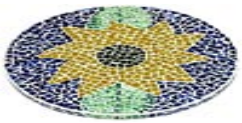
Workshop on “Innovation in Mobile Collaborative Workplaces”
17-18 February 2005, Rome

Session 1

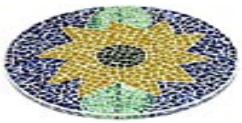
Current practice in mobile work
Insights from European case studies

Torsten Brodt, University of St. Gallen
Liz Carver, BAE Systems
Erik Andriessen and Robert Verburg, TU Delft
Olli Martikainen, Oulu University
Adam Turowiec, ITTI



Agenda

- **Introduction**
- Mobile work – how is it working?
- Key success factors
- Discussion

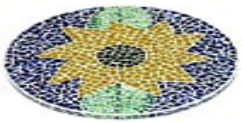


This workshop deals with the current practice of mobile work and its actual enablers and barriers.

From the workshop announcement

= The objective of this workshop is to **bring together practitioners, researchers**, solution developers and policy makers to explore the potential for innovation and change in supporting work practices [...].

= In particular we will **discuss current practice** and future scenarios for new ways of working, address important societal and organizational **challenges in creating systems change** [...].



The current practice assessment has two main objectives: stay real and derive insights from the field.

Main objectives

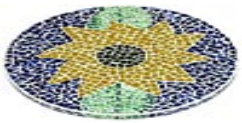
= Stay real

- Keep the EC-research efforts realistic and with two feet on the ground – what's the state of the art compared to all the visions?
- Where and why are mobile work environments to be found?
- Is it really so novel, is the development evolutionary or revolutionary
- Which organizations are waiting for what type of guidelines

= Derive insights

- into potential technical, organisational, process, psychological, economic enablers and barriers

Update visions: better understand the future development and drivers from the field



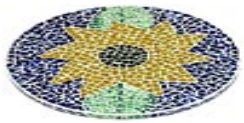
Mobile work environments free work processes from a fixed location.

Mobile work environments – a working definition

= We are concerned with mobile work, when information and communication technologies support work processes to be carried out independently from a fixed location.

= We are looking at the environment of mobile work in terms of:

- technologies used
- process, interface and human interaction design
- organisation, empowerment and skills
- implementation efforts
- performance / value created



Five questions and a bit of physical exercise.



Questions

= Do you think you are a mobile worker? ☐ no ☐ yes

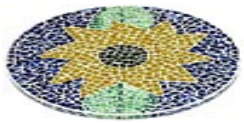
= How much time do you work at your employer's premises? ☐ >50% ☐ <50%

= 5 years ago - how much time did you work at your employer's premises? ☐ >50% ☐ <50%

= How have your work processes changed? ☐ radical ☐ marginal

= Do you appreciate that your work has become mobile? ☐ no ☐ yes

= Who reaps the benefits from mobile work? ☐ you ☐ both ☐ employer ☐ no benefits



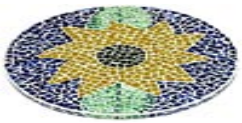
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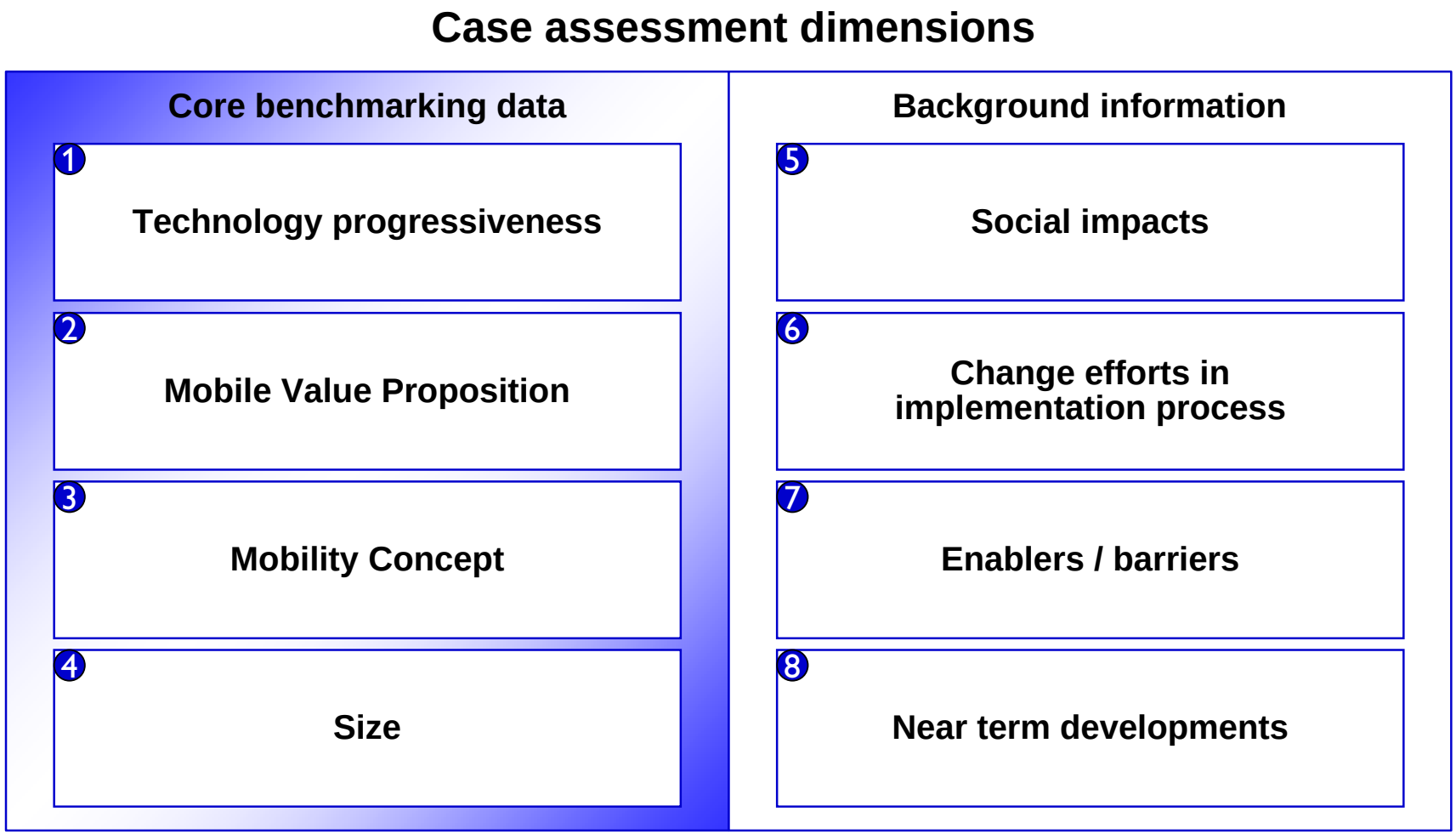
= **Mobile work – how is it working?**

= Key success factors

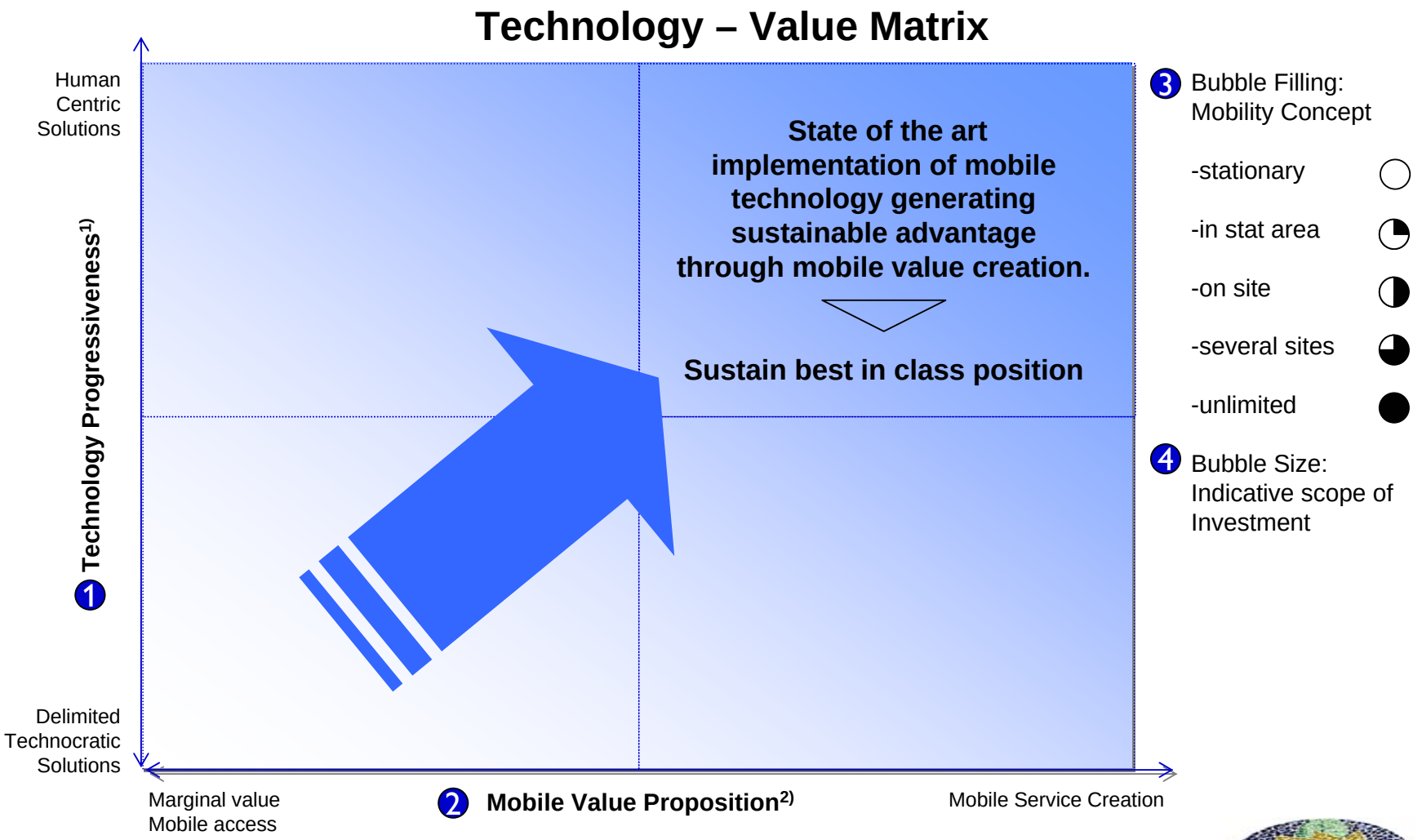
= Discussion



When assessing the various cases we focused on eight key dimensions.



Core benchmarking data determines the positioning of the cases in the technology – value matrix.



1) Type of technology deployed and quality of technical and human implementation.
2) Significance of products / services improvement based on the deployment of mobile technology.

Agenda

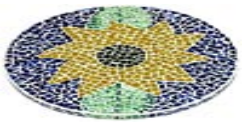
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= Mobile work – how is it working?

- **Customs Agency (NL)**
- Frimley Park Hospital (UK)
- Wired Up Community (UK)
- Flight Passenger Check-in, Finnair (FI)
- Mobile Sales Force (CH)

= Key success factors

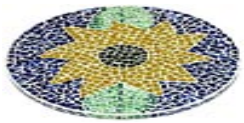
= Discussion



The Dutch customs organisation implements a mobile field force application for 500 controllers in the field.

Customs agency (NL)

Company background	Mobile Work Solutions
▪ Dutch Customs: four districts in the Netherlands ▪ Control of import and export of goods ▪ On the road and at client premises ▪ Planned and ad hoc assignments, by single controllers or in pairs ▪ Mobile teams (“physical control”): in total 1700 personnel ▪ Experiment with about a hundred controllers	▪ Mobile work force ▪ Currently 15 controllers equipped and on central dispatching seat ▪ Future target: 500 controllers ▪ Planned assignments generated by planning systems, a hoc assignments by control room ▪ Assignments send via GPRS to PDA and tablets of controllers. ▪ Controllers use PDA or Tablet, depending on setting ▪ Controllers complete report on PDA / Tablet and send results back

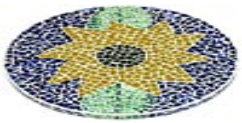


The customs agency achieved operational efficiency gains and image improvements.

Customs agency (NL)

Major benefits	Problems / barriers

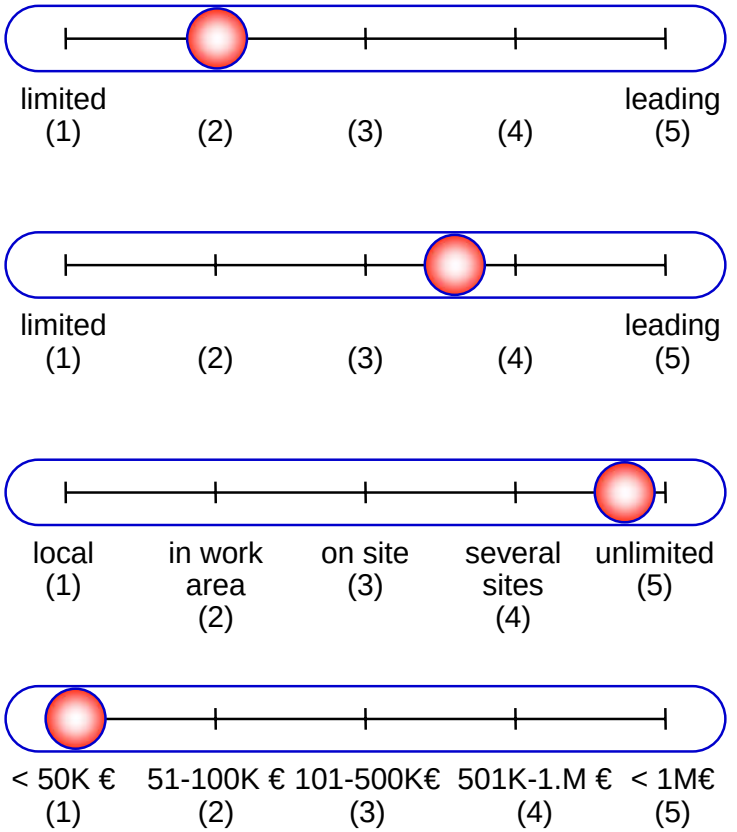
▪ Improved information availability for controllers
▪ Higher flexibility of task assignment
▪ Faster processing of results of controls
▪ Goods can be cleared much faster for the client
▪ Less waiting time for assignments at office
▪ Positive reactions by controllers
  ▪ The tools were very user-friendly
  ▪ Data only be entered once
  ▪ Information could be asked and received during the trip
▪ Improved image and employee motivation
	▪ Sometimes slow data-communication over the existing network
	▪ Duration of batteries
	▪ Access to intranet, i.e. connection has to be initiated repeatedly because of
	▪ Ergonomic conditions
	▪ Task execution more standardized, autonomy lowered



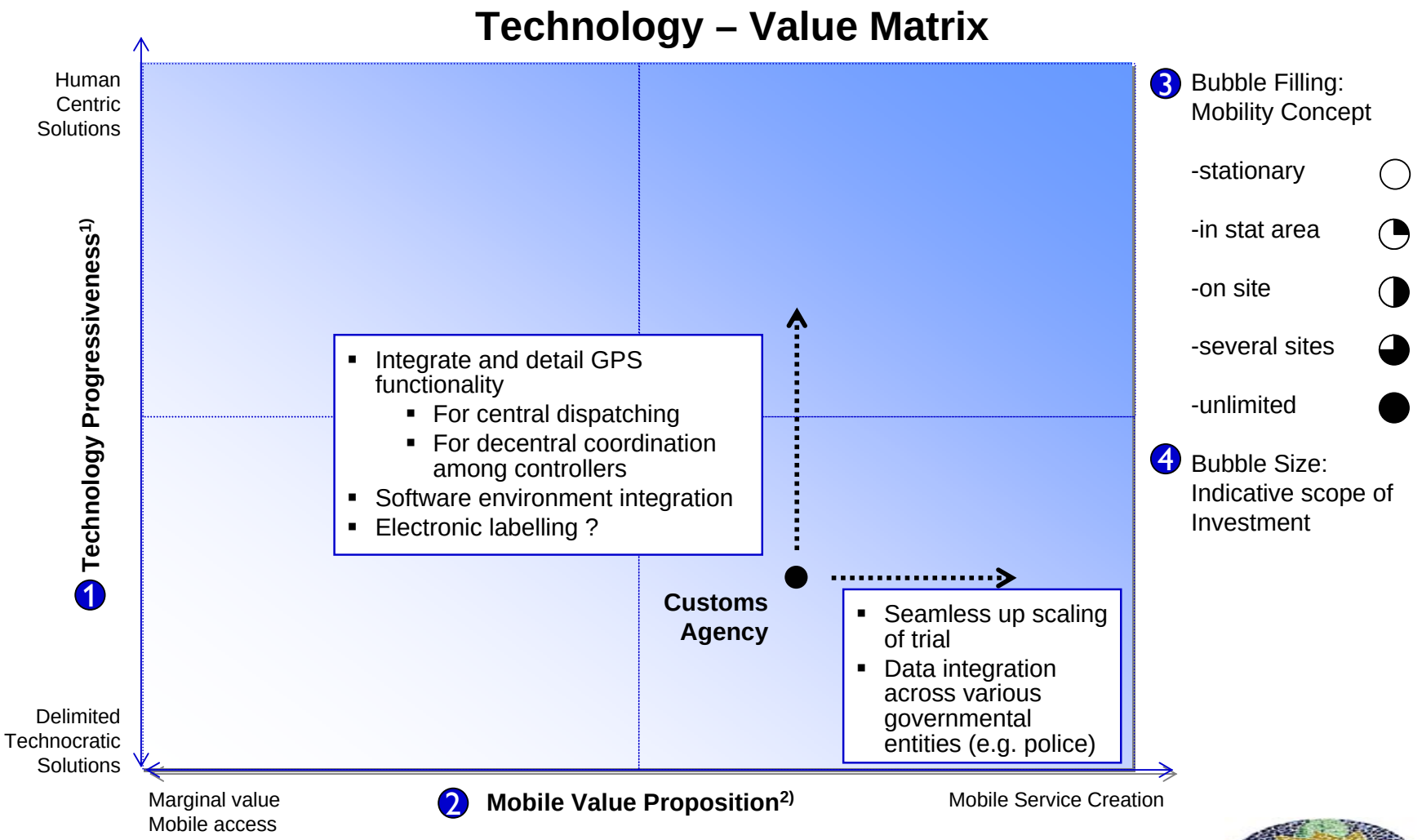
With reasonably small investment in robust technology the case shows quite positive value impact.

Customs agency (NL) - Case assessment

1 **Tech-nology**	▪ Ease of use is high and the system runs reliably ▪ No use of location based information ▪ Not fully integrated in SW environments ▪ Proven technology solution from ADAC (Ger)
2 **Mobile Value Propo-sition**	▪ Improved process flow and information availability in the field ▪ Better resource allocation and planning ▪ Increased employee motivation
3 **Mobility Concept**	▪ Theoretically worldwide, wherever GPRS coverage is available ▪ Usage in geographic districts in NL
4 **Size**	▪ Number of mobile workers: 15 in the trial today (500 in future) ▪ Trial investment: < 50.000 €



Further SW and data integration as well as seamless up scaling would be important to improve this case.



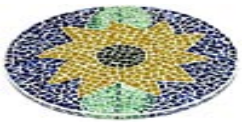
1) Type of technology deployed and quality of technical and human implementation.
2) Significance of products / services improvement based on the deployment of mobile technology.

The early involvement of users in the implementation process is seen as an important success factor.

Lessons learned

= Technical:
- Use different equivalent devices for different circumstances

= Organizational:
- Development is in line with the general automation trend in the organization.
- Organizational processes and actual work practices were not strongly changed, although this was technically possible. Therefore introduction of the new devices was quite easily done
- Due to earlier experiences, the project was set up with extensive organization, drive by project team and participative development and evaluation.
- Use of very user friendly devices and applications made acceptance quite strong
- Success(-until-now) probably also due to copying an existing approach (from ANWB)



Agenda

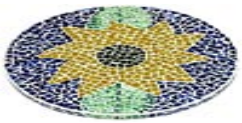
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= Key success factors

= Discussion



Tablet PCs implemented as mobile access to patient records, digital X-rays and other medical data.

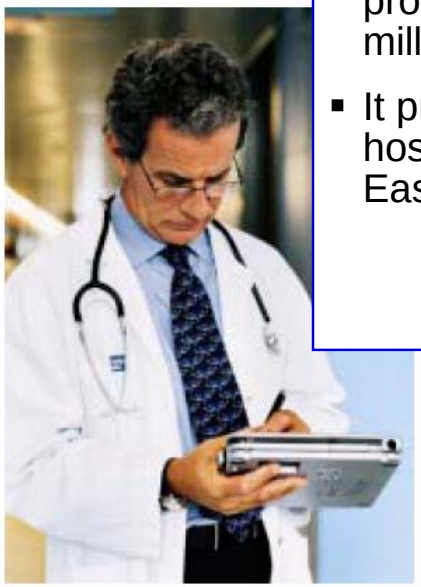
Frimley Park Hospital (UK)

Company background

- National Health Service Trust (ie public health, free at source) hospital serving the Surrey area in south east of the UK
- Serves a catchment population of 365,000
- 700-beds, staff of around 2,500 and an annual turnover of almost £100 million
- 75,000 patients per year
- Opened in 1974, with a major expansion programme in 1992 at a cost of over £37 million
- It provides a full range of district general hospital services for the population of North East Hampshire and West Surrey.

Mobile Work Solutions

- Access to data for medical staff whilst mobile (both doctors and nursing staff)
- ~60 devices located at nurses station in 12 wards, used as required by some 200 doctors and nurses
- WLAN: 55 Cisco wireless access points
- Personal equipment: Tablet PCs (SUMO ST 368 Embedded XP Digital Tablet), personal iPAQ and PDAs
- Access to applications:
  - Digital X-Ray images
  - Pharmacy
  - Patient database
  - MS Office tools



Mobile solution as part of much wider improvement programme.

Frimley Park Hospital (UK)

Major benefits	Problems / barriers
▪ Compliance to regulative requirements (NHS Care Records Service) ▪ Earlier release of patients - beds released 5 hours earlier ▪ Improved reporting procedures and access to data (conservative estimate, time saving: 1 minute per patient for 75,000 patients => 20 person weeks) ▪ Motivated workforce – seen that they are being provided with top quality IT and that it works ▪ More streamlined integrated process, linking all agencies involved with the patient. ▪ Linking commercial benefit with both medical staff and patient benefit	▪ Business case - took 18months to resolve ▪ Security - took 7 months to resolve ▪ Skills - both in terms of IT and in terms of training staff ▪ Cultural factors - reporting of risks ▪ Weight and battery issues (resolved by process and modifications to the kit) ▪ Team absorb personality of consultant ▪ View that there will always be people that do not embrace the new technology ▪ Complete independence of IT networks: hospital, police, social services and fire brigade ▪ It may be more difficult to replicate this success in other hospitals



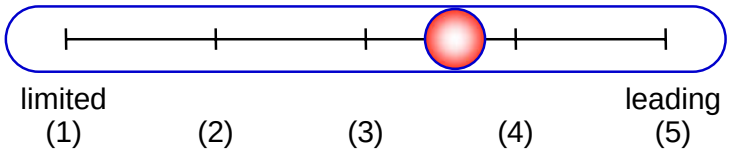
SUMO ST 368 Embedded XP Digital Tablet

Mobile technology costs offset by update to Digital X-ray process.

Frimley Park Hospital (UK): Case assessment

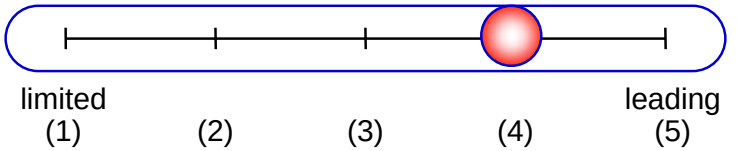
1 Tech-nology

- Fully integrated software environment
- Speech recognition for radiologists
- Use of location specific information
- No personalization
- Reliable, easy to use



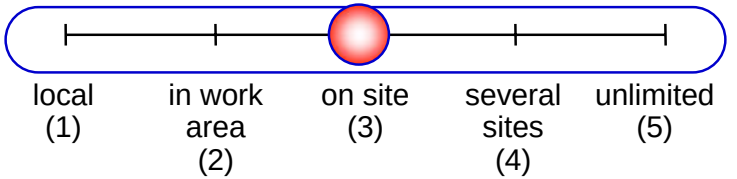
2 Mobile Value Propo-sition

- Indirect collateral benefits - better bed usage , patient release earlier with better process
- Time saved in accessing data and information
- Early adopters, the IT supports stringent government requirements for reporting



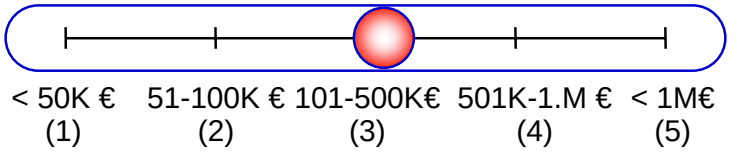
3 Mobility Concept

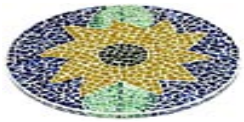
- Use of system in 12 wards but onsite only (WLAN coverage)
- Potential to integrate with ambulance service and district nursing
- Access to records anywhere any time
- Integrated approach to health care, not a one-off



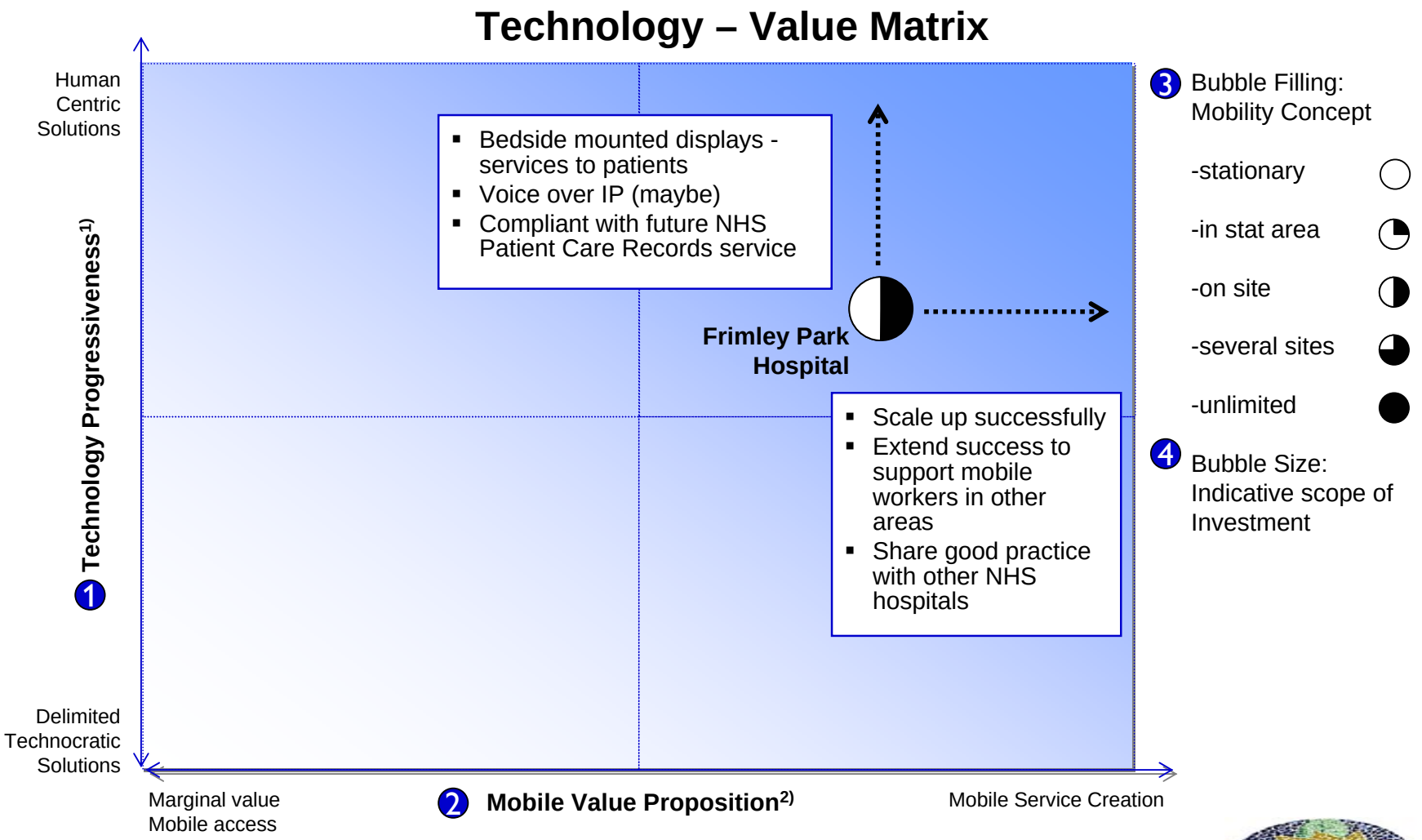
4 Size

- 200 staff using the system in this hospital, using 60 tablets.
- CAPEX: 101K-500K €
- Fully scaleable





Focus clearly on patient care - not short term improvements but an ongoing process.



1) Type of technology deployed and quality of technical and human implementation.
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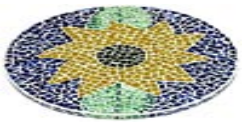
The success of the project was down to stakeholder involvement, CEO support, a highly skilled IT team and clear patient focus.

Lessons learned

= Technical:
- Network design - in house - cost effective and knowledge maintained
- Security protocols - answers had to be found during the project (symptomatic of early adopter)
- Partnership with manufacturers and service providers
- IT team training required

= Process:
- Process re-design for X-ray diagnosis and reporting, and for patient release - to benefit of patients and medical staff

= Organisational:
- Stakeholder management crucial - early involvement of mobile workers
- The pilot study was very valuable to iron out problems
- Don’t worry too much about dissenters - the benefits will carry the implementation
- Not a bureaucratic approach - very open culture and participative approach
- It helps to have a skilled IT team on site rather than relying on outsourced skills



Agenda

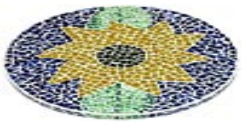
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= Key success factors

= Discussion



CyberMoor implements broadband access in an extremely remote area of Alston.

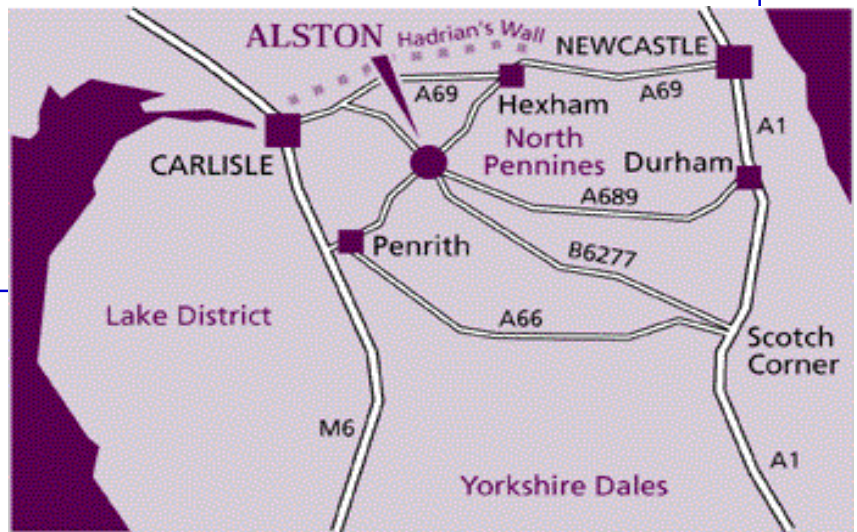
Alston CyberMoor – Wired Up Community (UK)

CyberMoor project's background

- Alston is an extremely remote town
- company limited by guarantee founded specifically for the project and owned by its subscribers (each new subscriber becomes a shareholder)
- CyberMoor provides a high-speed broadband service
- offers a range of on-line services to the residents of Alston Moor parish
- It was initially funded from a grant
- Now it's self-sustainable - generates GBP 150,000 a year
- More info: www.cybermoor.org or www.a-bard.org

Mobile Work Solutions

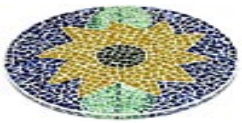
- Teleworking enables specialists to live in an attractive area and a beautiful landscape and simultaneously remain professionally active
- On-line shopping
- E-tourism services
- E-marketplace (for everyone)
- E-learning
- E-marketing



Digital inclusion of the community and businesses followed by further benefits.

Alston CyberMoor – Wired Up Community (UK)

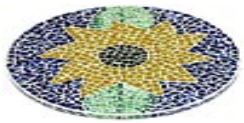
Major benefits	Problems / barriers
▪ Encouraging lifelong learning / home-school links, improving citizens' ICT skills ▪ Enabling (broader) take up of e-government services ▪ Facilitating economic regeneration (through improved ICT skills / broadband, encouraging and leveraging incoming business) ▪ Improving social inclusion through community website ▪ increase of real estate prices (25%) £25M over the area ▪ Cybermoor is the broadband capital of Britain - 30% of homes on broadband – national average 10%.	▪ Early underestimation of the support and project management requirements ▪ Lack of resilience/redundancy on backhaul ▪ Difficulty in formalising working SLAs with suppliers ▪ Reliability of wireless equipment ▪ Managing expectations amongst users



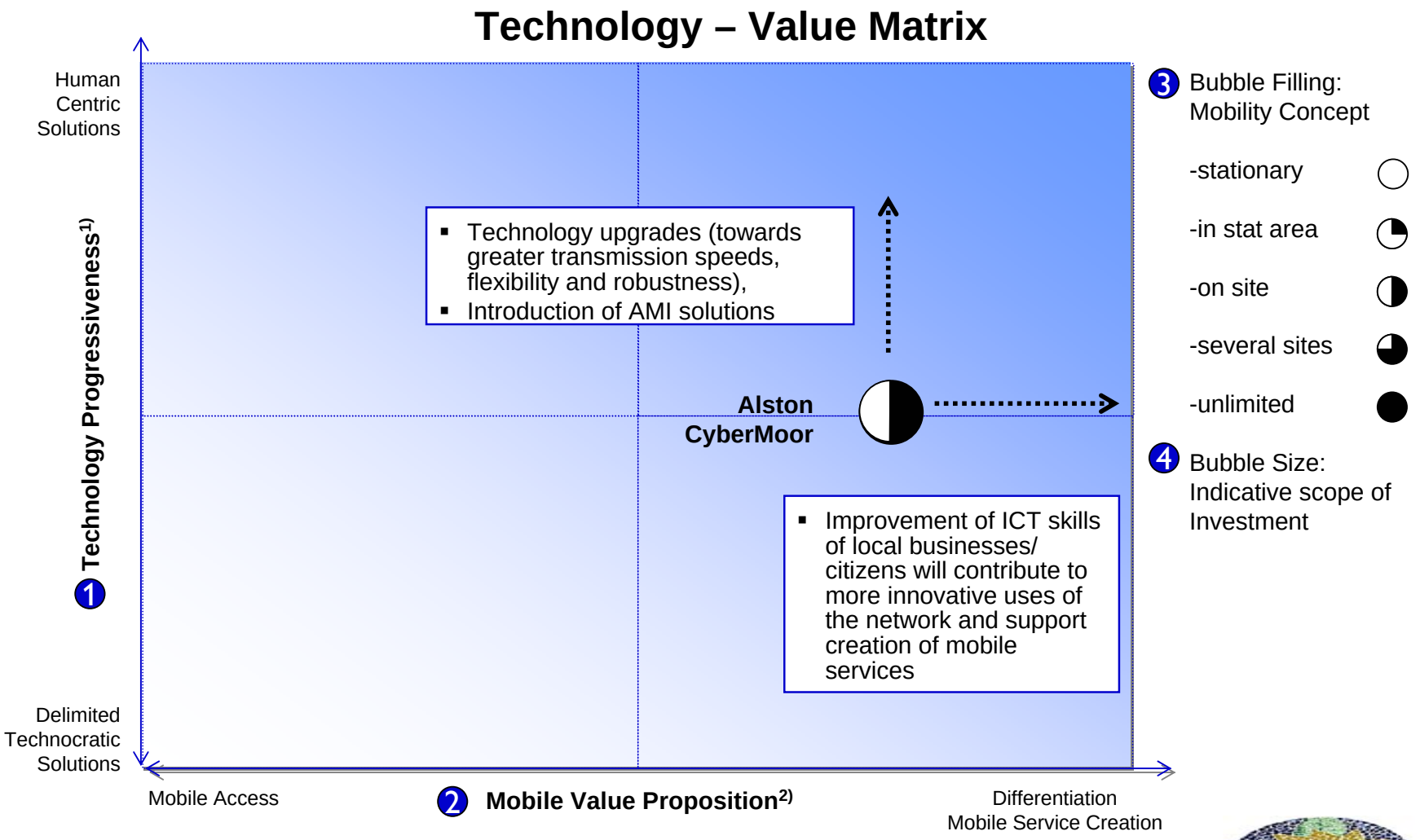
Reasonable investment, self-government and community-based solutions of great positive impact.

Alston CyberMoor: Case assessment

1 **Tech-nology**	▪ WiFi-based, proven technology, scalable ▪ After initial installation problems, currently the system runs reliably ▪ Maintenance done mainly locally	limited (1) (2) (3) (4) leading (5)
2 **Mobile Value Propo-sition**	▪ De-localisation and inclusion of the community ▪ Much better attractiveness and opportunities for businesses (incoming and local) development ▪ Innovative business concepts have arisen	limited (1) (2) (3) (4) leading (5)
3 **Mobility Concept**	▪ Network physical coverage is limited to Alston area, however – due to WiFi-based access – connectivity is unlimited ▪ Impact is theoretically unlimited since businesses may operate on a world-wide scale	local (1) in work area (2) on site (3) several sites (4) unlimited (5)
4 **Size**	▪ 400 local connections + backbone + secondary level distribution points (<500,000 €) ▪ Current maintenance ~ 20.30 thousand € (uprading servers, replacing antennas)	< 50K € (1) 51-100K € (2) 101-500K€ (3) 501K-1.M € (4) < 1M€ (5)



Innovation and impact will increase as businesses and citizens „mature" in ICT dimension.



1) Type of technology deployed and quality of technical and human implementation.
2) Significance of products / services improvement based on the deployment of mobile technology.

Professional project management for implementation and self governing organisation for operation chosen.

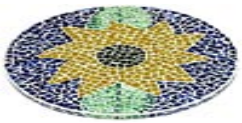
Lessons learned

= Technical:

- In spite of local character of the implementation, the planning should be done professionally (no resilience was initially built into the system which delayed the launch)
- Radio technology is not 100% reliable thus fixed back-up line was necessary

= Organizational:

- It is very important to devote adequate resources for managing suppliers and the project execution
- Formalising SLAs with suppliers was difficult but necessary
- Adequate and continuous marketing was necessary to launch the service at a proper scale (among ICT-inexperienced users)
- The marketing has been backed by dedicated training offer
- Self-governing and self-financing organisation has proved to be effective



Agenda

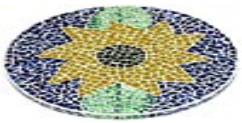
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SMS-based check in at Finnair reaches over 90% of passengers.

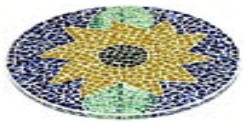
Flight Passenger Check-in Process, Finnair, FI

Company background

- The leading Finnish airline company
- 8,15 million passengers in 2004
- Major hubs Helsinki and Arlanda, Sweden
- Aims to be amongst the leading appliers of eBusiness practices in airline industry
- The ticket writing (eTicket) and the flight check-in and boarding work processes updated first
- For background information see www.finnair.fi and www.bookit.net

Mobile Customer Service Solution

- SMS based solution to mobilize the check-in and boarding work processes
- Passengers participate in the processes
- The new processes are implemented by Finnair in 2004 though the existing paper based manual processes are still available
- Special technology from a software company BookIT to make automated two way dialog over GSM Short Message Service applied
- Technologically the solution reaches over 90 percent of the passengers
- Very positive feedback, majority of passengers reaching SMS suggested check-in, do it through SMS



The solution allows passenger check-in at sharply reduced operational expenses.

Flight Passenger Check-in Process, Finnair, FI

Mobile work solution



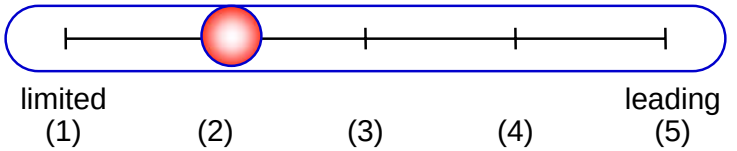
Major benefits

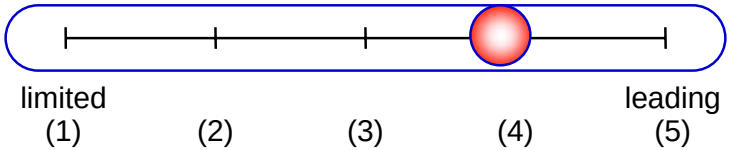
- OPEX an order of magnitude lower than with the ordinary paper based process (below 1 euro / passenger)
- Reduced load of check-in and gate personnel (see also lessons learned)
- Improved check-in process throughput, flexible personnel allocation in the airport
- Gate changes, guidance and delays can be informed to relevant passengers
- Majority of flight passengers can be integrated in the process since the SMS service is available in all GSM and UMTS phones
- Passenger status made available to airport and plane personnel, overbooking and special situations can be handled directly

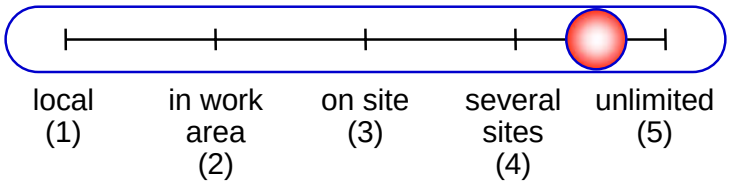
Though based on a technically simple messaging solution, Finnair was able to differentiate it's services.

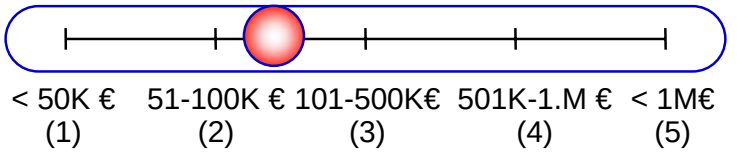
Flight Passenger Check-in Process: Case assessment

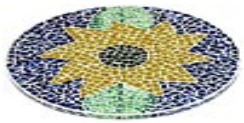
1 **Tech-nology**	▪ Two-way automated SMS dialog (BookIT patented technology) ▪ Integration with legacy check-in system
2 **Mobile Value Propo-sition**	▪ Labor savings in land processes ▪ Reduction of special documentation (boarding cards) ▪ Improved customer service
3 **Mobility Concept**	▪ The solution works with over 90% of Scandinavian passengers and with majority of passengers worldwide ▪ Passenger needs no extra HW, SW or service contracts
4 **Size**	▪ Total CAPEX, incl. implementation: below 250.000€ ▪ OPEX: 250.000€ / year ▪ Number of mobile passengers currently: 100 000 (active marketing increases this fast)



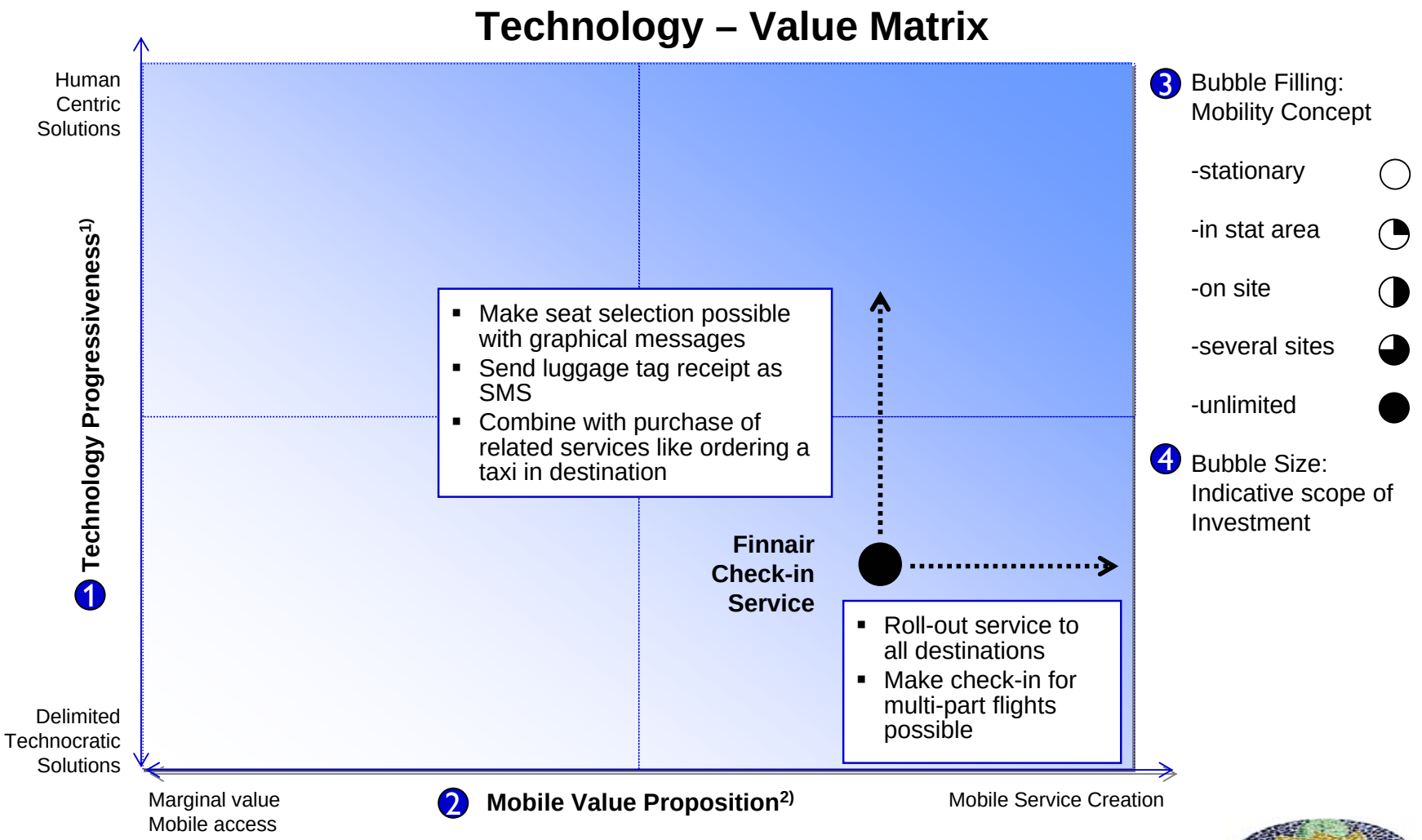








Expansion across additional airports and service enhancements will improve the solution.



1) Type of technology deployed and quality of technical and human implementation.
2) Significance of products / services improvement based on the deployment of mobile technology.

Process and administrative change more challenging than technological or social aspects.

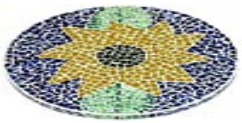
Lessons learned

= Main difficulty is not in technology, but the necessary changes in existing and related work processes
  - To get permission to use the service in Helsinki and Arlanda demanded negotiation with seven different authorities and required changes in their work processes
  - In many foreign destinations it seems impossible to get permission from authorities to use the system. Integration with check-in kiosks printing boarding cards would be needed
  - Travellers have to give explicit permission that Finnair can send service SMSs to them as a part of check-in process

= Personnel freed from expensive peak hour routines to more evenly distributed activities such as high value added services to customers. Personnel skills must be upgraded.

= Use SMS when the target user group is general public

= SMS messages with return channel are very efficient in getting ordinary public to use the service



Agenda

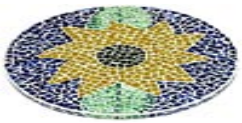
= Introduction

= Mobile work – how is it working?

- Customs Agency (NL)
- Frimley Park Hospital (UK)
- Wired Up Community (UK)
- Flight Passenger Check-in, Finnair (FI)
- **Mobile Sales Force (CH)**

= Key success factors

= Discussion



This case analyses a mobile sales force solution (MSF) of a food manufacturer in Switzerland.

MSF – packaged food, CH

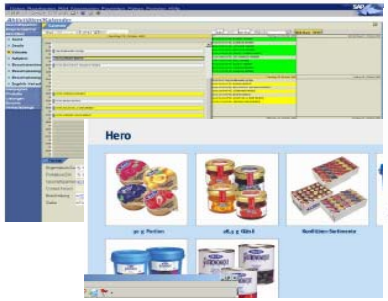
Company background

- International company for packaged food focusing on branded retail business and selected b2b markets
- Major products: fruit-marmalade, fruit-juices, fruit-bars and baby food
- ~1 bn € (ca. 75% consumer foods, 10% baking aids, 5 % industrial products)
- 270 employees in Switzerland



Mobile Work Solutions

- MSF solution based on SAP "mobile sales" and FujitsuSiemens tablet PCs
- So called “offline MSF solution” – wired synchronization only via ADSL
- 27 sales representatives: restaurants (15), specialist retail (baby nutrition) (5) and retail sales (7)
- Serves 40.000 clients from restaurants and retail in Switzerland. I.e. each sales rep. service between 600 and 1.200 customers

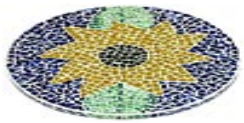




Major benefits of the MFS can be attributed to the top line – efficiency gains are marginal.

MSF – packaged food, CH

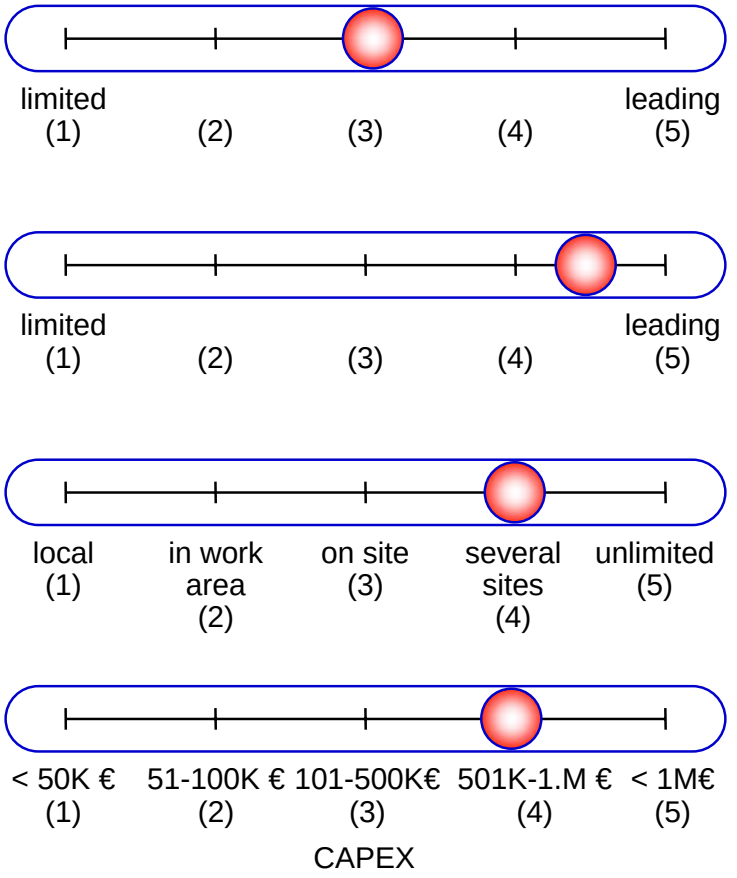
Major benefits	Problems / barriers
▪ Image improvement: More advanced appearance vis a vis client ▪ Acquisition of partner business: Take over of sales activities from other manufactures, who deliver to the same client base ▪ Improved marketing planning & controlling: Better client data records allow for central marketing planning and controlling Advanced and result-oriented sales incentive system ▪ New sales representatives can be introduced more easily since knowledge is externalized ▪ However, the company does not realize more customer contacts per sales rep.	▪ Being the first adopter of the solution resulted in: ▪ Malfunctioning of software ▪ Replacement of consultants ▪ Project delays ▪ Technical problems required special effort to keep the spirit of mobile sales representatives up



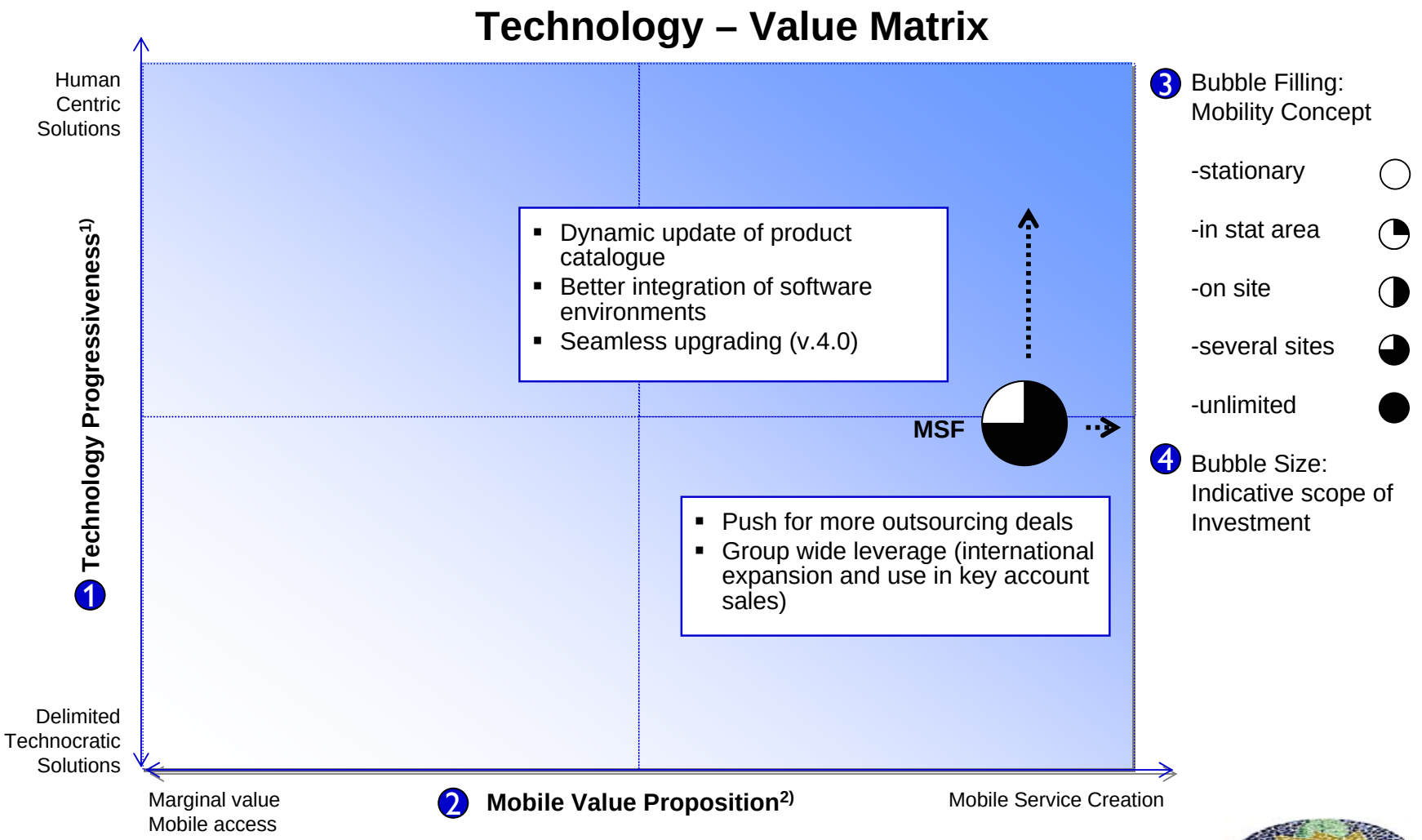
The value of the MSF is generated by the image gains and new outsourcing assignment from competitors.

MSF - packaged food, CH - Case assessment

1 **Tech-nology**	▪ Personalized customer data per sales rep. ▪ Limited software integration (no dynamic upgrade of catalogue, travel & expenses, Lotus) ▪ SAP mobile sales v3.0 (4.0 available) ▪ Scalability limited (due to organisation)
2 **Mobile Value Propo-sition**	▪ Image improvement ▪ Better central marketing planning and controlling ▪ Win sales outsourcing assignments from compt. ▪ No net-bottom line effect (off-set by higher admin activity per sales rep)
3 **Mobility Concept**	▪ No mobile connectivity - Offline MSF (wired synchronisation at home via ADSL)
4 **Size**	▪ Total CAPEX (Capital Expenditure) in hard- & software, incl. implementation: 500K-1 Mio€ ▪ OPEX: 100-500k€ ▪ Number of mobile workers: 27



Being an early adopter had two effects: high position on value creation despite a limited technology score.



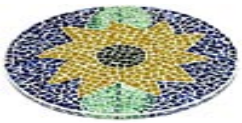
1) Type of technology deployed and quality of technical and human implementation.
2) Significance of products / services improvement based on the deployment of mobile technology.

The MSF solution will be technically upgraded to improve the sales process but wireless connectivity is not planned.

Lessons learned

= Technology
- Low performance of mobile broadband connectivity and lack of flat fee pricing models will hinder the upgrade to a real mobile sales force solution.

= Organisational
- Being an early adopter is a two edged sword - it brings the opportunity to differentiate in the market but bears the risk of complex technology implementation.
- Critical success factors:
  - Early involvement of the mobile workers
  - Top management support
  - IT know how and resources
- Sales representatives are mobile workers, per se. Their ways to work will not change radically due to new technologies.
- Sales representatives feared increased administration effort.



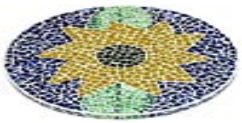
Agenda

= Introduction

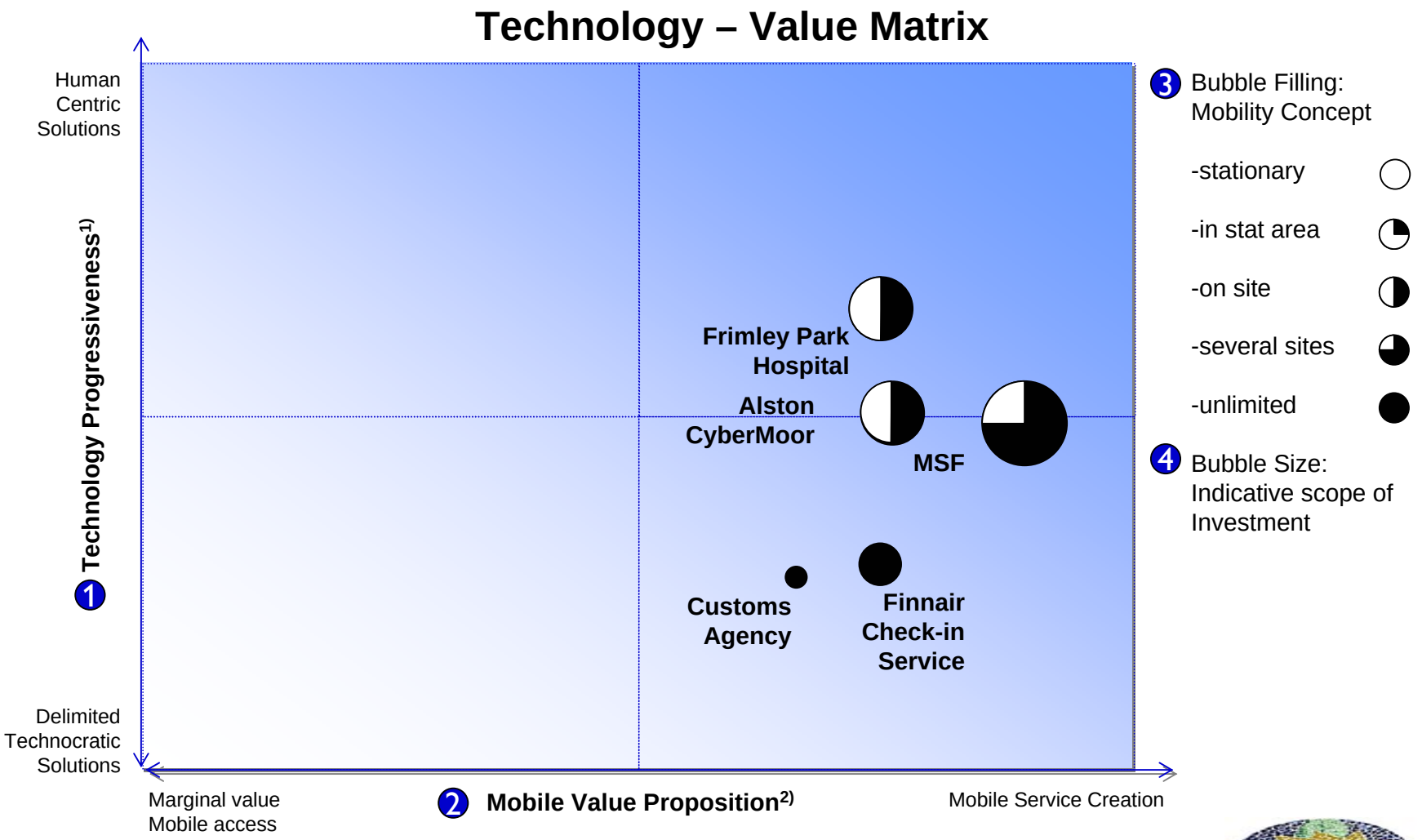
= Mobile work – how is it working?

= **Key success factors**

= Discussion

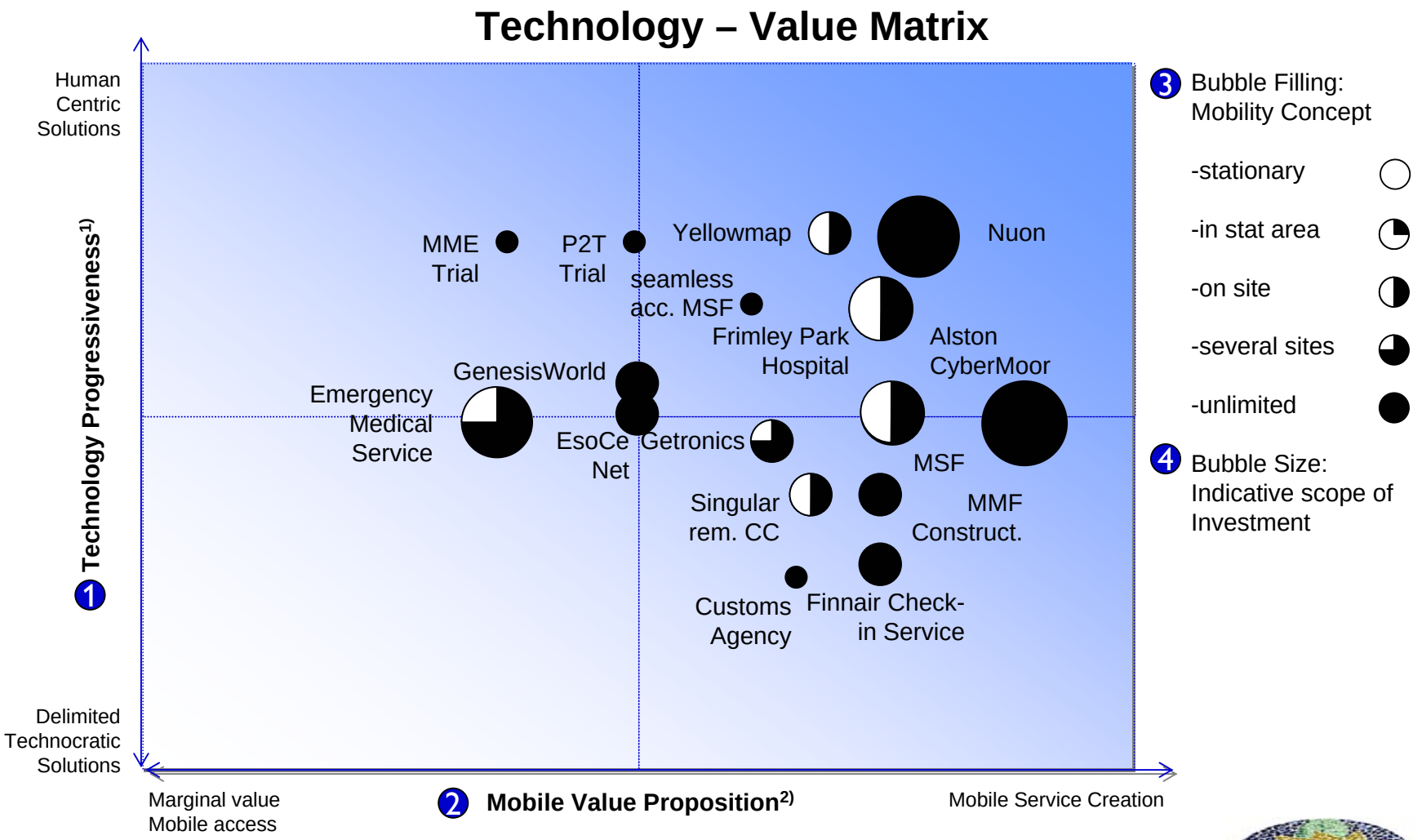


Although all five cases don't rate highest on tech-scale, they create specific value propositions.



1) Type of technology deployed and quality of technical and human implementation.
2) Significance of products / services improvement based on the deployment of mobile technology.

More than 15 cases have been assessed so far.



1) Type of technology deployed and quality of technical and human implementation.
2) Significance of products / services improvement based on the deployment of mobile technology.

Developments are generally part of a steady move towards further automation – however, technology is far from being well implemented.

Status quo: Technology

Contextuality
(Personalisation/Localisation)

- Identification mostly password based – **no "automatic" identification**
- Content and applications adopted to user in often static manner
- Location based information used in some cases but often from non-integrated GPS systems

4

1

System Integration

- **No 100% integration of systems/data/applications** and very little cross-company integration to be found
- Mobile connectivity only used when controllable – therefore WLAN preferred over UMTS

Technology Progressiveness

Human Interface Design

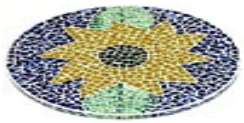
2

- **Traditional** flat screens, touch screens tablet PCs but no advanced wearable presentation tools
- Voice recognition only found in two cases

Scalability

- Limiting factor of solution scaling mostly not the technology but the **process environment**, which differs across divisions/countries. Process change needed first
- Various MWE-solutions include **proprietary applications**, limiting a smooth up-scaling.

3



Most value is created within selected functions or divisions – value chain integration is seldom found.

Status quo: Mobile Value

Value Chain

- Integration of partners found rarely
- **Need of cooperation models** to share cost/benefit effects along value chain

1

Profit and Loss Impact

- Projects are **more evolutionary process improvements** than being part of a comprehensive “mobilisation”-strategy
- MWE projects are often perceived long-term and complex - difficult to attribute clear net effects (generally limited KPI controlling)

Mobile Value Proposition

2

Motivation

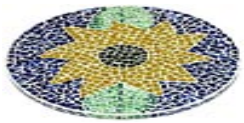
- Mobile workers **generally adopt new technologies quickly**
- MWEs to be found in areas where workers work mobile anyway (=> marginal change in work habits)
- Sometimes low acceptance levels with older employees
- Below the line all cases report positive motivation effects

3

4

Image

- **Positive image effects** in most cases
  - Employees
  - Customers
  - Partners / competitors

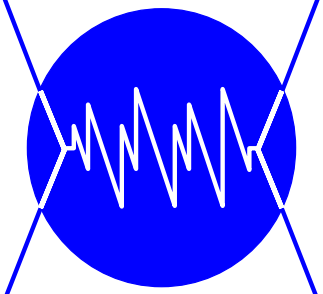


Adequate skills, sufficient commitment and a systematic preparation are key enablers.

Mobile Work Success Factors

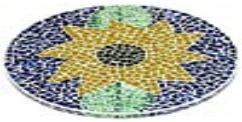
Key enablers

- **Proper project management** and clear communications (incl. training) is key
- Early involvement of mobile workers into the implementation process
- **ICT skills within the organisation** – even if it is not the core of the business (e.g. health)
- Top management commitment, that endures even over lengthy and problematic implementation processes
- **Definition of process change and well defined proposition** of the new work-process
- Use of proven technology (if no reason and resources for early adopter approach)



Potential barriers

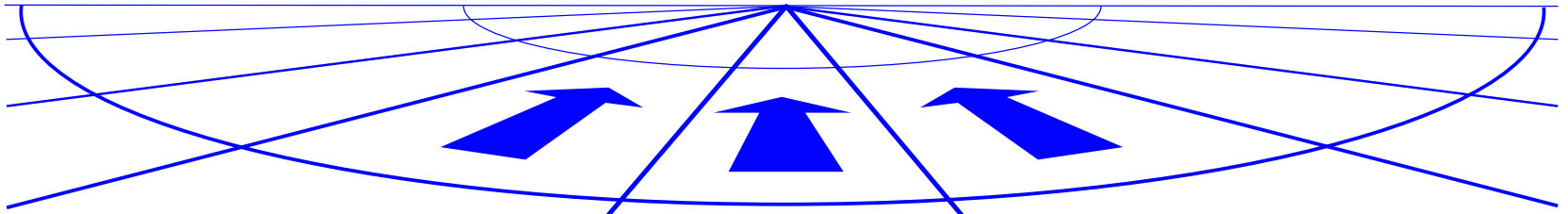
- Lack of active management of enablers
- **Fragmentation** of organisation, loss of culture and shared values (social cohesion)
- **Increase of administrative activities**, which the mobile worker does not perceive important (e.g. data recording)
- "**Automation of humans**" – limiting decision capabilities and self management, lack of employee autonomy
- Early adoption works only with strong project management and clear vision



Having learned the first lessons of mobile work, three near term value drivers have been identified.

Near term value drivers

Mobile work environments



Integration along value chain

- Mechanisms (e.g. collaboration models) need to be developed that support integration of m- and e-work along the value chain to avoid silo solutions

Faster adaptation

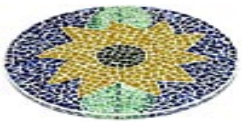
- Software must allow more flexible integration of solutions across divisions, functions, and countries
- Processes, organisations and regulation must adapt faster to technological possibilities
- Even in less ICT-driven industries, specialised ICT teams need to be built up to speed up implementation

Maintain workforce motivation

- Maintain social cohesion and “thinking” employee for critical tasks
- Pursue appropriate automation (e.g. repetitive and low involvement tasks) and promote alternative tasks for compensation

Agenda

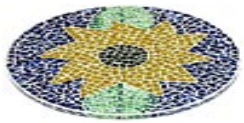
- = Introduction
- = Mobile work – how is it working?
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Discussion: Status Quo

Status quo

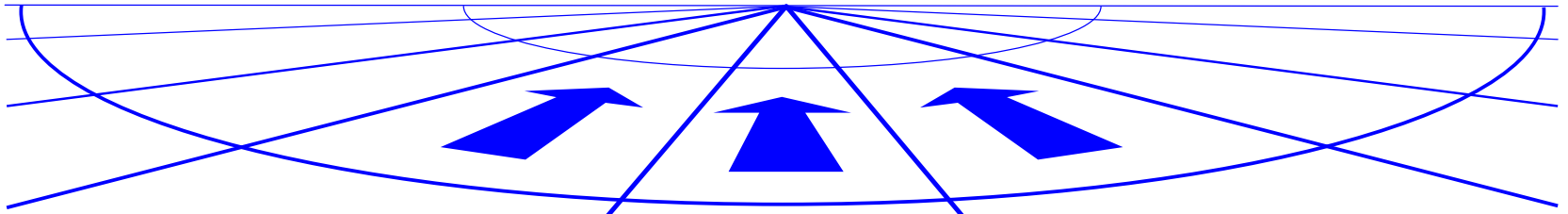
Technology progressiveness	Mobile value proposition
Developments are generally part of a steady move towards further automation – however, technology is far from being well implemented.	Most value is created within selected functions or divisions – value chain integration is seldom found. Projects are more evolutionary process improvements than being part of a comprehensive “mobilisation”-strategy.



Discussion: Near term value drivers

Near term value drivers

Mobile work environments



Integration along value chain

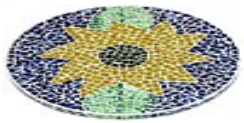
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Contact

Torsten Brodt
=mcm *institute* for Media and Communications Management
University of St. Gallen
Blumenbergplatz 9
CH-9000 St. Gallen
Office: 0041-71-224 2772
Mobile: 0041-76-583 3880
e-mail: torsten.brodt@unisg.ch

