



**MoSoSo and sustainable innovations:**  
empowering digital communities to build resilience  
through Community-Generated Services (CGS)

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# Background

Insight from Ph.d. thesis on “*digital community design*”

**Research question:** “*what is the role of mobile social software (MoSoSo) in the process of digital convergence?*”

**Thesis:** the greatest potential of MoSoSo consists in exploiting digital convergence for the realization of more **sustainable futures**.

**By enabling and empowering digital communities**, MoSoSo complements traditional top-down approaches to decision making, societal transformation and business innovation with quick, inexpensive and resilient self-organizing structures **driving social change through community-generated services (CGS)**.

# Background

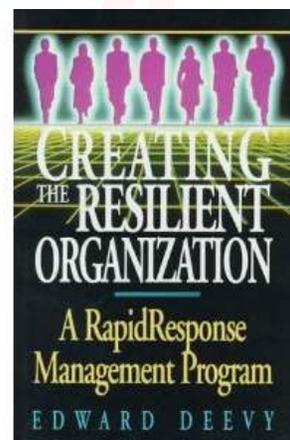
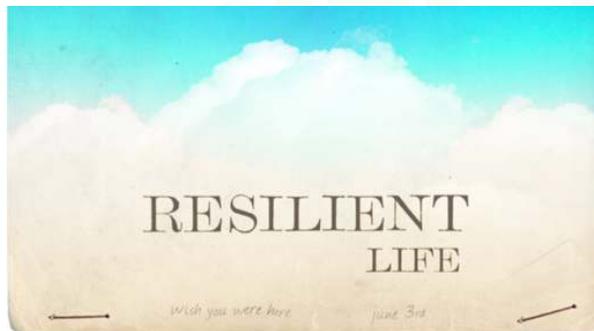
- **Introduction**
  - Resilience
  - From local to digital communities
  - Digital communities and resilience: a recent case
  - Community-generated services (CGS)
  - Network-based civil society
- **MoSoSo: "designing" digital communities**
  - Existing MoSoSo: technological and social perspectives
  - Re-conceptualizing MoSoSo
  - Designing MoSoSo: a conceptual model
- **Conclusion: building resilience through MoSoSo**

# Resilience

- From resilient materials and products....



- ...to resilient lives, ecosystems, organizations and societies



“Next generation resilience relies on citizens and communities, not the institutions of state...”

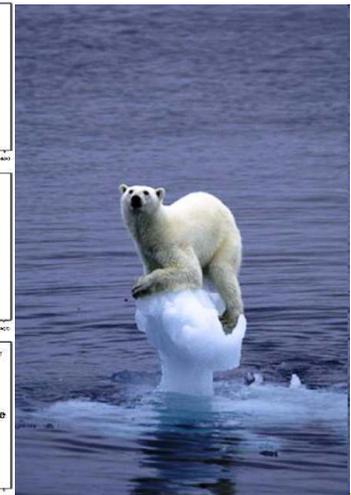
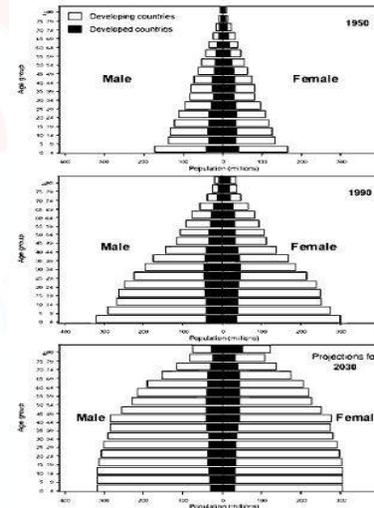
# Resilience



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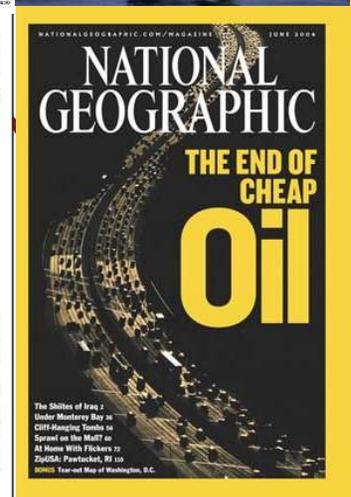
Global ageing    Climate change  
Economic crisis    Resource depletion

- **Crises?** We are living in a historical period of **transformation**
- Building resilience necessary to successfully adapt to changed socio-economic environment
- **Challenge:** replacing dominant business thinking with **resilience thinking**



**PAUL KRUGMAN**  
WINNER OF THE NOBEL PRIZE IN ECONOMICS

**THE RETURN OF  
DEPRESSION  
ECONOMICS**  
AND THE CRISIS OF 2008



# Resilience



- **Resilience thinking:** basic principles to adopt in planning, developing and adopting solutions for realizing the vision of **sustainable lives in sustainable societies**
- Successful application of resilience thinking requires **policy convergence** of all stakeholders on major issues at political, social and technological level
- Synergy between top-down and bottom-up approaches to societal transformation and business innovation

# From local to digital communities

- In any historical period, and especially in times of crises and transformation, **communities** have provided safety and security to its members
- **Resilience** from micro (individual lives) to macro level (organizations, societies) can be achieved **by enabling and empowering communities**
- Contemporary **communities** are no longer just local. In Western societies, they **have become "digital"** because all social relationships are, to different extents, mediated by ICT

# From local to digital communities

- **Community** has always been about **sharing**
  - But...sharing of what?



- **Traditionally**: shared territory and/or feelings of solidarity
- **Digital age**: “content-based” communities through the sharing of digital resources.

Mobiles allow discovering what “makes” a community by observing, directly and/or indirectly, how digital resources are created, shared and used in particular contexts

# Digital communities and resilience: a recent case

- In April 2010, the Icelandic ash cloud caused severe **disruptions to airplane traffic**
- **Alternatives** for completing a journey (trains, buses, car rentals) became **hard to obtain and expensive** because of speculations
- Instead of fighting for gaining exclusive access to scarce resources, **passengers self-organized** in small groups
- Through mobile access to Facebook, passengers managed to quickly and cheaply implement an efficient **ad-hoc car-sharing service**



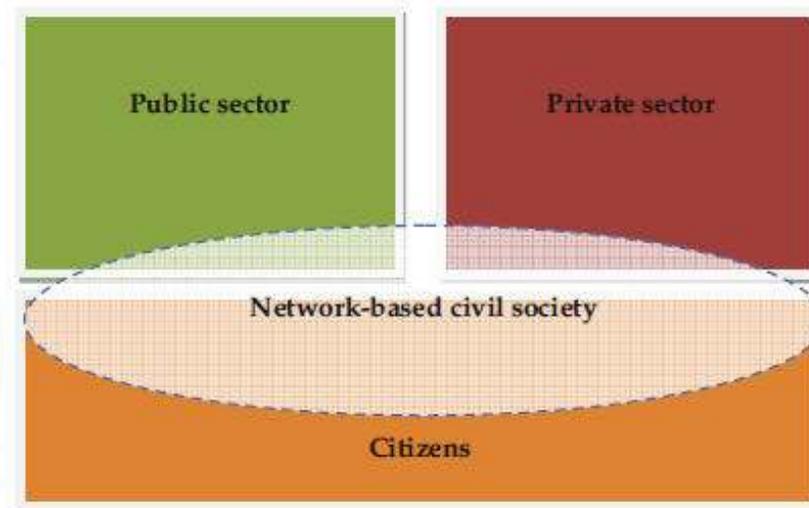
# Community-generated services (CGS)



- The **ad-hoc car-sharing service** is an example of CGS
- Facebook is a service platform through which networked users quickly and cheaply **co-create, develop and consume CGS**
- CGS are **community-oriented services** based on the primitive operations of "create, share and use" of UGC
- CGS are an alternative or complement to **public / private services**

# Network-based civil society

- Through **CGS**, Facebook and other social platforms **add resilience** to individual lives and assume an **emancipatory function** in driving grassroots social change



- Interconnected self-organizing digital communities form a **network-based civil society**, which acts as glue between traditional institutions and informal networks of citizens

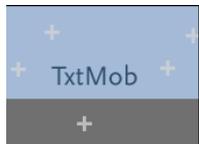
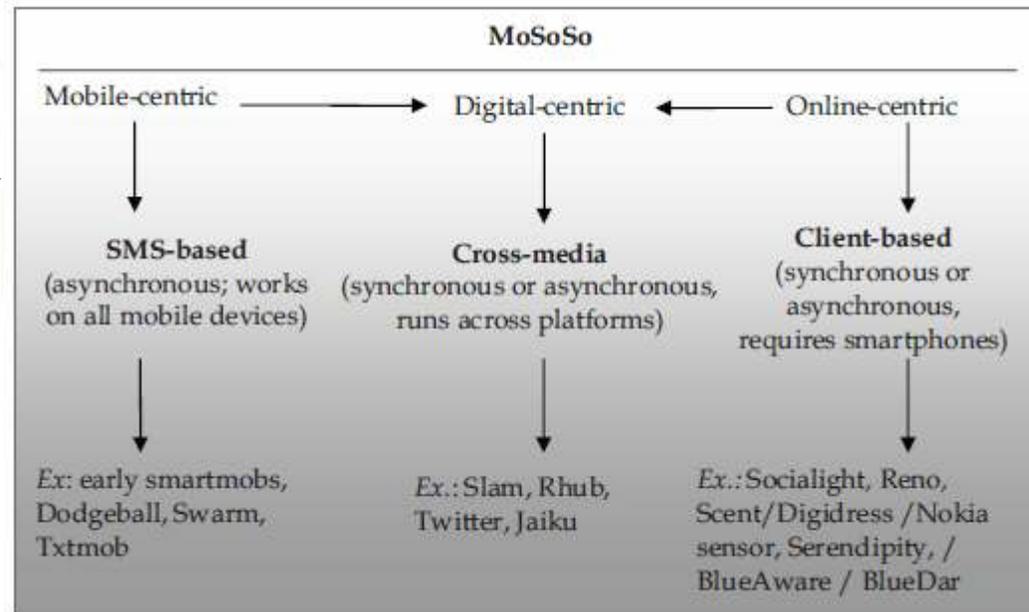
# Mobile social software (MoSoSo)



- Mobile access to Facebook is an example of MoSoSo, but it does not exploit the full potential of MoSoSo
- Although it supports various types of CGS, mobile Facebook (as most forms of MoSoSo) is typically used for socialization and entertainment. Other uses are less common.
- In 2003, Jeremy Rifkin predicted that ICT would have been employed for enabling *peer-to-peer energy sharing*, with energy companies coordinating communities rather than producing energy for them
  - we need a new conceptual model of MoSoSo for enabling the full range of CGS

# What is MoSoSo?

- MoSoSo is a product of digital convergence and refers to a class of mobile applications whose scope is to support **informal mobile social networking**
- **As a technology**: three main types of MoSoSo



# What is MoSoSo?

- **From a social viewpoint:** MoSoSo is a **context-aware mobile technology** with two main types of interactions
  - social proximity interactions
  - social awareness interactions
- MoSoSo is more often designed as a **stand-alone application** than as a **general purpose social platform**

“In theory, the ambitious of designing a ‘general social tool’ would be feasible only if the common user needs and the nature of social interaction were well understood in the domain area. But when the technology does not have established social practices, it may be a challenge to acquire such understanding in order to inform the design decisions for mobile social software concepts” (Jung et al., 2006 p.70)

# Reconceptualizing MoSoSo

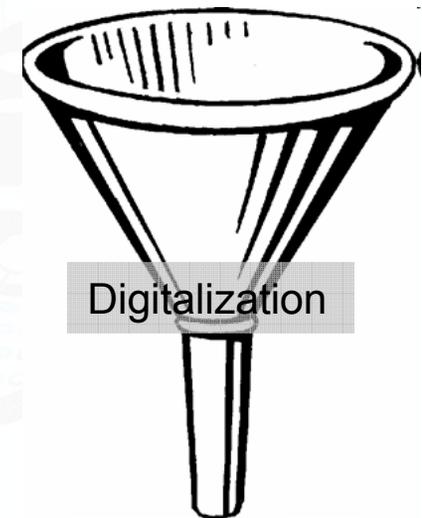
- **The "Swiss knife" dilemma:**
  - It does only one thing, but it does it well
  - It does everything, but it does nothing perfectly
- MoSoSo should be conceived similarly to the WWW as a **general purpose social platform** in which *"anything can be linked to anything"* (Berners-Lee, 1999 p.4)
  - The real problem is to define the "anything" in a more formal manner...



# Reconceptualizing MoSoSo: Digital resources

- MoSoSo can be conceived as a general-purpose social platform by defining its building blocks in terms of **digital resources**
- Digital resources are symbolic goods with a (contextual/subjective) value
  - *Digital resources vs digital content*
  - *Digital resources vs UGC*

Symbolic / material resource

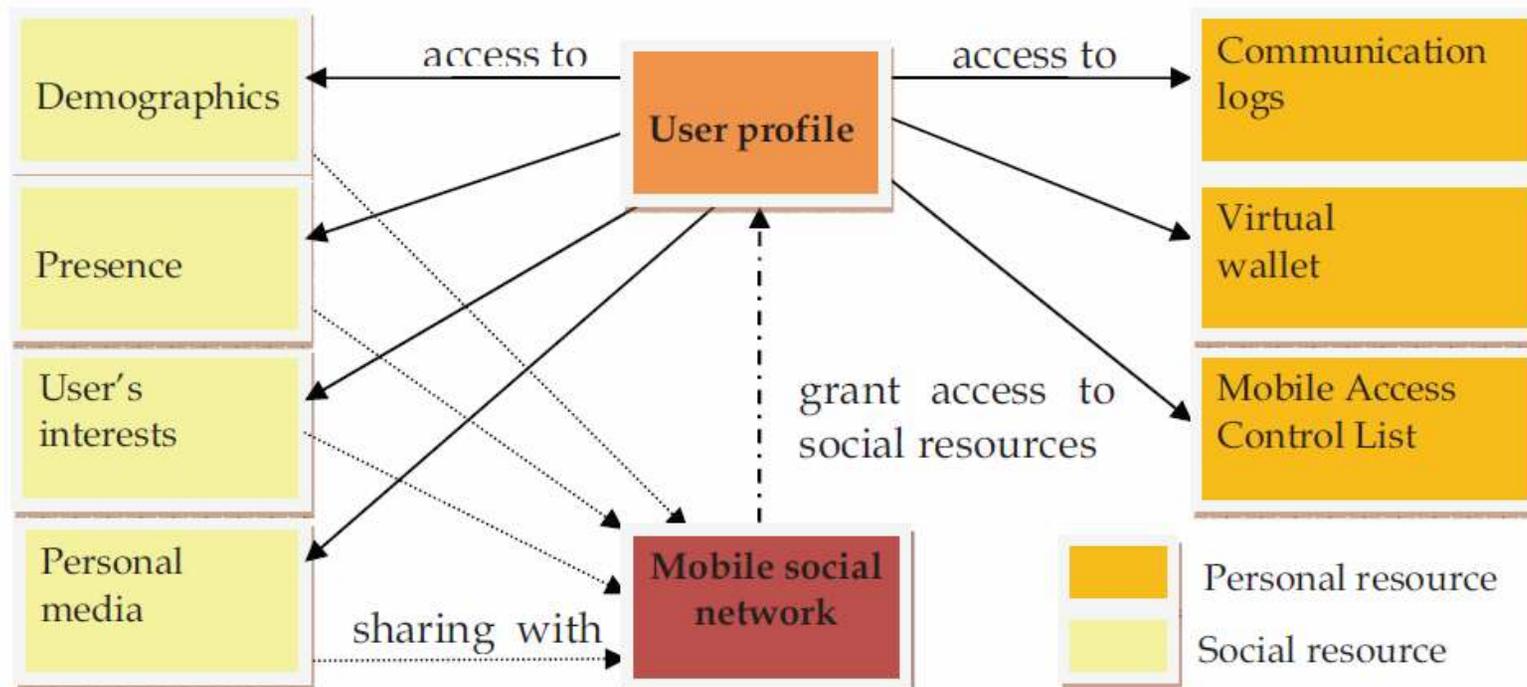


Digitalization

Digital resource

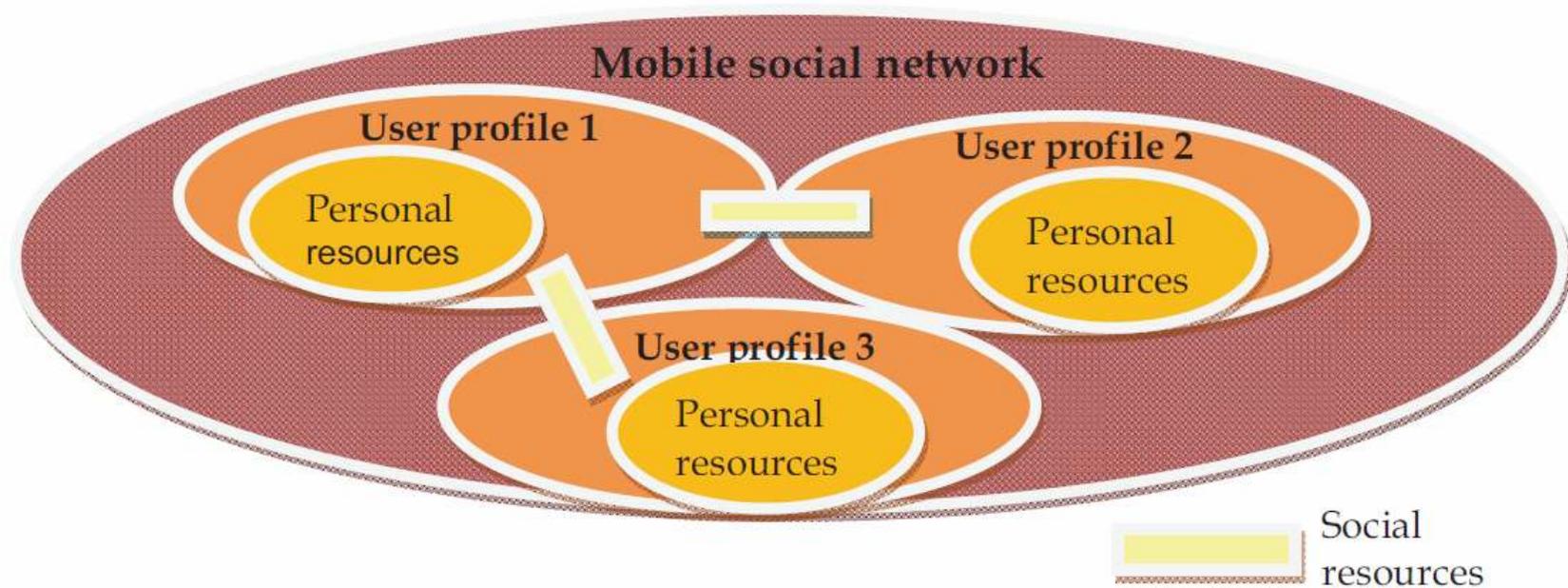
# Reconceptualizing MoSoSo: User profile

- Digital resources can be either **personal** or **social**
  - Digital sharing “transforms” personal resource into social resource
- A user profile is a collection of personal and social resources



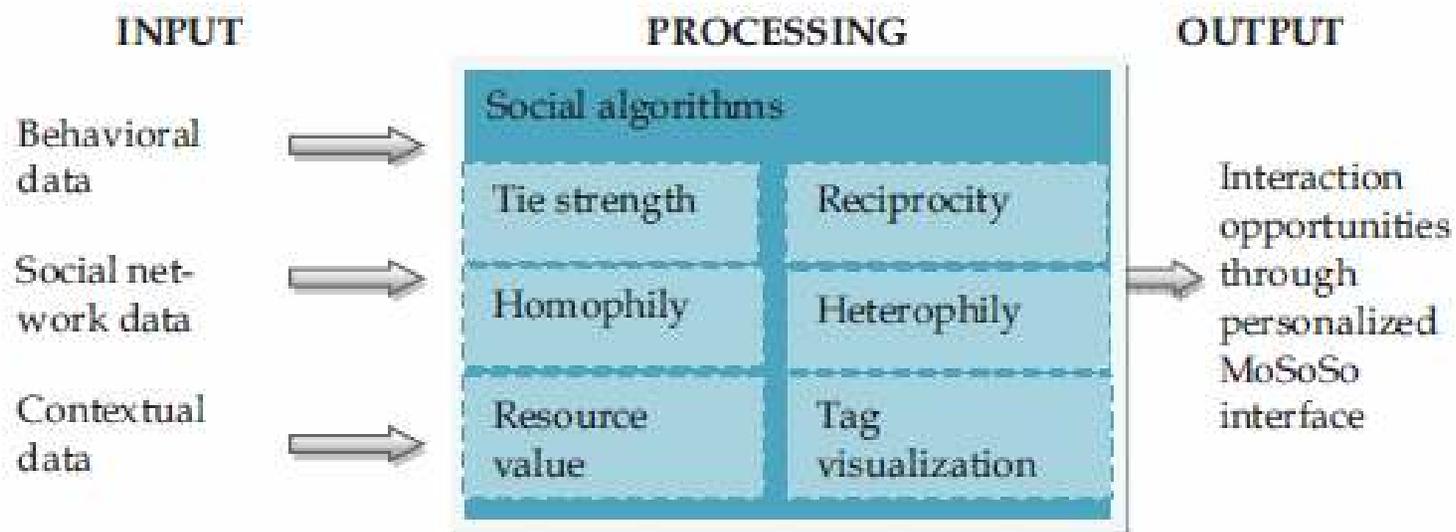
# Reconceptualizing MoSoSo: Mobile social networks

- From MoSoSo viewpoint, digital communities are structured, perceived and experienced as **mobile social networks**
- Mobile social networking is about **creating, sharing and using digital resources in contextual interactions**



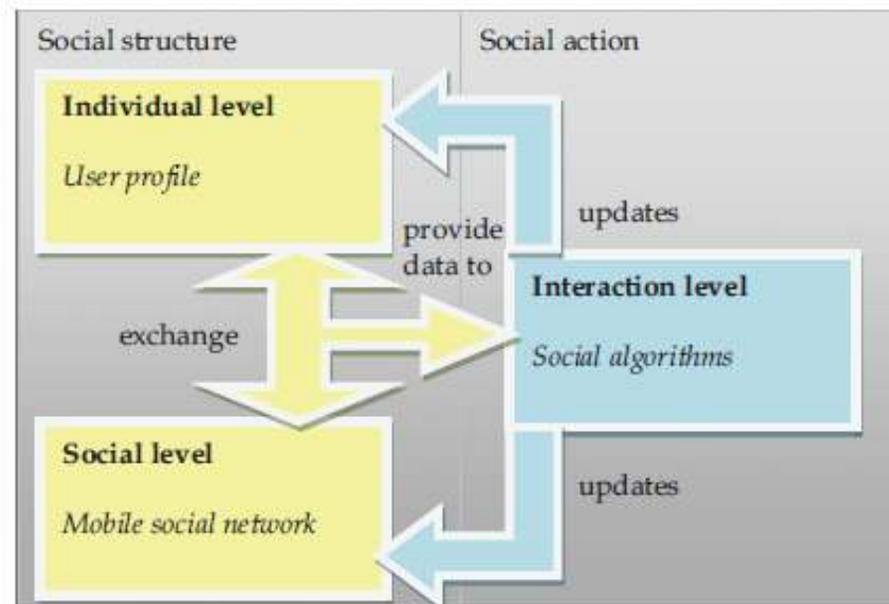
# Reconceptualizing MoSoSo: Social algorithms

- MoSoSo support contextual social interactions through social algorithms, procedures that collect and analyze large amounts of low-level data and return higher level knowledge through a **personalized MoSoSo user interface**
- Various types of social algorithms



# Designing MoSoSo: a conceptual model

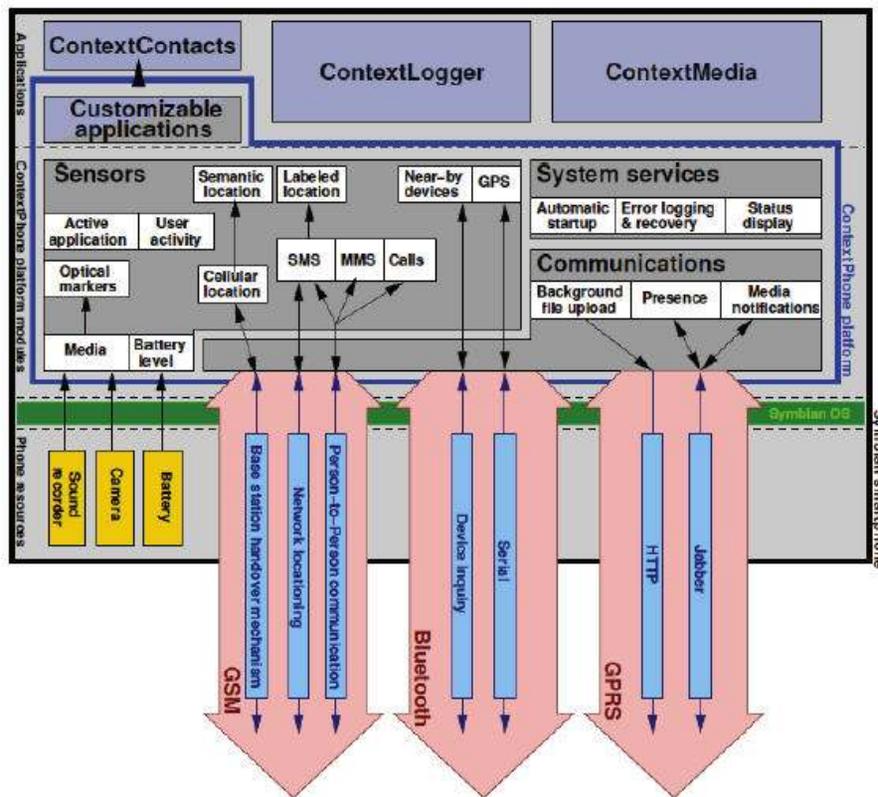
- User profile, mobile social network and social algorithms are the building blocks of the holistic model of MoSoSo design



- **The goal of MoSoSo interaction** is to **facilitate the attainment of personal/collective action goals** through digital resources embedded in mobile social networks

# From theory to practice: ContextPhone

- General purpose platform for mobile context-aware applications



ContextPhone computing platform (Raento et al., 2005)

- MoSoSo like ContextContacts render ContextPhone as a context-aware social platform
  - user profile, mobile social network and social algorithms belong to the application layer
- Interconnected modules allow achieving better context-awareness than mobile browsers

# Conclusions: building resilience through MoSoSo



- **MoSoSo significance**: enabling **sustainable lives in sustainable societies** by **promoting grassroots social change** and **building resilience** in people's lives, businesses and societies through CGS
- **Challenge**: application of resilience thinking to MoSoSo design for engaging digital communities in the **adoption of sustainable lifestyles** in other areas than entertainment and socialization like
  - commuting / logistics
  - home energy management
  - ethical consumption
  - expert services and support networks
- **Technological innovations like** MoSoSo are necessary, but not sufficient for the realization of **social innovations** (i.e. CGS)
  - related aspects of policy convergence need to be investigated further

Kiitos!!

Thanks!!

Grazie!!

Time for comments / questions...