Graduate & PhD Course
Measuring Dietary Behaviour the intelligent way
Fudan University, Shanghai
November 23--25, 2015

Tracking PA and dietary behavior with wearable camera technologies

Bent Egberg Mikkelsen,
Professor, Aalborg University

Last time

https://www.youtube.com/watch?v=-8h7NTDT4pQ&feature=youtu.be

This time

AAU-Cph Research Festival Tour March 23-24 2015
The Virtual Food Choice Simulator (VFCS)

Can you be nudged? Find out with the 3D glasses,
Walk'n Find motion sensors and Grab 'n Choose gloves

Oculus

AAU-Cph Research Festival Tour March 23-24 2015

Get a read out on the valence dimension (pleasant - unpleasant) and arousal dimension (active – inactive) of your reaction

AAU-Cph Research Festival Tour March 23-24 2015

Mobile Intelligent Buffet (M-IB)

AU-Cph Research Festival Tour March 23-24 2015

TP-LINK

TL-ANT2409A

The Foodscape Tracker

The sensor detects the presence of your mobile
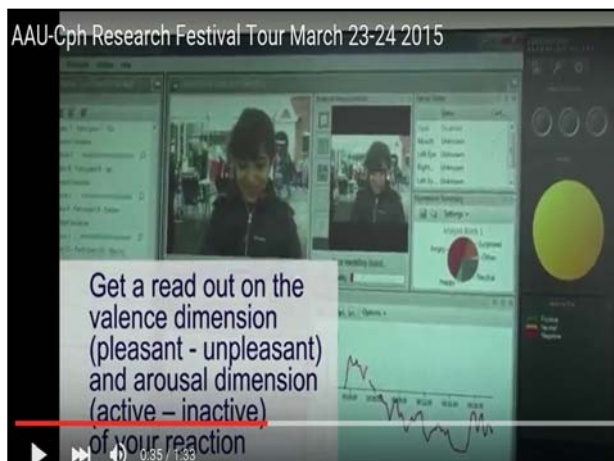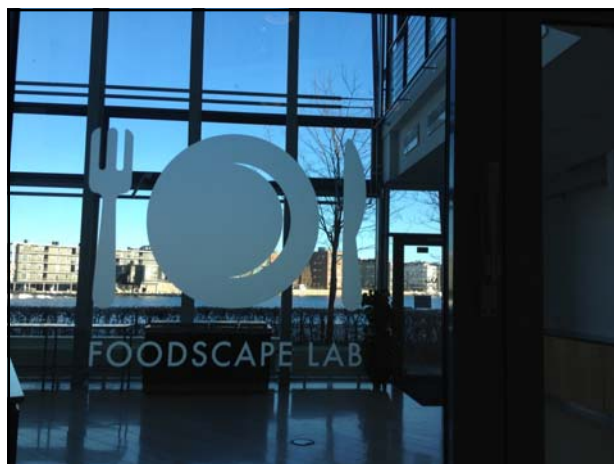
Eat area overhead cam

SenseCam & Meal Snap

Gemming, et al., Eur J Clin Nutr (2013) 67, 1095-1099: Arab et al., Eur J Clin Nutr, 2011, 65(10):1156-1162,

NANA: Novel Assessment of Nutrition and Ageing
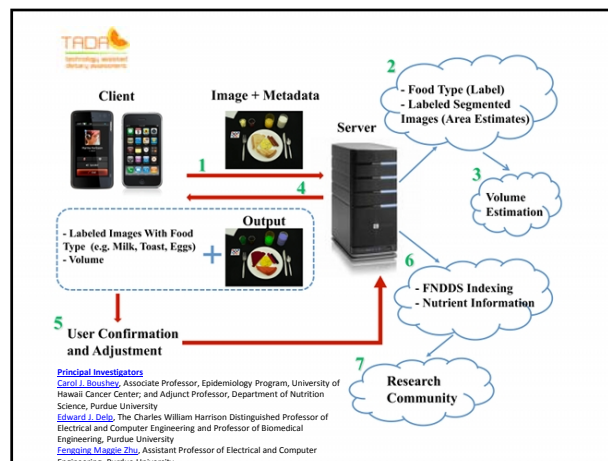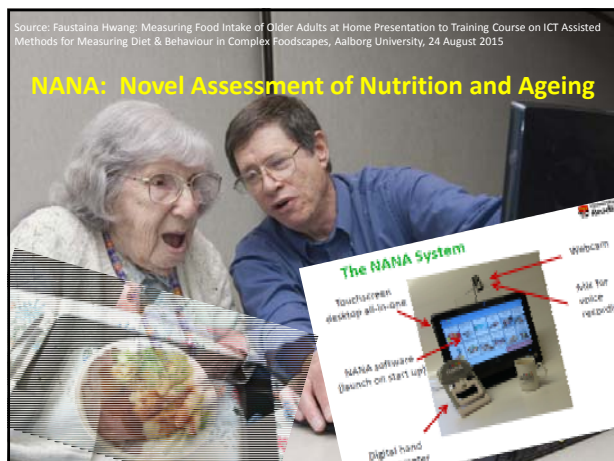
Other systems
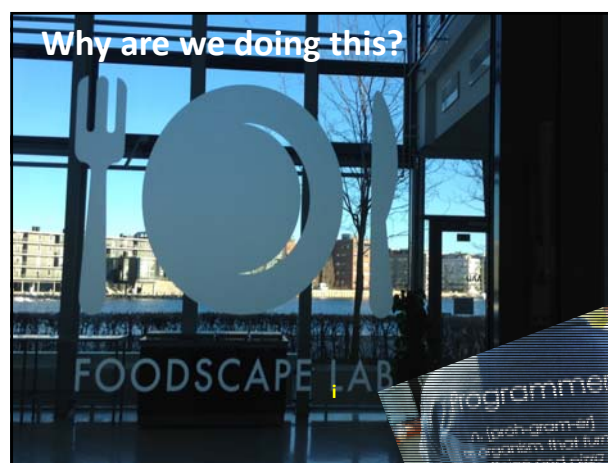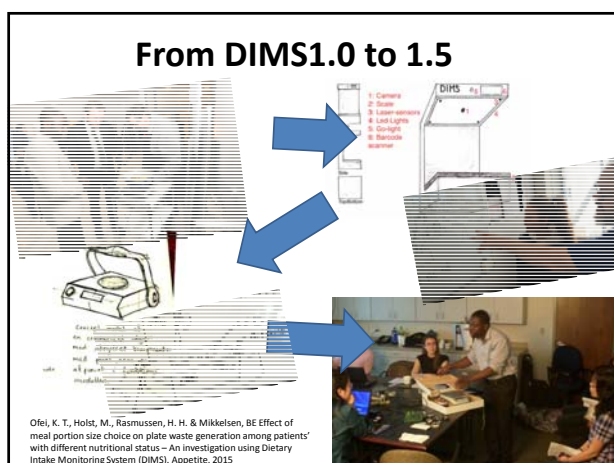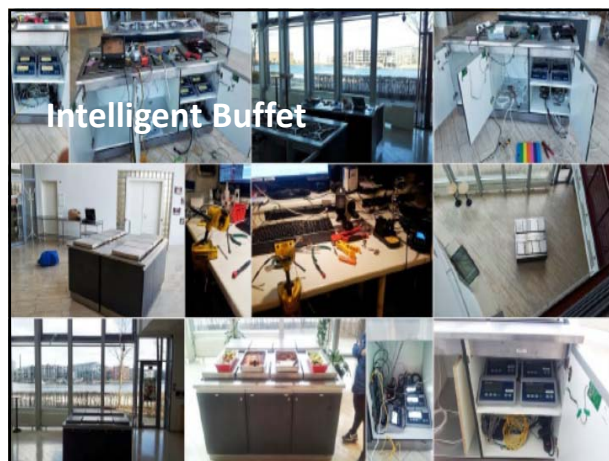
- ASA24 – Automated Self Administered 24hdr
- TADA: Technical Assisted Dietary Assessment
- Diet Data *Recorder* System (DDRS)
- Smart Plate
- Smart Fork
- TelSpec

http://www.tadaproject.org/

New technology in dietary assessment: A review of digital methods in improving food record accuracy, Stumbo, P, Proceedings of The Nutrition Society 02/2013; 72(1):70-6

Why are we doing this?

Very First Prototype
made by students from Integrated Food Studies

Intelligent Buffet

From DIMS1.0 to 1.5

Ofei, K. T., Holst, M., Rasmussen, H. H. & Mikkelsen, BE Effect of
meal portion size choice on plate waste generation among patients'
with different nutritional status – An investigation using Dietary
Intake Monitoring System (DIMS). Appetite, 2015

DIMS 2.0

Inviting for co-creation

Output mode

	Weight	Energy	Protein	Carbon eqv	Price
	grammes	kcal	Grammes	Grammes	DKK
Pre-serve					
Post-serve					
Intake					
Waste					

DIMS ver. 2.5

Measuring behaviour
"we know where you are and what you eat"

Hedegårdskolen

Tracking eye movement

- https://theeyetribe.com/

Measuring skin conductivity

Measuring brain response

99
USD

Intelligent buffet dynamics
Researcher Festival Spinderiet

Heat mapping the food choice dynamics at the buffet. Rikke Gade, PhD student, Aalborg University, Training & Research Course, ICT Assisted Methods for Measuring Diet & Behaviour in Complex Foodscapes, August 24-27, 2015, Aalborg University
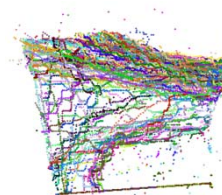
Intelligent buffet dynamics
Researcher Festival Spinderiet

Heat mapping the food choice dynamics at the buffet. Rikke Gade, PhD student, Aalborg University, Training & Research Course, ICT Assisted Methods for Measuring Diet & Behaviour in Complex Foodscapes, August 24-27, 2015, Aalborg University

Illustrative methods to uncover the dynamics of foodscapes

Take home messages

- Consider carefully the "development" efforts
- It goes from your datacollection efforts
- Test it carefully, Battery, WiFi, Security etc
- Team up with somebody
- Dont forget: there is a lot of signals out there
- But are they signs of what you think they are?

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Spiros Fragos

Ravin Shreshtra

Marie Nerup

Michal Dobroczynski

GAME OVER

INSERT COIN

Stay Tuned
**Stay updated on Food & Devices in our Special Interest Group. Join
here**

About

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  http://personprofil.aau.dk/119690?lang=en
- Linked in: http://dk.linkedin.com/pub/bent-egberg-mikkelsen/7/713/13b
- ResearchGate:
  http://www.researchgate.net/profile/Bent_Mikkelsen
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