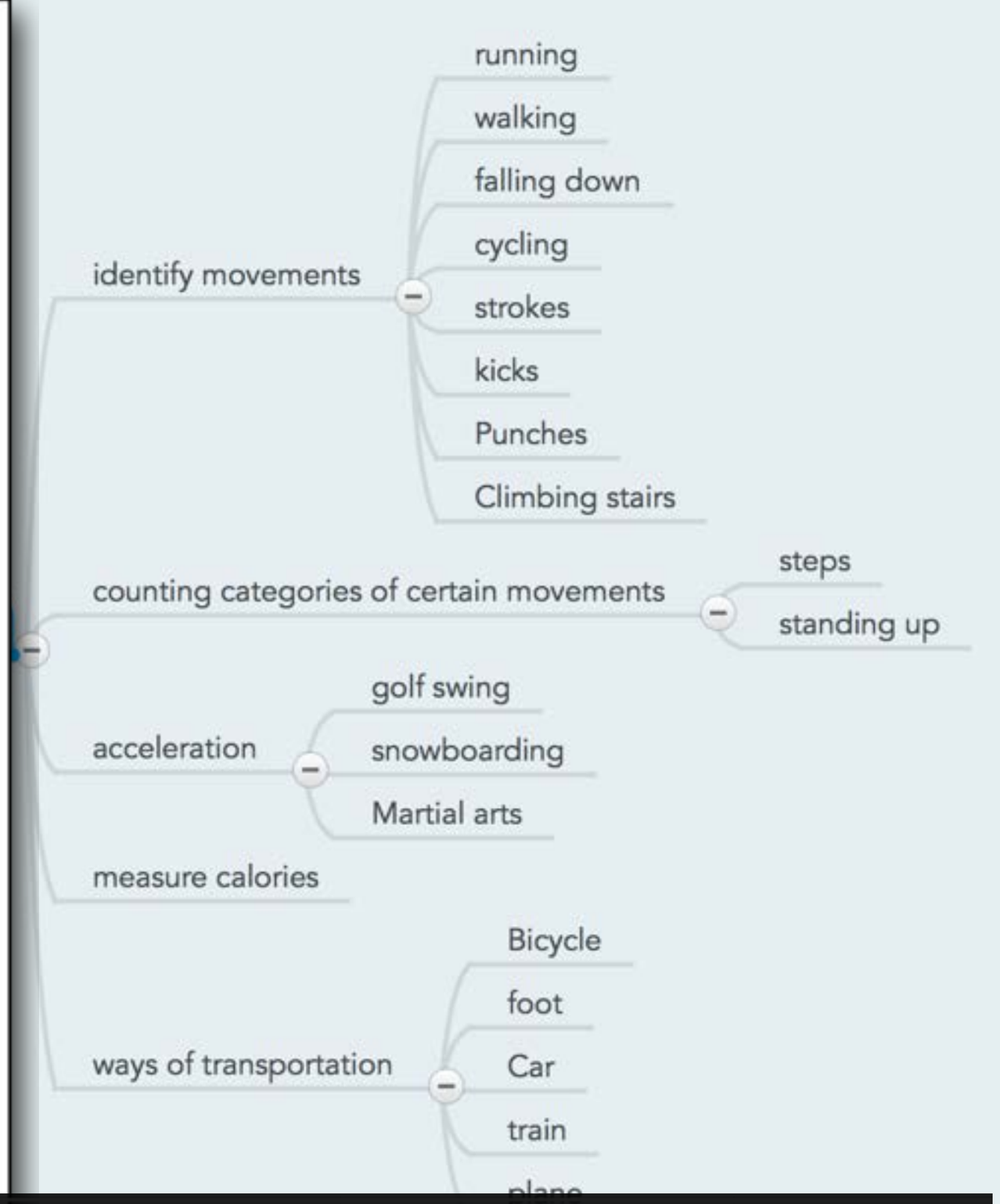
personal and social views ...

Vessyl

personal records...

Sensor data

- 1. audio
  - a. volume analysis
  - b. frequency analysis
  - c. rhythm analysis
- 2. video
  - a. face recognition
  - b. lighting conditions
  - c. image and object recognition
- 3. accelerometer
  - a. vibration
  - b. movement
  - c. activity
  - d. agility
- 4. magnetometer
  - a. orientation
  - b. magnetic field
  - c. shaking
  - d. absolute orientation
- 5. gps
  - a. location
  - b. environment
  - c. proximity
- 6. user input (ESM)
  - a. everything else



HTTP://WWW.LUMOBODYTECH.COM/LUMOBACK/

sensor data for...

LOTS OF CHANGES

computers changed
they are
embedded in our daily interactions and
environments,
they ***sense*** our activities and analyse the data,
they **visualise** and integrate data in our personal space

#2 LINKING TO HUMAN LEARNING

HUMANS STRUCTURE AND ...

EPISODIC MEMORY ...

OPENSOURCE FRAMEWORK FOR MIXED REALITY GAMES

ARLEARN

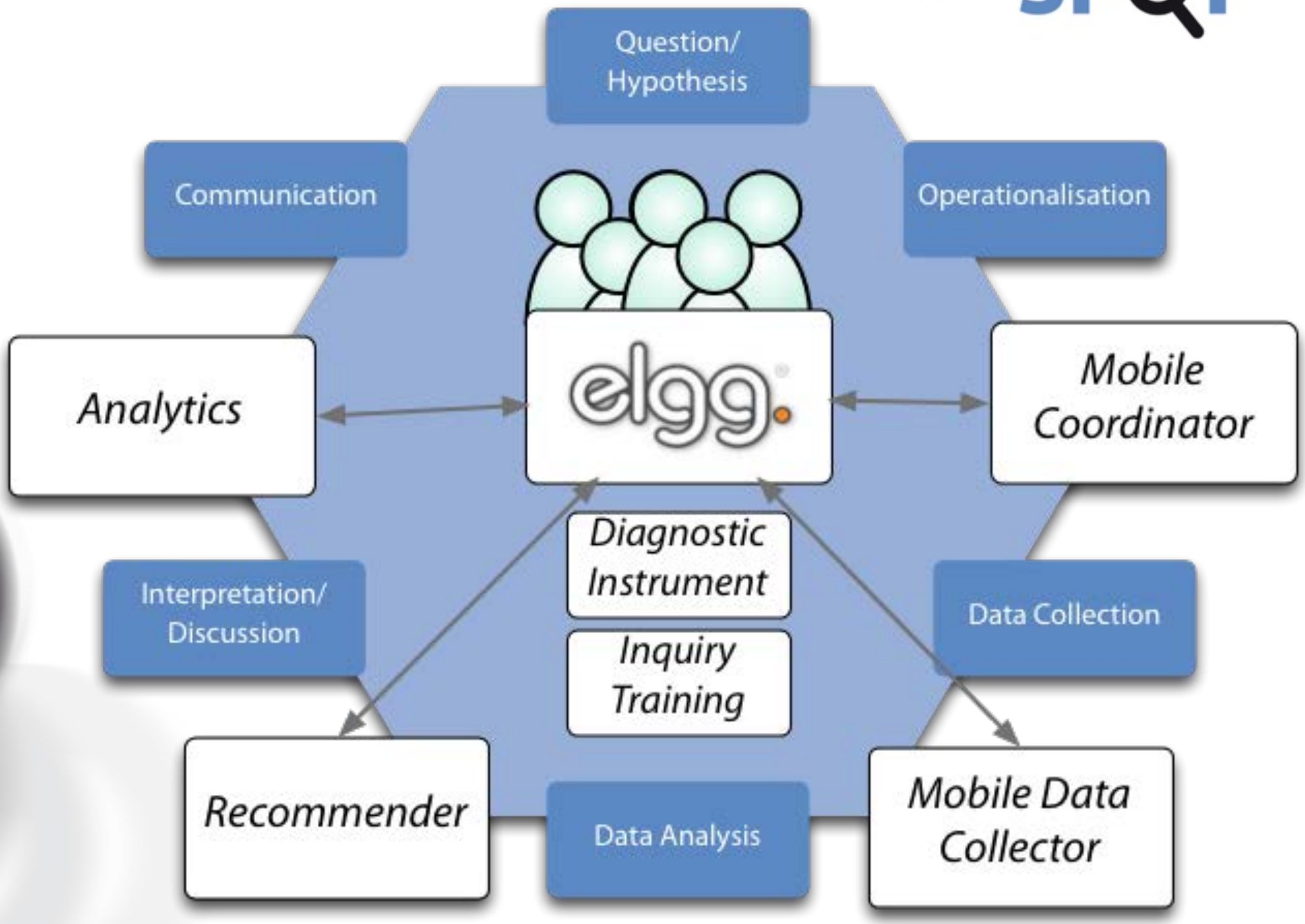
LANGUAGE LEARNING

- http://www.elena-learning.eu

LEARNING IS EMBEDDED ...

... IN A SOCIAL CONTEXT ...

weSPOT


Question/
Hypothesis
Communication
Operationalisation
Analytics
elgg
Mobile
Coordinator
Diagnostic
Instrument
Inquiry
Training
Interpretation/
Discussion
Data Collection
Recommender
Data Analysis
Mobile Data
Collector

weSPOT

iOS Simulator File Edit Hardware Debug Window Help — 100% Mon 6:11 PM Stefaan Ternier

wespot.kmi.open.ac.uk/groups/profile/8104/demo-inquiry-for-review/tab/8115/data-collection

Demo inquiry for review

Edit inquiry | Nodig gebruikers uit

Question/Hypothesis | Operationalisation | Data Collection | Data Analysis | Interpretation | Communication

Description:
This inquiry demonstrates how the **weSPOT workflow e**ngine integrates with the **ARLearn data collection framework**.

Owner: Stefaan Ternier
Inquiry members: 1
Open membership

Add inquiry components

▼ **Help: Data Collection**

Phase 3 - Data Collection
Last updated 8 days ago by admin
Guide, Data Collection

The data collection phase refers to testing a hypothesis and seeing whether the real world behaves as predicted by the hypothesis. Scientists test hypotheses by conducting experiments, which determine whether observations of the...

▼ **ARLearn data collection tasks**

Collect the temperature of this room
Results: 0

More data collection tasks

▼ **MindMeister maps**

No MindMeister maps created yet

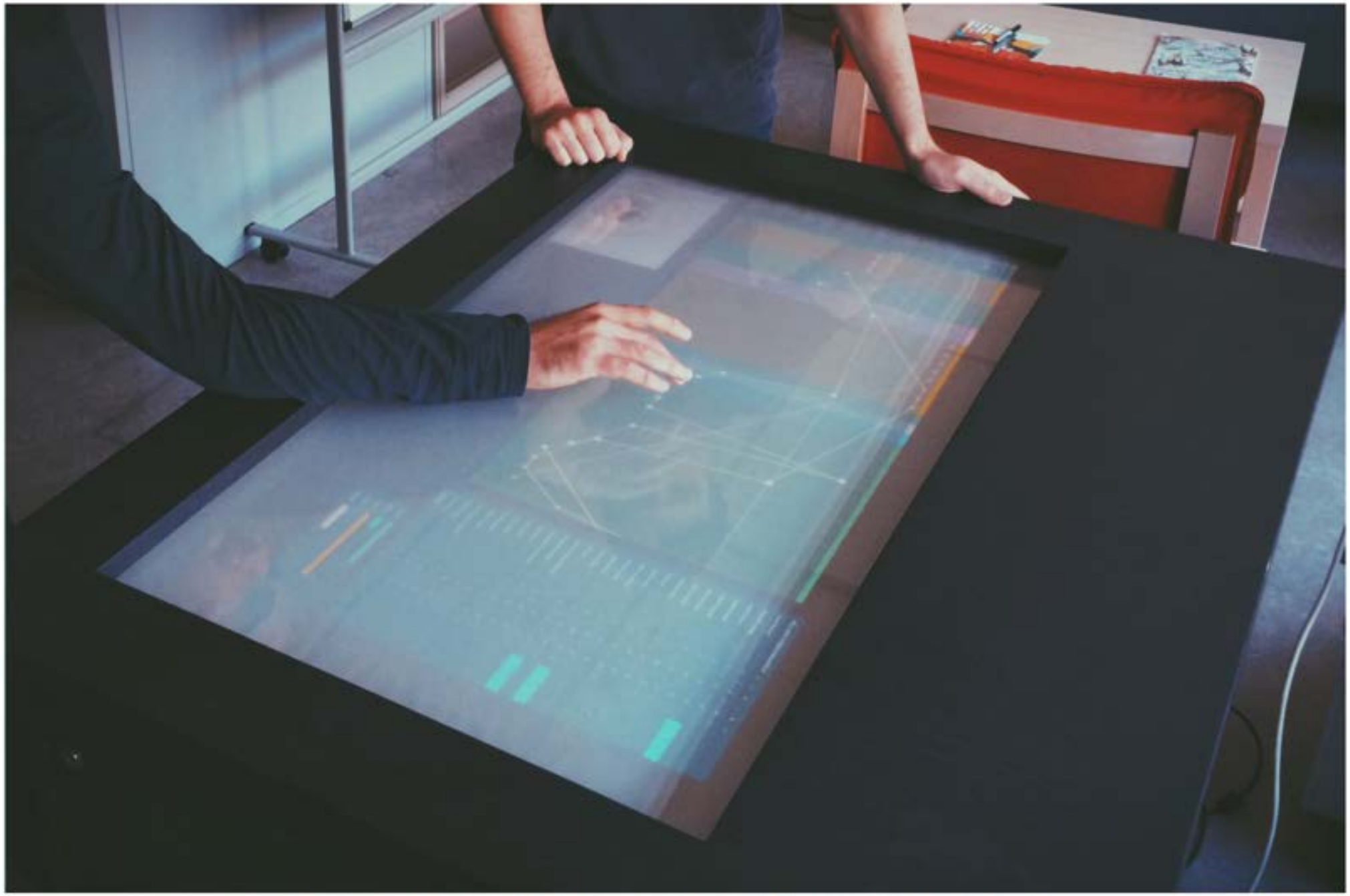


Figure 7: The teacher invites the student to the tabletop

HUMANS DO NOT ALWAYS LIKE TO DO ...

REFLECTION

activity

tags ComputerGames **ComputerHistory** ComputerScience Demos Design Flash **Flow** *FutureTechnologies* *GameBasedLearning* **GraphicDesign** GUI HCI Journals JSON **LearningTechnology** *Literature* LSA Mace MMURPG MobileLearning OpenSource **Perl** SOAP SocialSoftware **TENCompetence** Usability Visualisation Web WebAnimation **WebApplications** WebDesign XML XUL

activity

tags ComputerGames ComputerHistory ComputerScience Demos Design Flash FutureTechnologies GameBasedLearning Gaming GraphicDesign GUI HCI Journals JSON LearningTechnology Literature LSA Mace MMURPG MobileLearning OpenSource SOAP SocialSoftware TENCompetence Usability Visualisation Web WebAnimation WebApplications WebDesign XML XUL

activity

tags ComputerGames ComputerHistory ComputerScience Demos Design Flash FutureTechnologies GameBasedLearning Gaming GraphicDesign GUI HCI Journals JSON LearningTechnology Literature LSA Mace MMURPG MobileLearning OpenSource SOAP SocialSoftware TENCompetence Usability Visualisation Web WebAnimation WebApplications WebDesign XML XUL

context indicators ...

Course: Dominique's Course - Mozilla Firefox

File Edit View History Delicious Bookmarks Tools Help

Dominique's Course

Location: Time spent on course: 01:32:11 You are logged in as Christian Glahn (Logout)

Moodle1 ▶ DV101

Switch role to... | Turn editing on

Activities
- Assignments
- Choices
- Forums
- Quizzes
- Sloodle Modules

People
- Participants

Search Forums

Advanced search

Administration

Course categories
- Main
- Testing

All courses ...

GISMO

Topic outline

On this forum, you are requested to post at least two questions arising from your reading of the resources. All questions will be answered by the instructor.

News forum

1 Five Usability Principles in Web Design - COURSE MATERIAL

Indicators

Your Actions

Peer Actions

Latest News

Upcoming Events

Recent Activity

Resource 9

Done

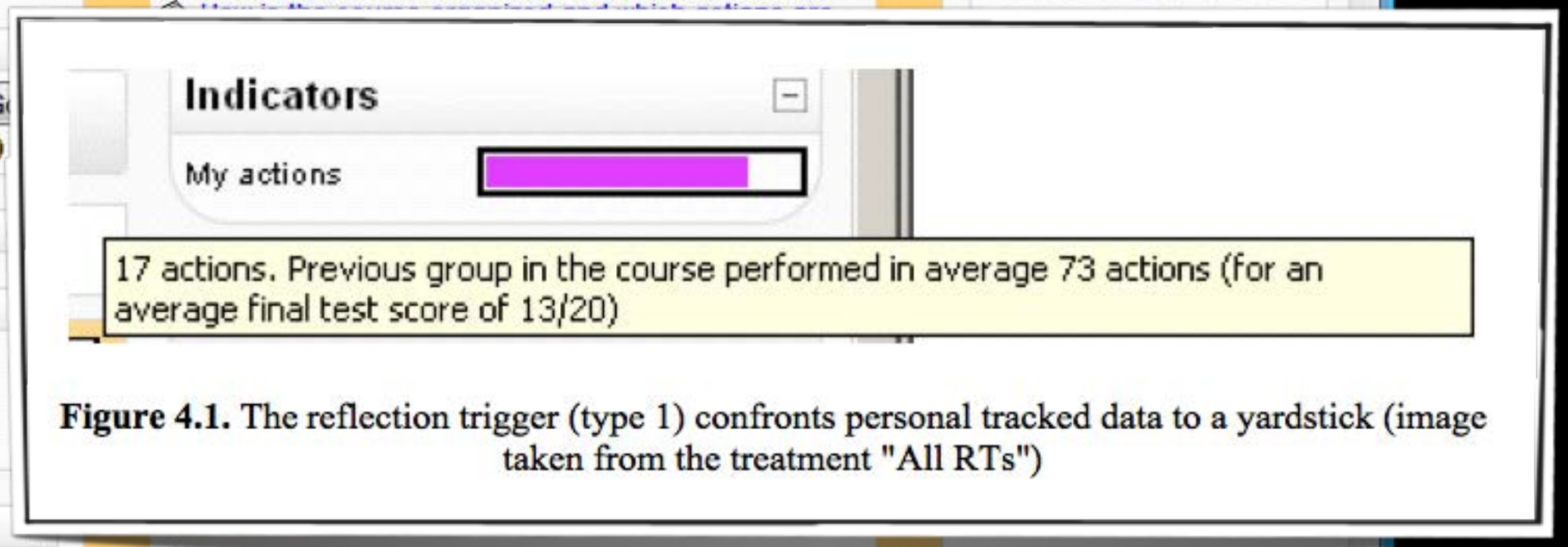


Figure 4.1. The reflection trigger (type 1) confronts personal tracked data to a yardstick (image taken from the treatment "All RTs")

reflection amplifiers ...

Personal Context Notifications

Figure 8.2. Student reflective practice a. Daily SMS received by students. b. What were your main learning channels today? c. How intense was your learning day? Rate it from 1 to 5.

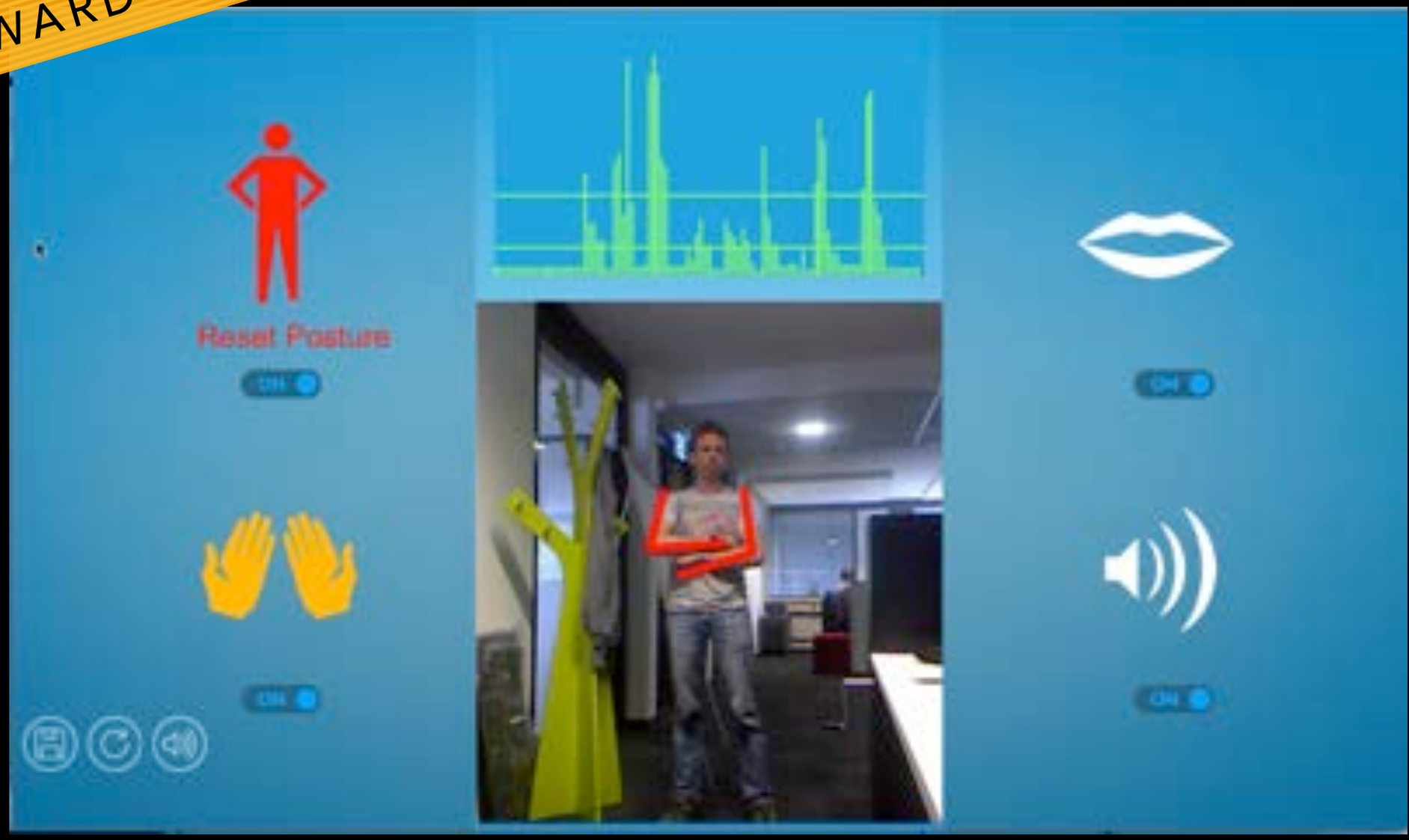
WHAT MAKES IT PERSONAL IS ...

FEEDBACK ...

Goetz, T. (2011). Harnessing the Power of Feedback Loops | Magazine. *wired.com*. Retrieved August 22, 2011, from http://www.wired.com/magazine/2011/06/ff_feedbackloop/5/

PRESENTATION TRAINER

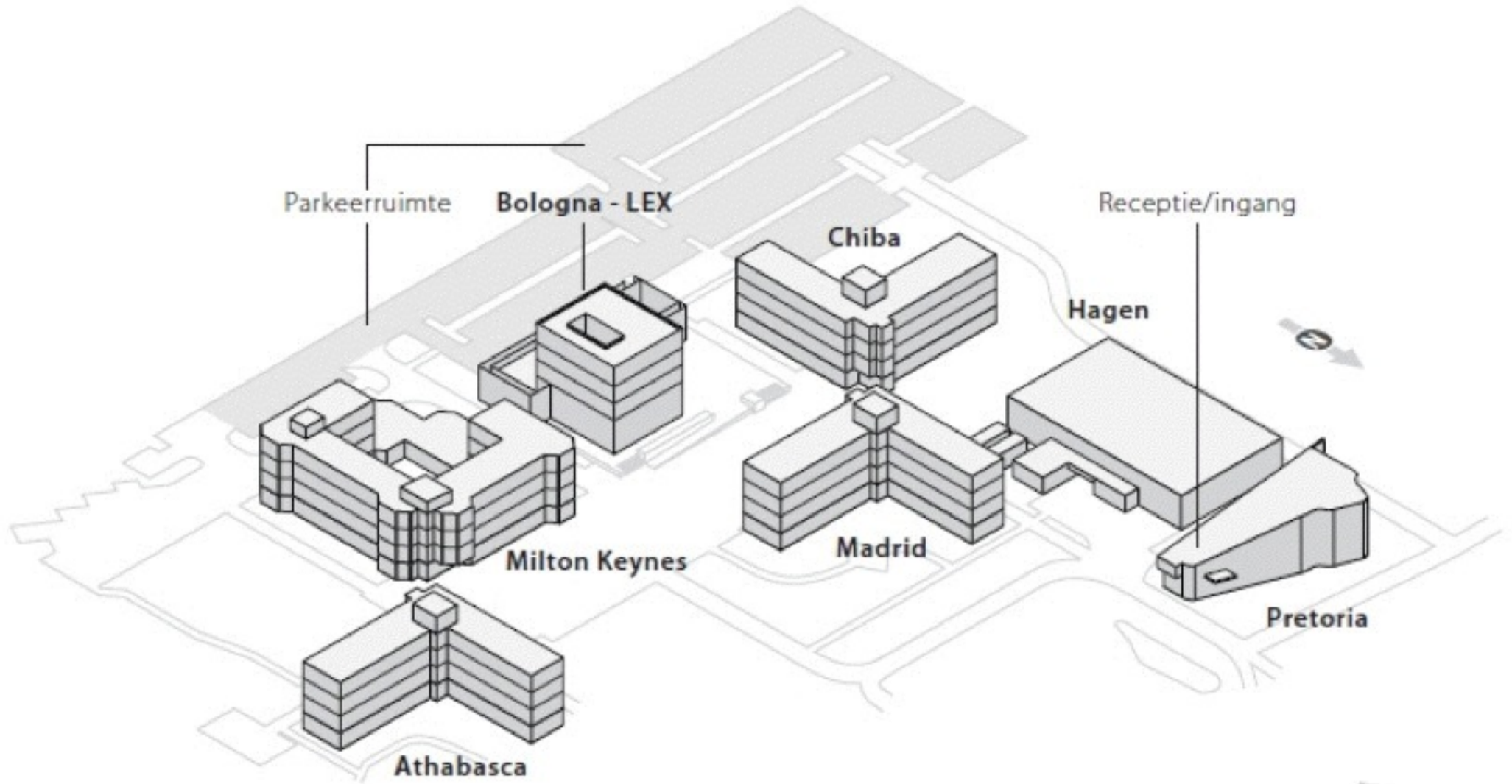
BEST DEMO AWARD - ECTEL 2014



#6 AWARENESS

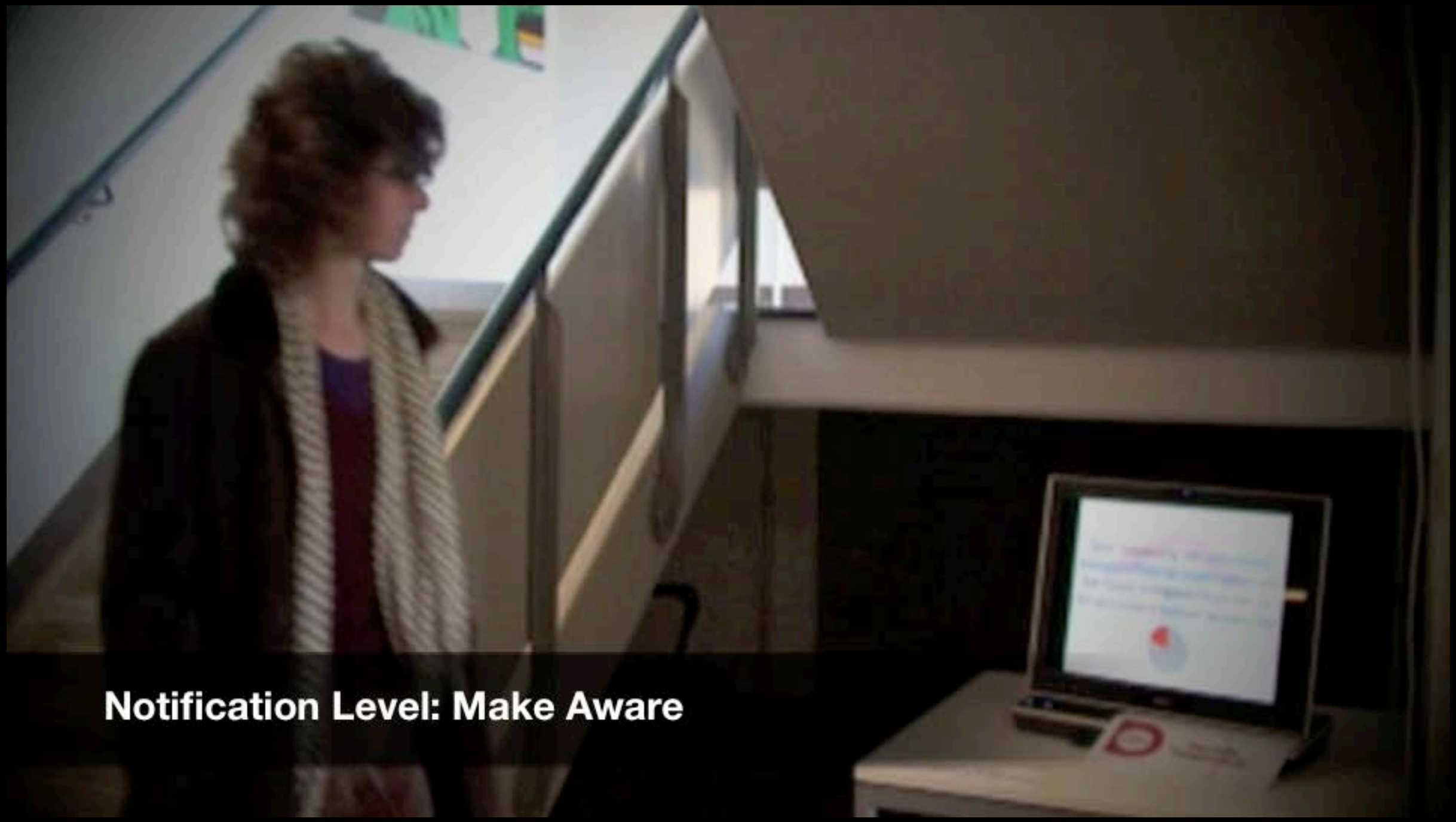
Fl elisa 12:39 63 %

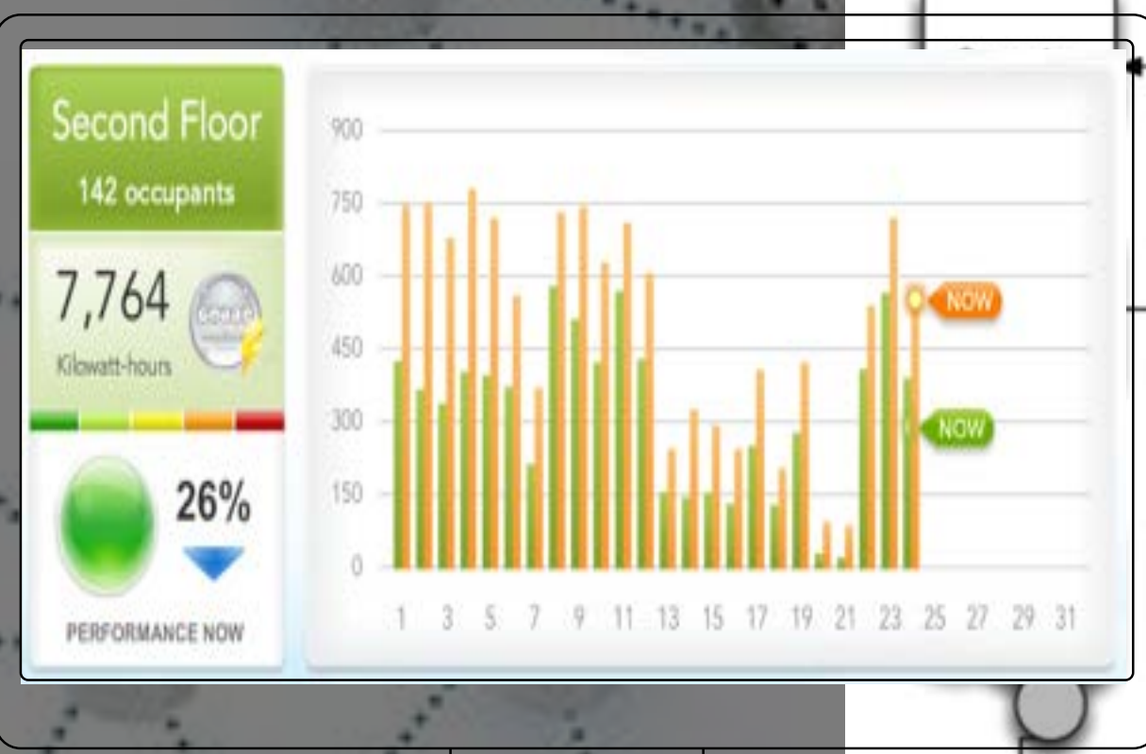
Conception

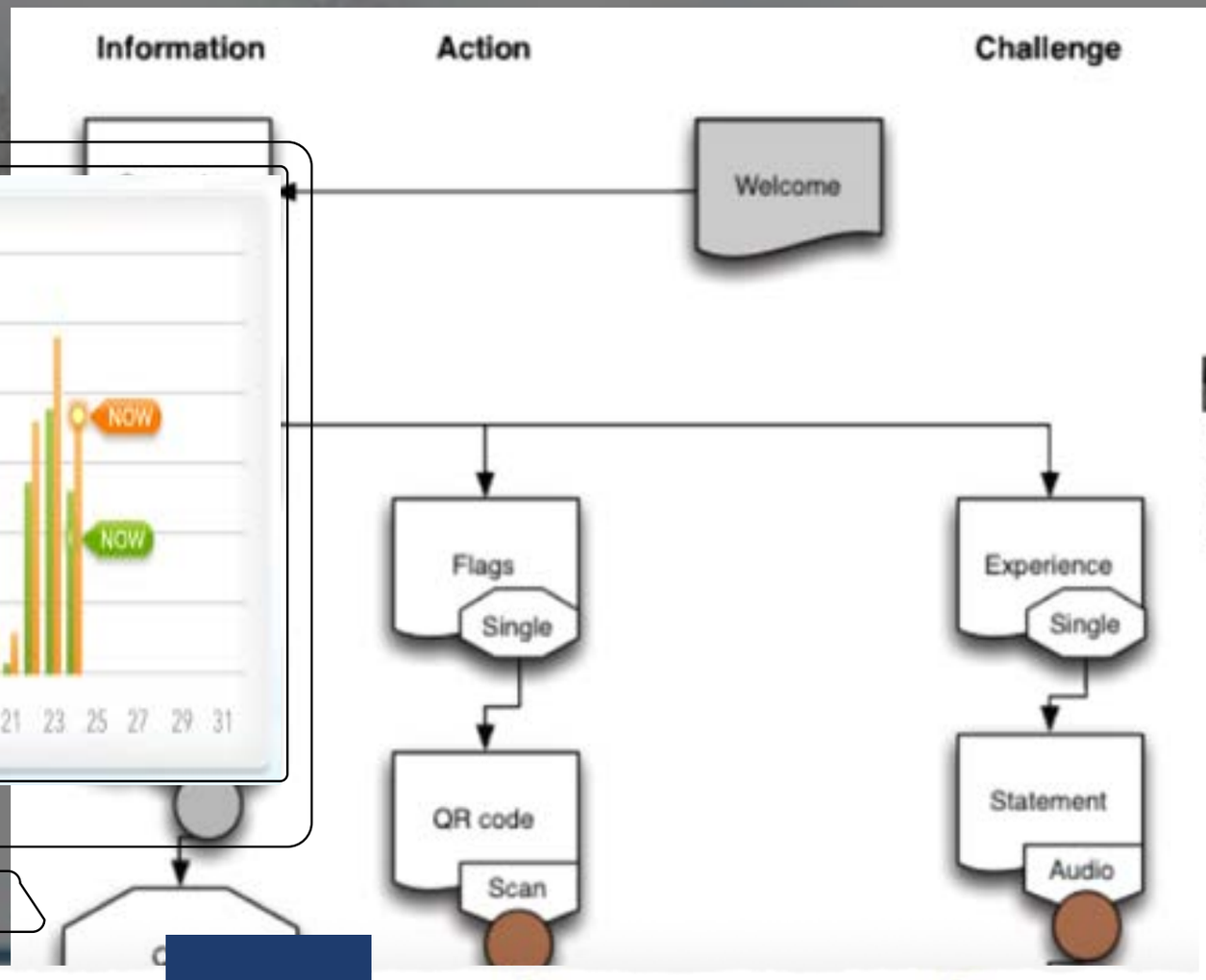


measuring power consumption on campus with standard facility management, plus sensors on workplaces and public devices, personal registration of power consuming activities.

Energy consumption ...


Notification Level: Make Aware


Second Floor
142 occupants
7,764
Kilowatt-hours
26%
PERFORMANCE NOW
900
750
600
450
300
150
0
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31
NOW
NOW


Information
Action
Challenge
Welcome
Flags
Single
QR code
Scan
Experience
Single
Statement
Audio


[Action] QR code
Great you found the Mindergie flags. The first thing you have to do here is to find the small QR code attached to the 'Athabasca' flag pole.
When you found it, simply press the scan icon below and use your camera to scan the code.
ENERGY SAVED

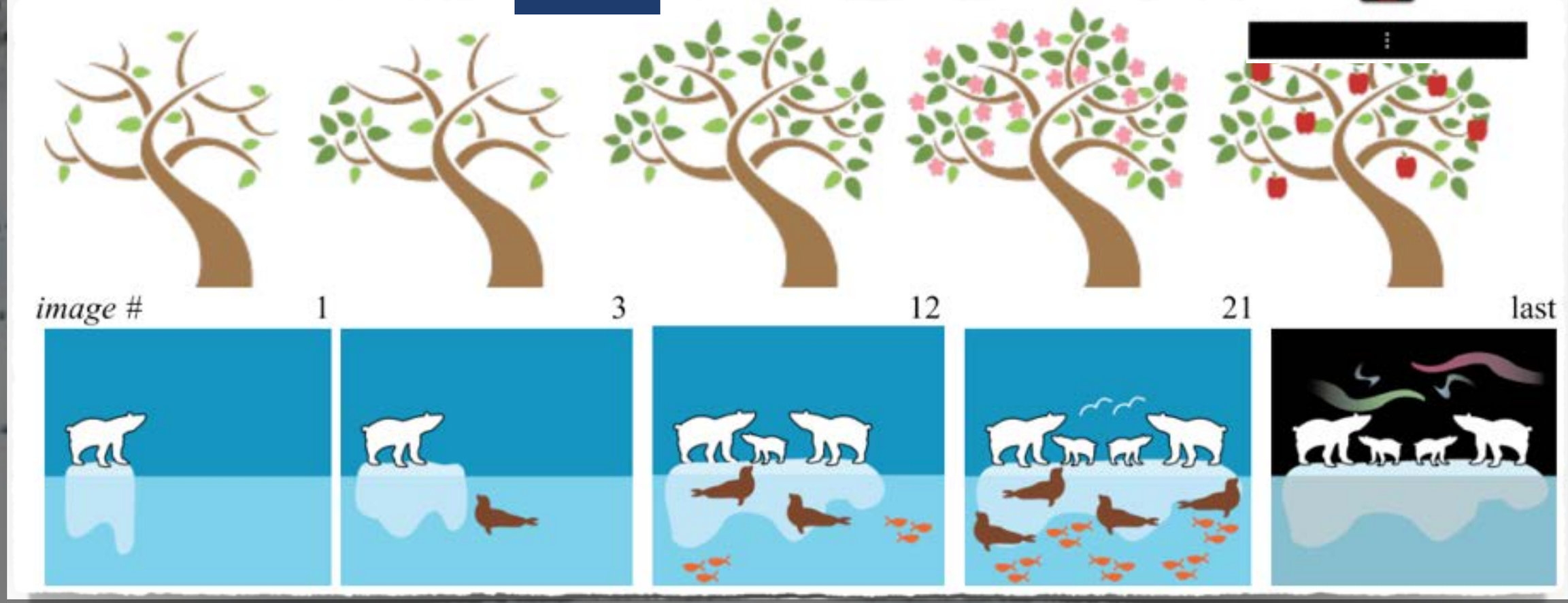


image #
1
3
12
21
last

MAIN RESULTS ENERGY AWARENESS

- Situated displays have a generic effect of raising awareness and energy consumption on a mid to long term

- Badge and social incentive systems must be embedded with social media to have an effect

- Real world action foster curiosity, discussion, and reflection about the topic when combined with public displays

attention-aware displays ...

- raise and retain attention significantly better.
- lead **not** to higher cognitive load but to a significant higher knowledge gain.

#SUMMARY

SO ...

- #1 There are seams between the different learning contexts, locations, times, social contexts, ...
- #2 There are opportunities with new technologies that are open, ubiquitous, context-aware, and personalized.
- #3 look at the aimed effects on awareness, curiosity, creativity, knowledge, latent variables, ...

MINDFUL AND SEAMLESS LEARNING ...

- **ubiquitous open content access**,
- flexible **sensor data** aggregation,
- **synchronisation** of channels (to context and person),
- and dynamic **visualization and output indicators** (ambient displays).

M.M. SPECHT

NOW LET'S WORKSHOP

#1 CREATE YOUR OWN

1. Write down associations for the words:
   unintentional learning space each on one card
2. Marcus collects them
3. Form a team of 4-5 members
4. Pick your 3 cards

#2 CREATE YOUR OWN

1. create a service/app/movement/organisation based on your **three words**

2. Choose a name, target group, business model

3. Why should I use it? Pedagogical Model, Added Value, Innovation, Solved Problem?

4. Present your product/service !

APP IDEA OUT OF EDUCATIONAL WORKSHOP WITH WORDS ...

NOT-ANYWHERE LEARNING

CHOOSE 3 PLACES IN WHICH YOU LEARN WITH THIS MOBILE APP