

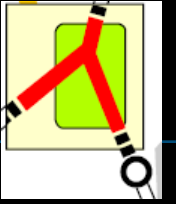
VGI

Practicing is Preaching

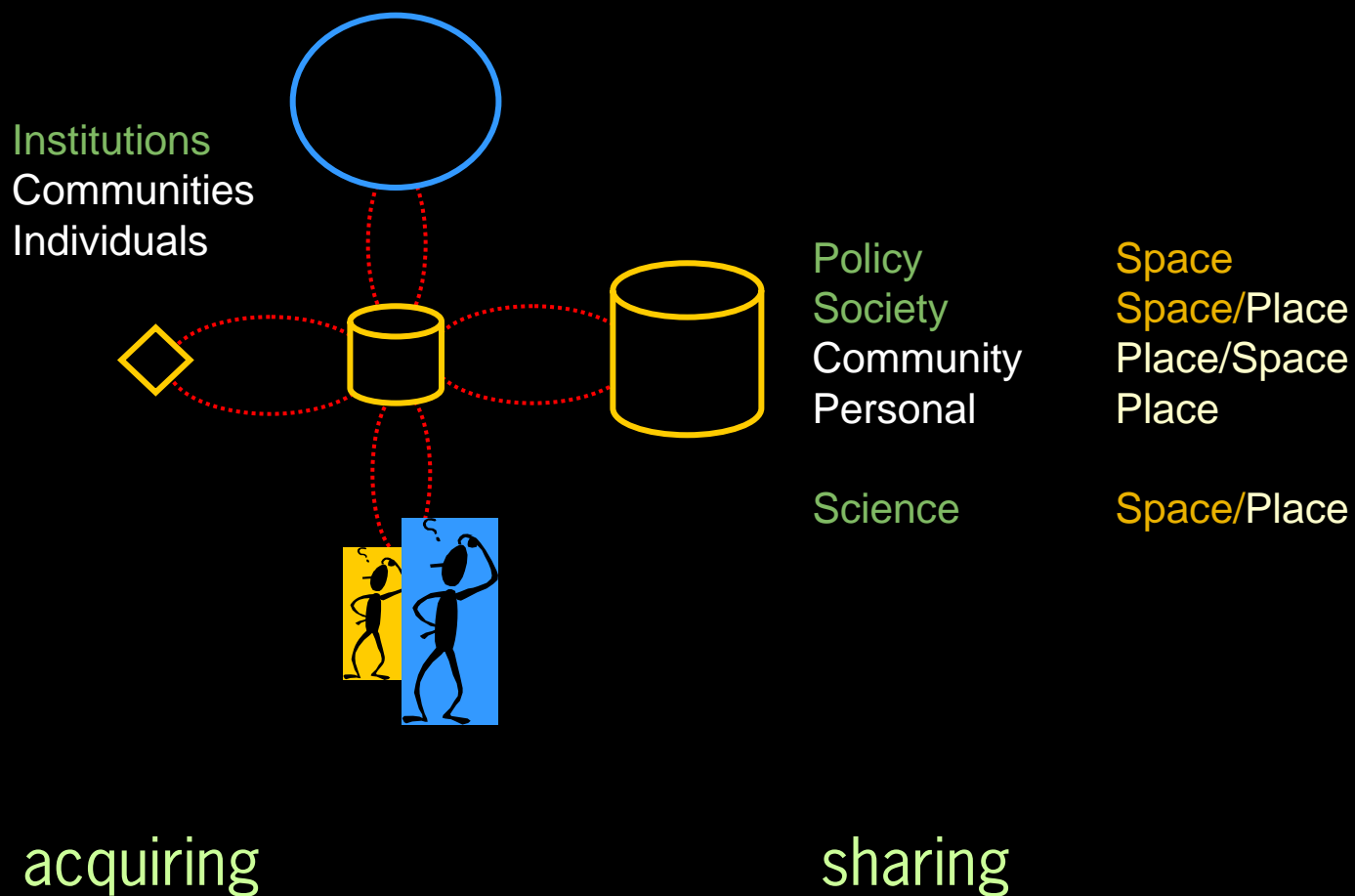
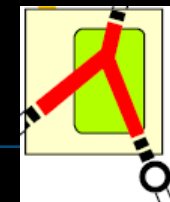
Ron van Lammeren
Centre for Geo-Information,
Wageningen University



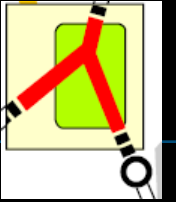
Beloved Volunteers.....



VGI views

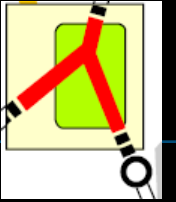


Content



- Part I - Practicing <http://tripod.shef.ac.uk/>
<http://www.globoamazonia.com/>
<http://www.openstreetmap.org/>
<http://www.grs.wur.nl/NL/publicaties/Beelden/DiWi/>
- Part II - Preaching -
<http://www.natuurkalender.nl/waarnemingen/default-analyse.asp>

Practicing: an example



■ Why

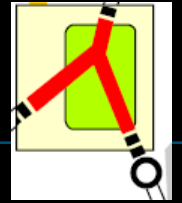
- usability test of application
- capture more specific data (behavioral, normative)
- capture more actual data (more frequent and of higher frequency)

■ What

- Case specific predefined setting - experimental
- Trigger to new / other ideas to use data

<http://www.urban-atmospheres.net/CitizenScience/>

Objective Digital Dowsing Rod

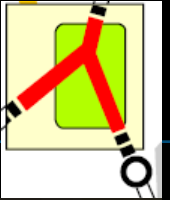


Sensing Landscape History with an Interactive Location Based Service
van Lammeren, R., M. Goossen, P. Roncken, Sensors 2009, 9,

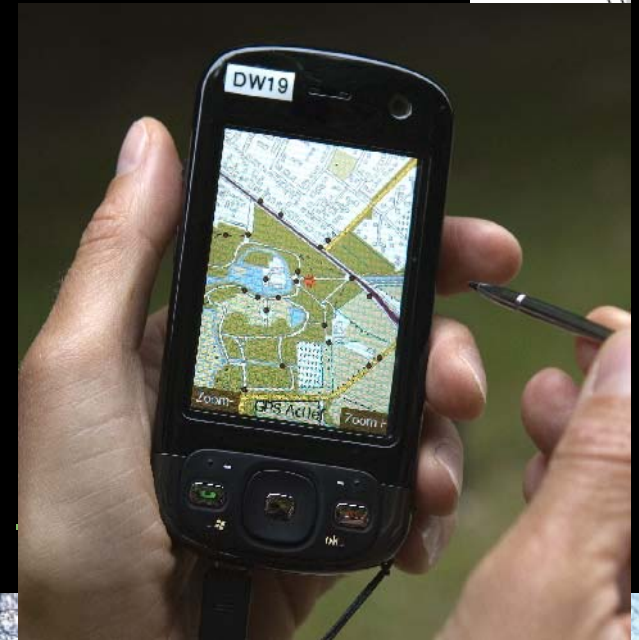
- Technology acceptance
- Impact on experience
- Impact on behavior



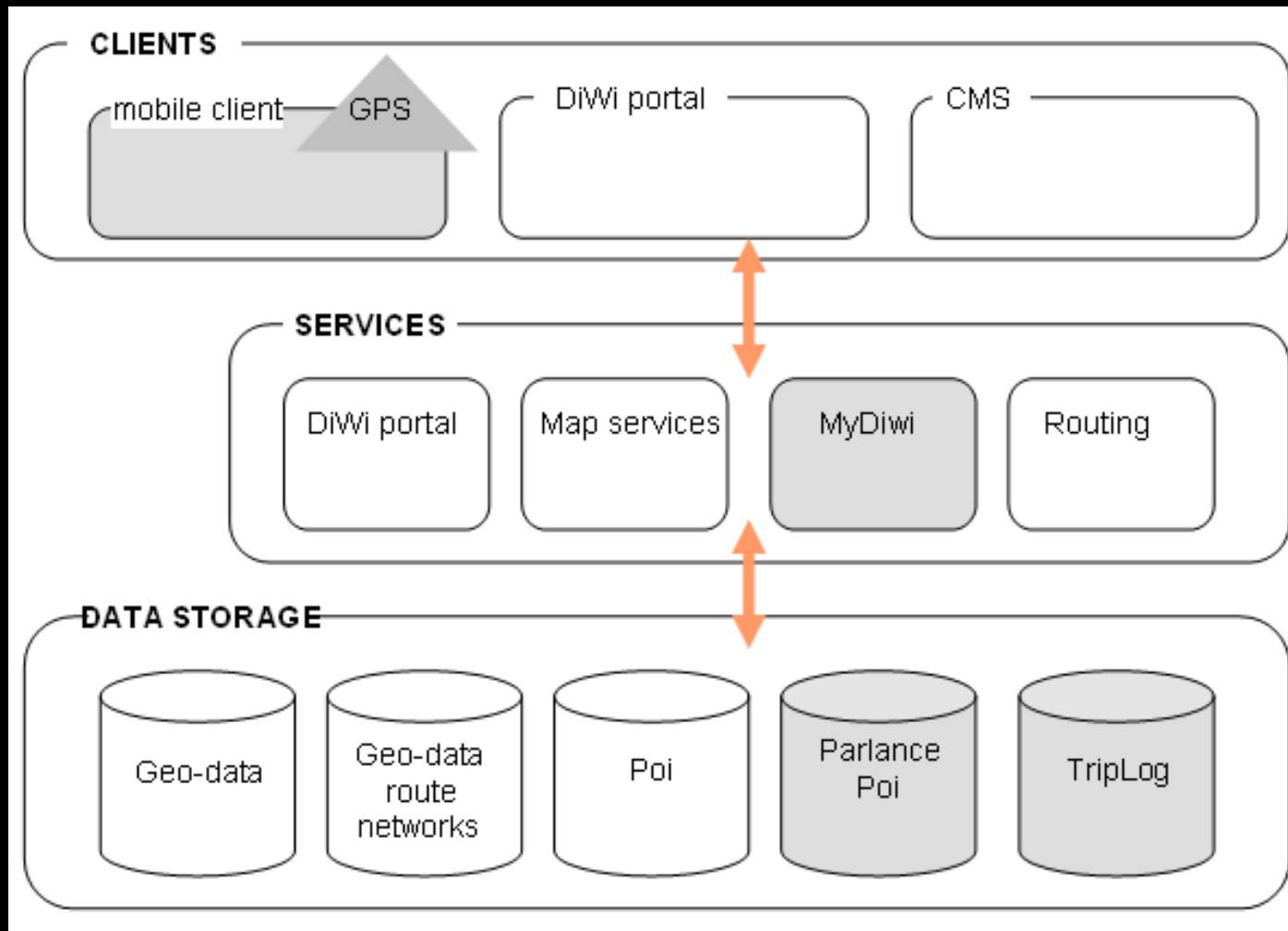
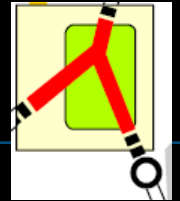
Digital Dowsing Rod (DiWi)- pilot



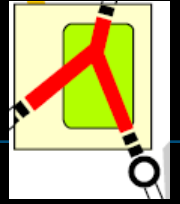
- (personal) route
- related POIs
- of (cultural-historic) information
- for **responsive** and **reactive** tourists
- via mobile technology [3G]
- based on interoperable web services



Digital Dowsing Rod - architecture



Methodology Digital Dowsing Rod



■ Technology acceptance

- In-take questionnaire [5 minutes]
- Out-take questionnaire [20 minutes]

Perceived usefulness
Perceived Ease-of-Use
Perceived Enjoyment
Surplus value
Motives

■ Impact on experience

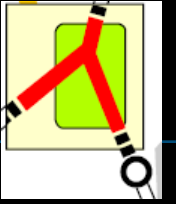
- Tracing of movement and interaction
[15 minutes instruction; max. 150 minutes]

Track logs
POI logs [parlance]
Contentwise

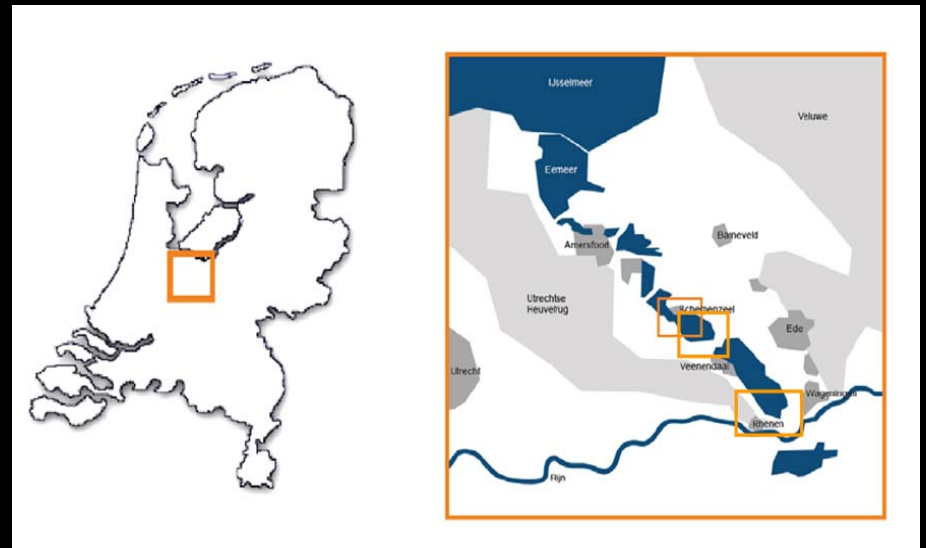
■ Impact on behaviour

- Hypotheses based on analysis

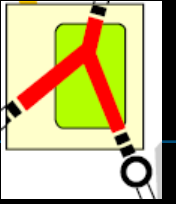
Where did they volunteer: Grebbe linie



famous for:
fortification and inundation remnants
of a historical
Dutch military defense system
originally 17th century constructed
and even used in 2nd world war

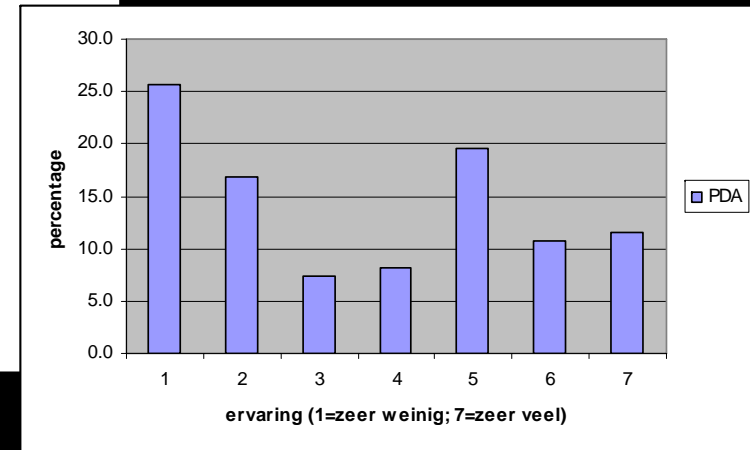
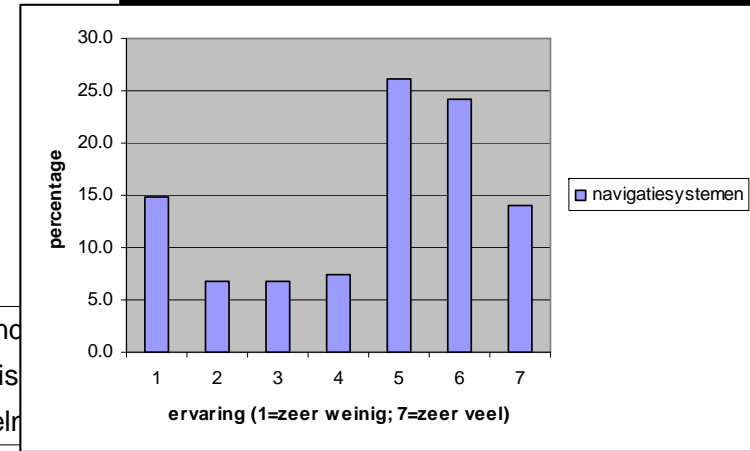
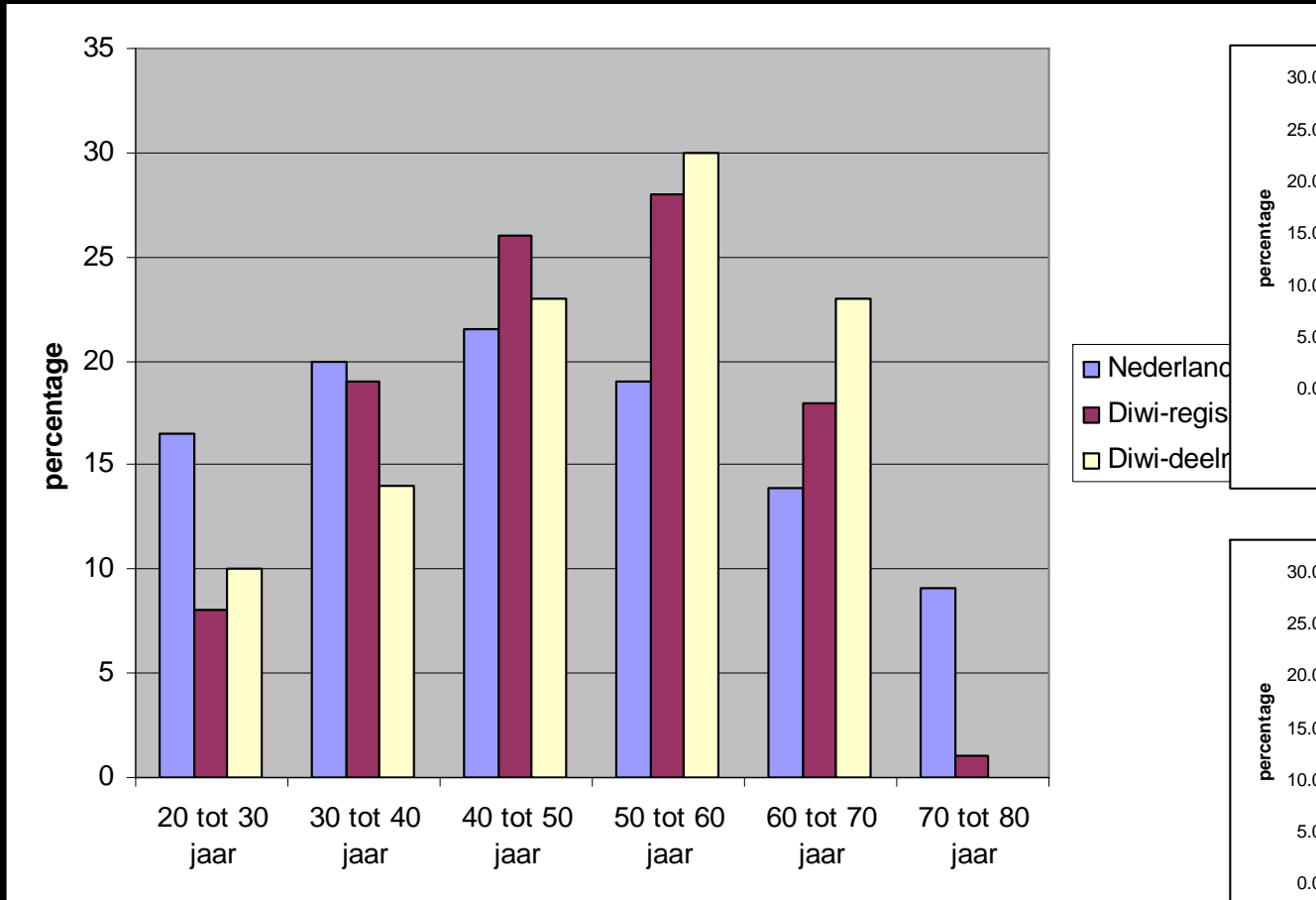
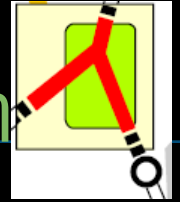


Some statistics - DiWi - data



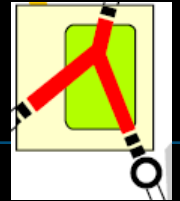
- 387 potential volunteers
- 150 valid volunteer results
- 3 locations
- 20 routes (7 – 7 - 6)
- 580 POIs (174 POIs route related; 66 functional POI)
- 345 parlance POIs

Comparison DiWi volunteers vs Dutch population



Ps DiWi reponses - Male vs Female = 233 : 155

DiWi applicants – Dutch population

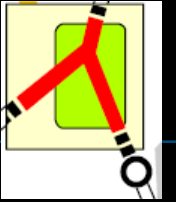


Mentality-group	Diwi-registered (in %)	Diwi-valids (in %)	Netherlands (in %)
Traditional middle class	9	3	18
Convenience oriented	3	1	9
Modern middle class	<u>6</u>	<u>7</u>	<u>22</u>
<i>New conservatives</i>	5	5	8
Cosmopolitans	18	25	10
<i>Social climbers</i>	4	3	13
Post materialists	32	35	10
<i>Post modern hedonists</i>	19	20	10
No data	3	1	

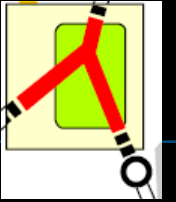
Source: De digitale wichelroede en haar gebruikers : interactieve location based services voor cultuur-historische landschapsbeleving

Goossen, C.M.; Lammeren, van R.J.A.; Ligtenberg, A., 2008, Research report 2008-4/1759, Alterra

Behavior (2008)

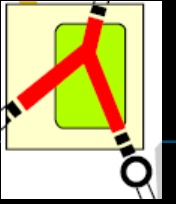


Points of Interest



- Facilitating POIs
- POIs

Assessment

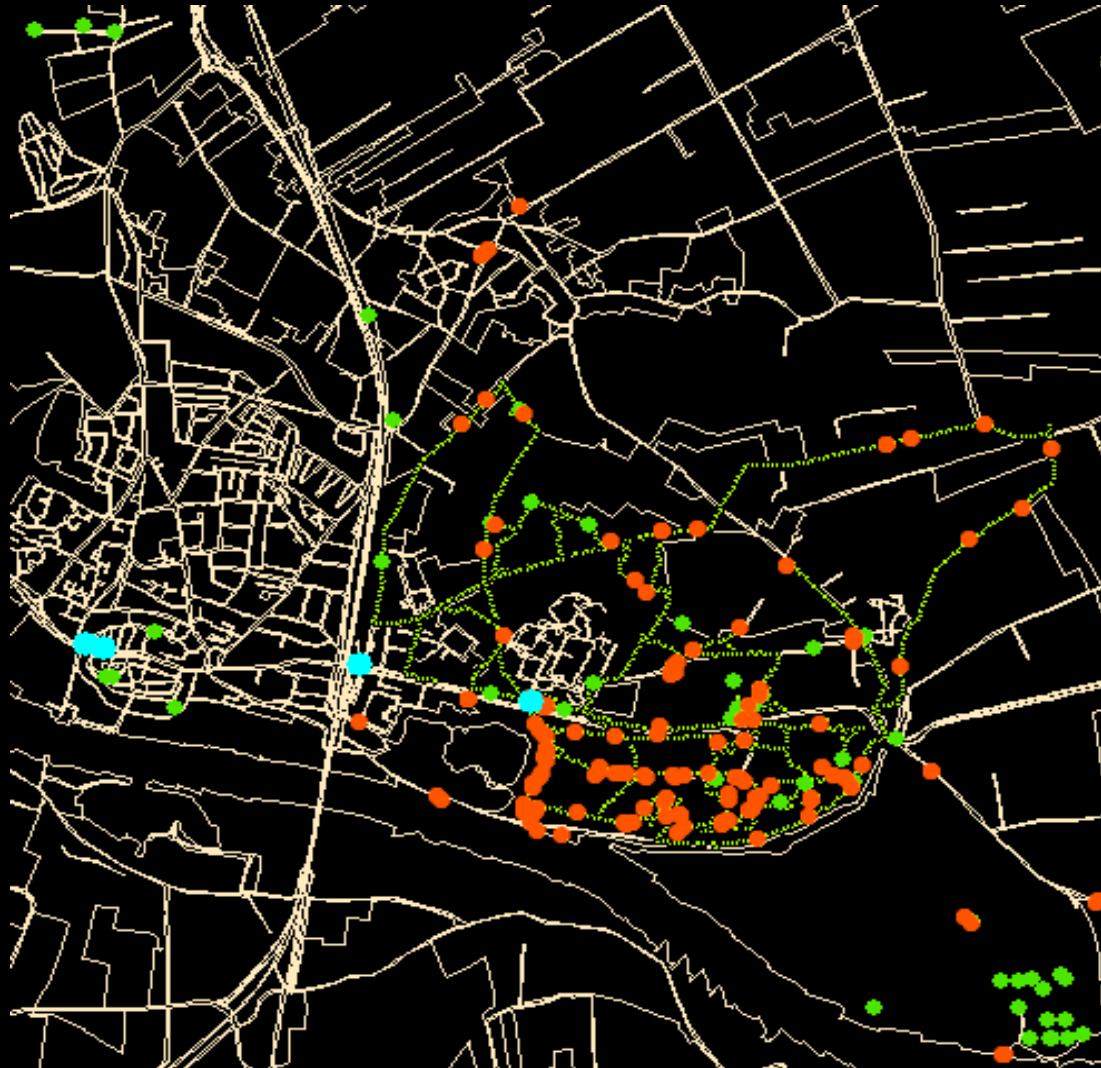
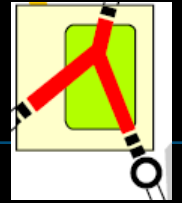


- | | |
|---------------------------------------|-----|
| ■ More attractive than the usual trip | 75% |
| ■ Better informed | 58% |
| ■ More knowledge about the area | 55% |
| ■ Learned something about the area | 68% |

N = 150

in %

Parlance Points (Volksmond)



- Volksmond POIs
- Facilitating POIs
- POIs

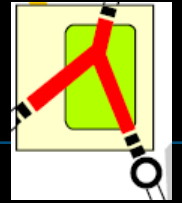


Landgoed Lam

Lambalgen is een historische plaats en werd als hoeve al genoemd aan het einde van de 16e eeuw, later is het uitgegroeid tot buitenplaats naar de 19e eeuwse mode. Van boerderij tot herenhuis met parkaanleg. De naam Lambalgen duidt op een zandige verhoging in water of moeras. Bij natuurterrein De Slingers is dat nog goed te zien. In 2003 werd de cultuurhistorische waardevolle parkaanleg hersteld met financiële steun van Stichting Vernieuwing Gelderse Vallei.



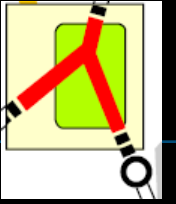
Parlance Points Classified



Parlance (N=345)	General Classification		Cultural Historic (N=121)					
	Cultural Historic	Prob Cultural Historic	Total	Animal Plant	Building details	Building environ.	Vista	Line
Picture	83	38	236	51	40	22	35	24
Text			95					
Video			19					
Sum	83	38	345					

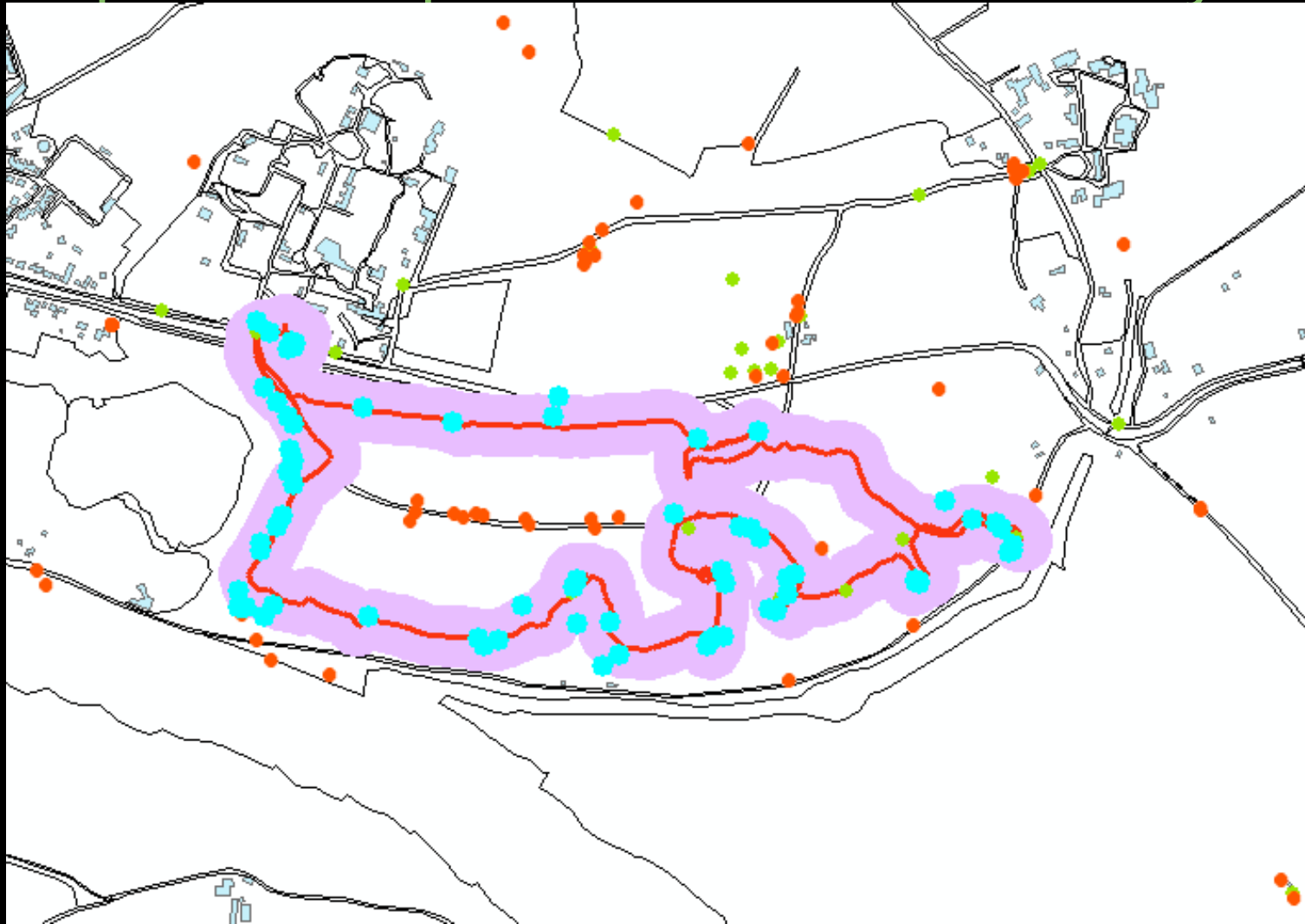
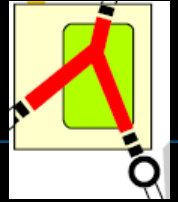


What did the users sense - trigger



- Preliminary analysis of Parlance Pois (Volksmond)

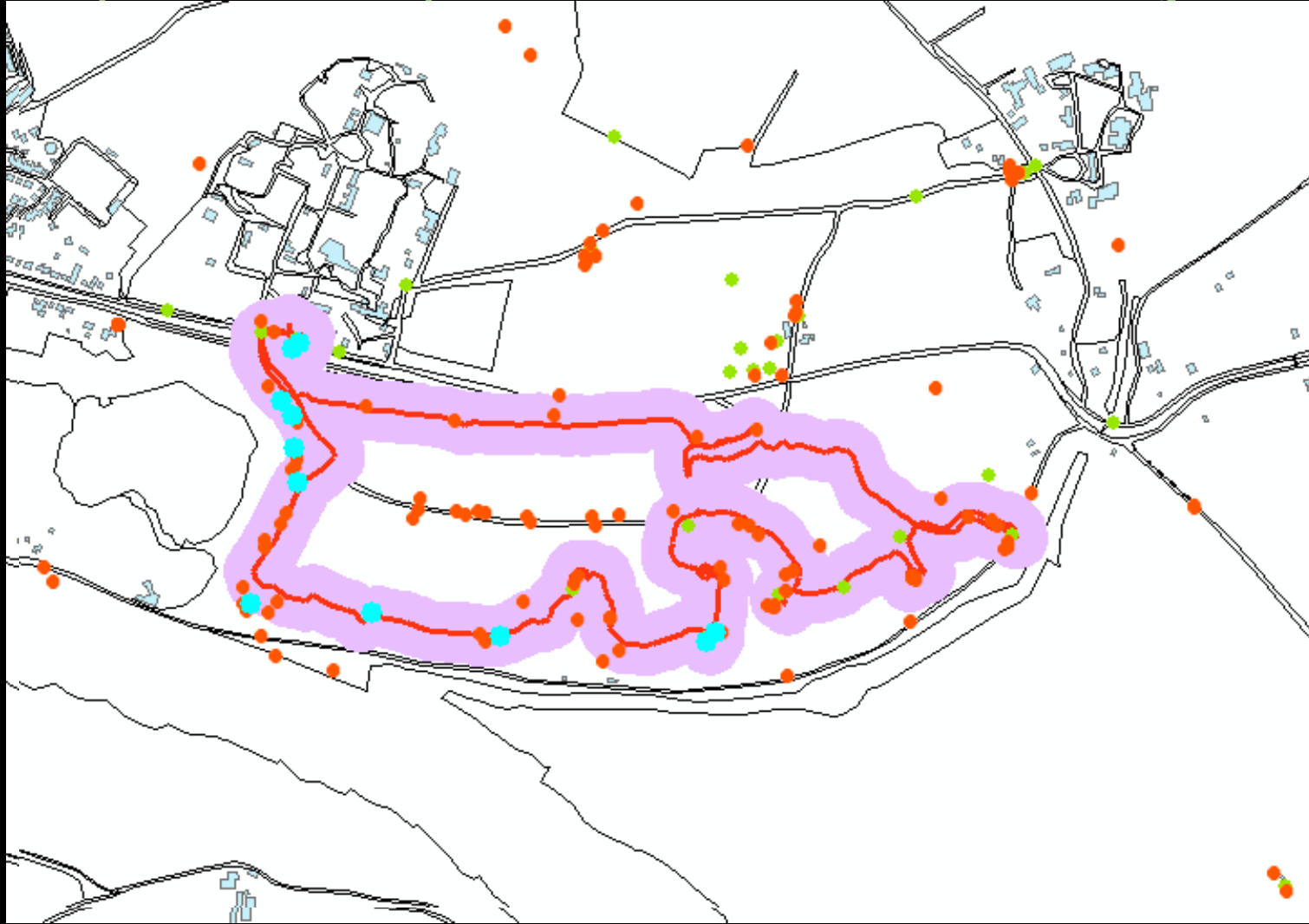
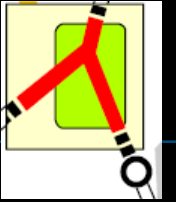
Impact on experiences: where did they sense



- parlance POIs
- POIs
- POIs - other
- Selected POIs

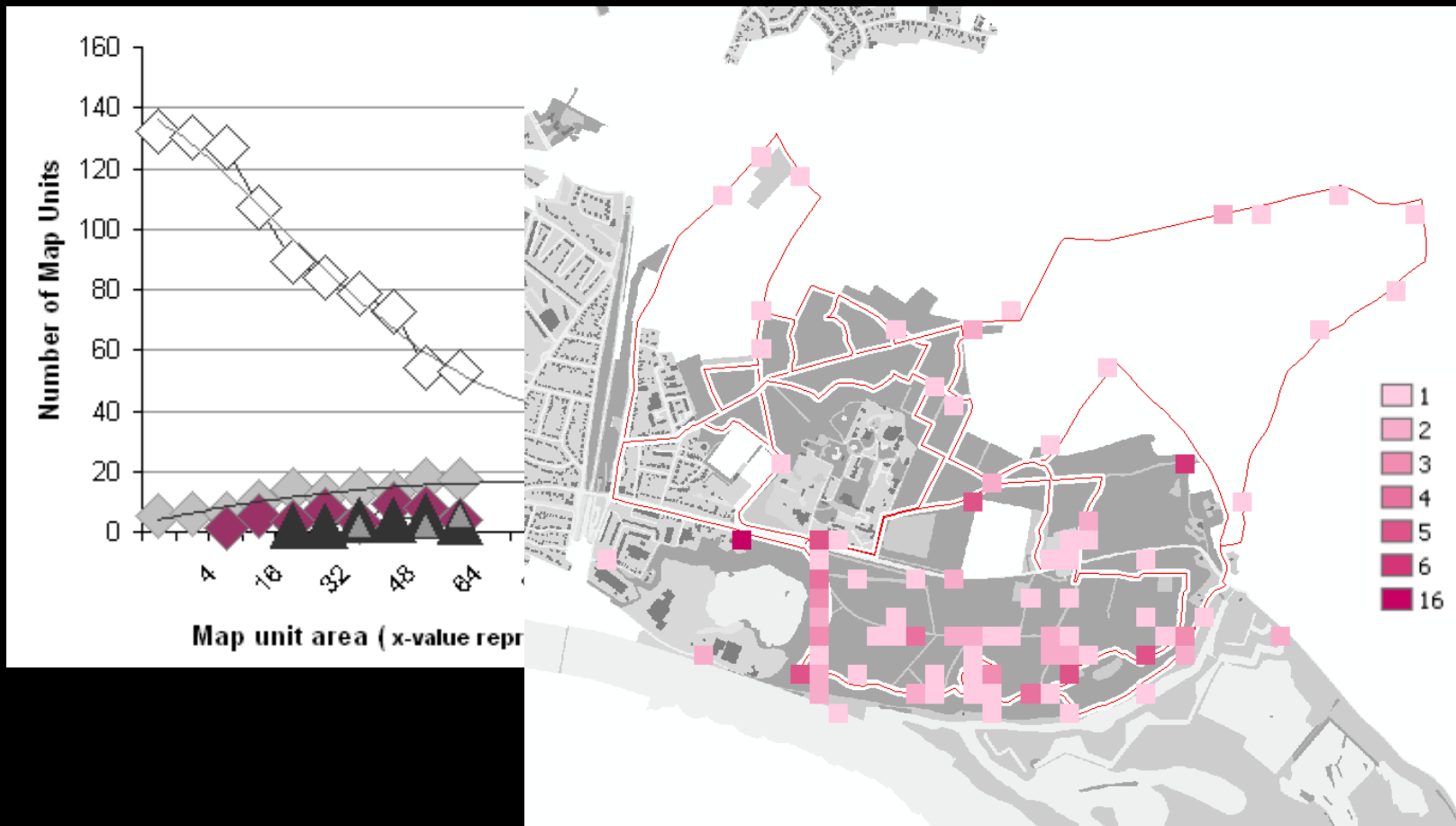
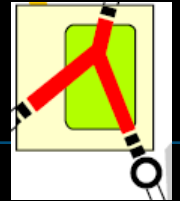
75 out of 345
Within 50 meters
Around a Route

Impact on experiences: when did they sense

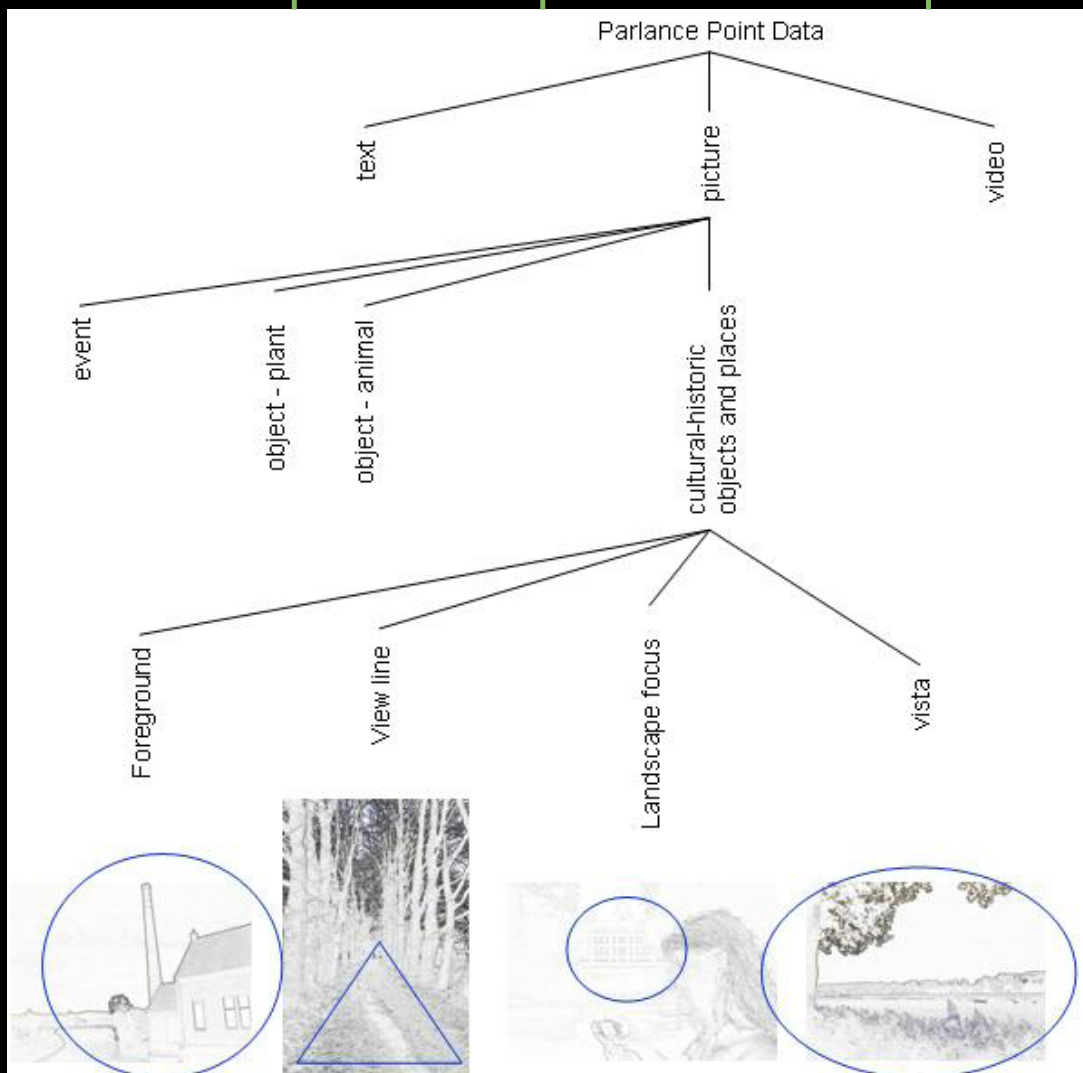
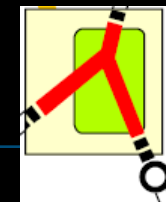


- Selected POIs
- 12 out of 75
- Within 50 meters
- 30/3/2008

PP Density

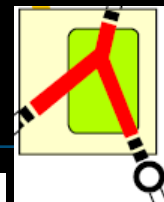


STEAD: spatio-temporal *in-situ* experiences as data



Sensing Landscape History with an Interactive Location Based Service ,
van Lammeren, R., M. Goossen, P. Roncken, Sensors 2009, 9

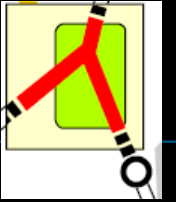
Do volunteers download POI's



- Average downloads: 7 POIs
- Average donwloads: 2 Parl POIs
- N% of POIs users: 100%
- N% of Parl POIs users: 56%

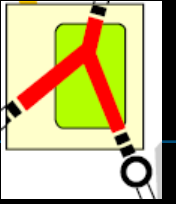
Number	POI		Parlance POI	
	N	%	N	%
0	11	7	72	44
1	6	4	26	16
2	11	7	17	10
3	15	9	10	6
4	13	8	16	9
5	17	10	4	2
6	10	6	7	4
7	17	10	3	2
8	12	7	2	1
9	6	4	1	1
10	8	5	3	2
11	7	4	0	0
12	9	5	2	1
13	5	3	0	0
14	2	1	0	0
15 or more	14	10	0	0
Sum	163	100	163	100

Volunteers assess other volunteer data



Content	Average score
Attractive	3,6
Interesting	3,2
Parlance texts are superfluous	4,3
Parlance pictures are superfluous	4,5
Parlance movies are superfluous	4,5
Offered new information	3,2
Added information is worthwhile	3,5

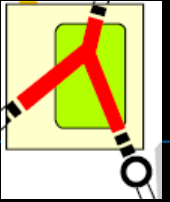
Practicing - Challenges - Trigger



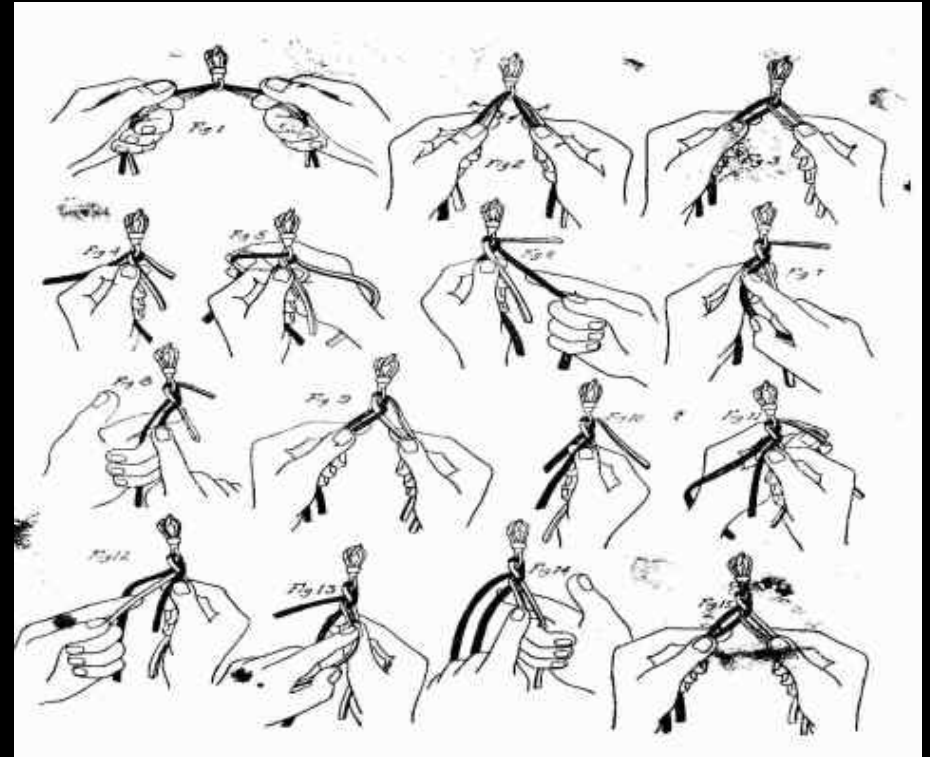
- Parlance POIs content
- Parlance POIs and Mentality groups
- Parlance POIs in space [cluster, link to routes]
- Parlance POIs in time [cluster, link to routes]
- Parlance POIs in space-time [cluster, link to locations]

- Translation into behavioral studies

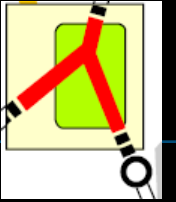
Beloved colleagues.....



- Lessons : **PLAIT - F**
 - Public relation
 - Logistics
 - Acting perspective
 - Instructions
 - Test / Technology
 - Feedback / Filtering

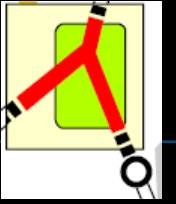


Public Relation



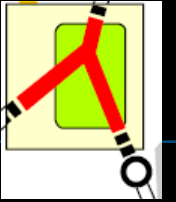
- Link to interest: try to use mass media AND the more content specialized media (regional and local will work)
 - Possible to pass by : see Tripod
 - Sometimes more than needed: Amazonia project

Logistics



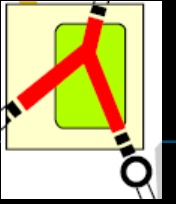
- Welcome volunteers and explain their rights and duties
- Prepare the (field) setting: locations of the venue / welcome / start / pause / finish
- Inform facilitators: land owners / facility manager / ao
- Brief volunteers many times and always one day before
- Check data and ICT services
- Offer a fall-back / back-up option in case of
- Check the final stage: data collected, id's,

Acting perspective



- what (make a clear assignment / define action)
- where (explain area)
- how (in case of explicit tasks)
- technical requirements (device, software, transmission)
 - <http://www.scenariocommunities.com/web/index.php/general/team?symfony=7350d7ae589081c4b59c519668929e1f>
 - Not urgent in case of implicit tasks

Instruction



- In case of usability tests or explicit tasks offer a short training and send before an introduction / manual
 - <http://www.galaxyzoo.org/>
 - Not urgent in case of implicit tasks

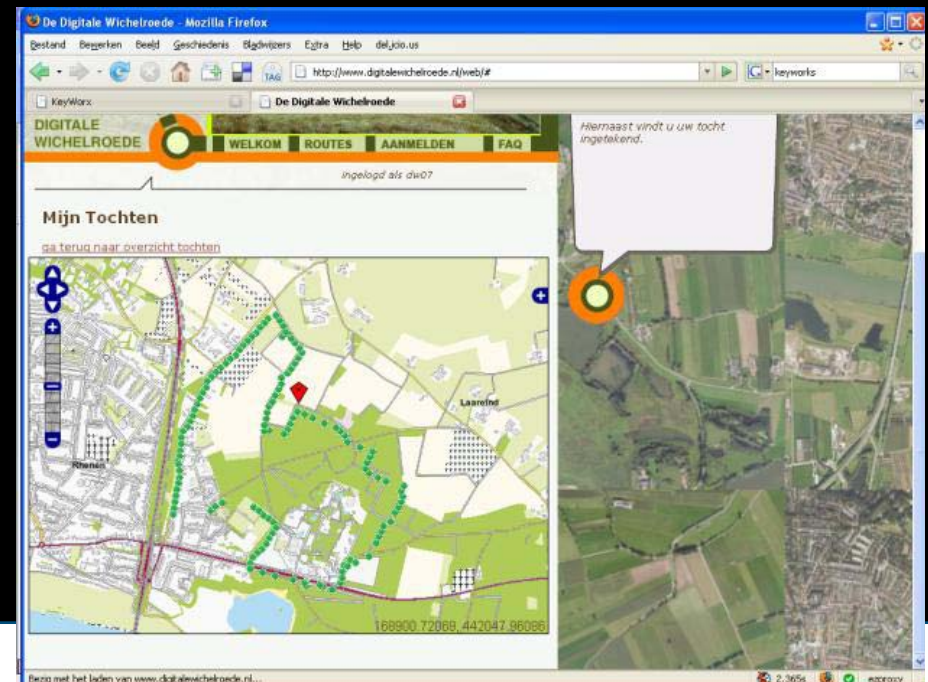
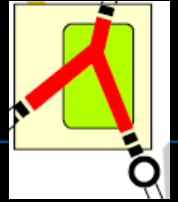
Test / Technology

■ Hardware

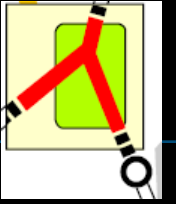
- battery duration – (temperature, number and type of programs)
- storage capacity - impact of streaming
- wireless signal strength - mass capacity test, 'heartbeat'
- visibility – screen / audibility – sound – recording

■ Software

- Cognitive walkthrough
 - Force Errors to offer solutions
 - Relation data-environment
 - Check formats / sizes
- ## ■ Data storage /services
- ## ■ Control environment / field



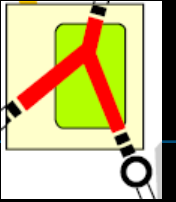
Feedback / Filtering



- Keep Volunteers informed
- Deliver information of outcomes
- Check data / filter

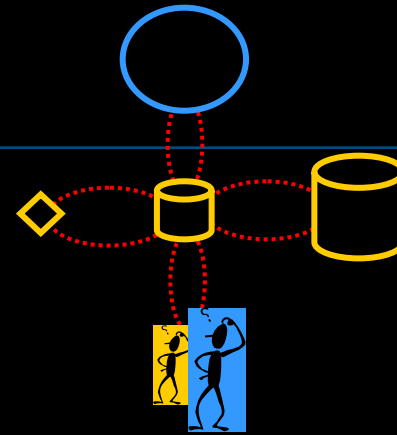
- use PR facilities
 - both mass media and specialist oriented sources

Preaching – change of expenditure



	preparing	running
● Public relation	20%	35%
● Logistics	5%	15%
● Acting perspective	10%	5%
● Instructions	10%	5%
● Test/Technology	50%	15%
● Feedback/Control	5%	25%

Summary



■ Practicing

- Location and volunteers must have a 'click' - *place browsers*
- Volunteers : same interests but varying backgrounds
- Volunteer as the 'dependent variable'
space to place / behavior

■ Preaching

- PLAIT-F – foster and care your volunteers
- Support scientific spin-off (*citizen science**)

http://www.researchinformation.info/news/news_story.php?news_id=573

VGI for science

Practicing is Preaching

Ron van Lammeren

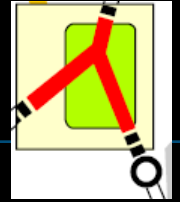
Centre for Geo-Information, Wageningen University, 2010

www.geo-informatie.nl

Thanks to Arnold van Vliet, Centre for Climatic Studies, WUR; Leo Eppink, StoryTeller;
Piet Woldendorp, Casteelse Poort Foundation; Henk Meeuwsen & René Jochems, Landscape Centre, WUR



DiWi Acknowledgement



- Dutch National Research program on Geo-Information
- RGI : <http://www.rgi.nl/> Consumer and Student
- Digital Dowsing Rod (Digitale Wichelroede) project

- Projectteam: Alterra, DS Landschapsarchitects, Galileo Communication Projects, Municipality of Utrecht, KPN, Dutch Cadastre, Province of Utrecht, Foundation “ Vernieuwing Gelderse Vallei “, Waag Society and Wageningen University.
- Sponsor: Dutch National Research program committee on Geo-Information (RGI), Province of Utrecht and the Dutch Ministry of Agriculture, Nature and Food quality.