

Faculty of Design

2014

Bringing complexity into service design research

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Bringing Complexity into Service Design Research

Systemic perspectives in Design for Services

Daniela Sangiorgi _ ImaginationLancaster, Lancaster University

About me ...

1998 - 2007

SDI Agency _ INDACO Department,
Politecnico di Milano, Italy

2000 - 2004

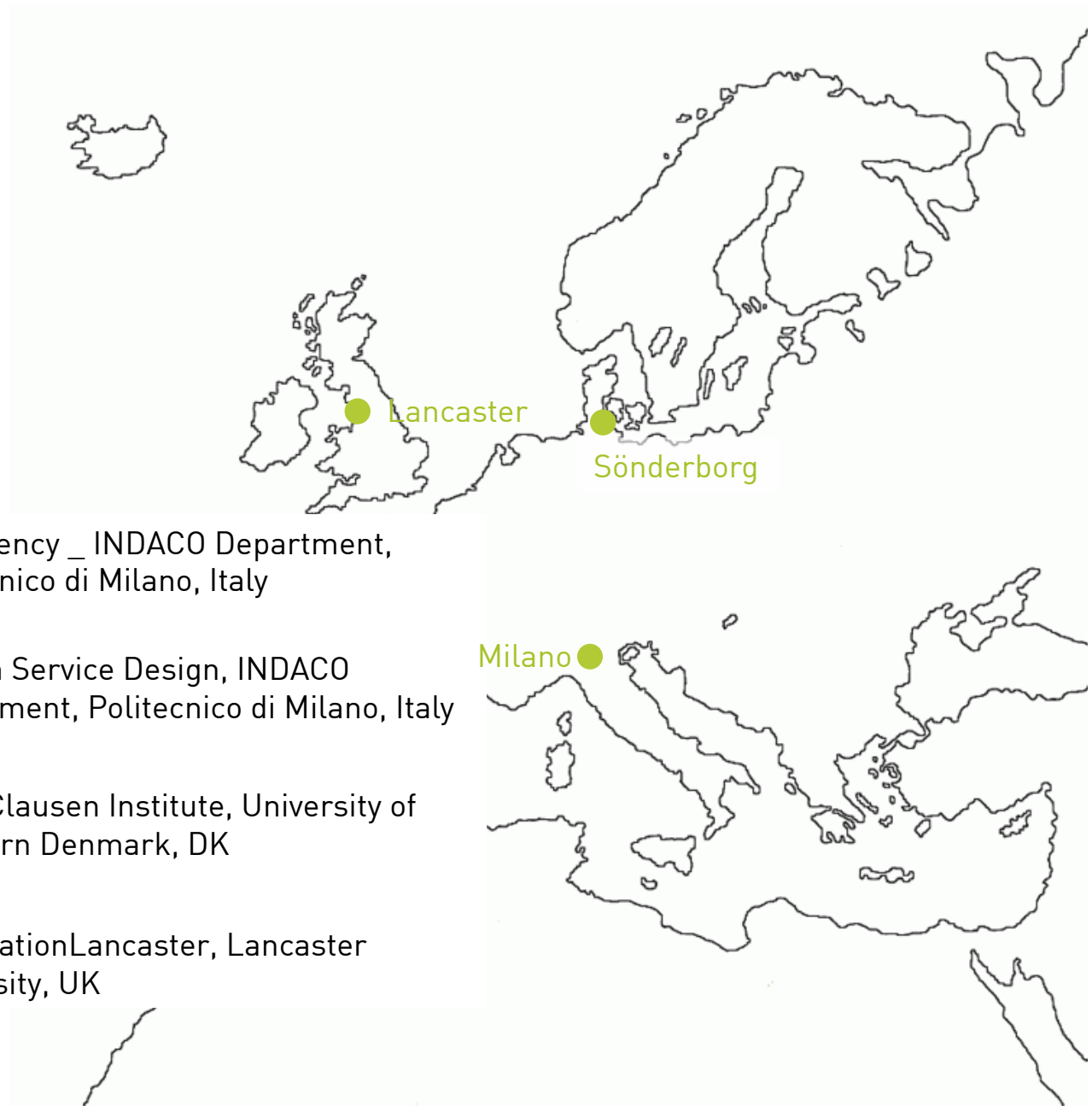
PhD on Service Design, INDACO
Department, Politecnico di Milano, Italy

2003

Mads Clausen Institute, University of
Southern Denmark, DK

2007

ImaginationLancaster, Lancaster
University, UK



ImaginationLancaster

an open and exploratory research lab that

- » investigates emerging issues, technologies and practices
- » combines traditional science and social science methods with the practice-based methods arising from the arts

Lancaster University

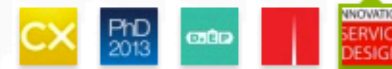
We conduct applied and theoretical research into people, products, places and their interactions.

Big Data Art



How do you visualise 2.5 billion calls and text messages exchanged between 5 million users?

Innovation through Improved Service & Design



Recently Updated



Data Arts

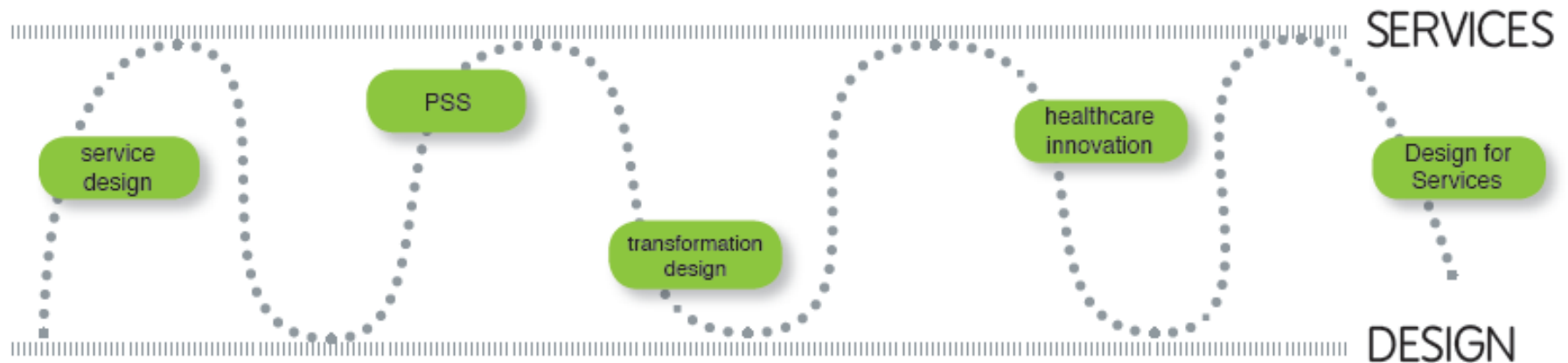


ServDes 2014

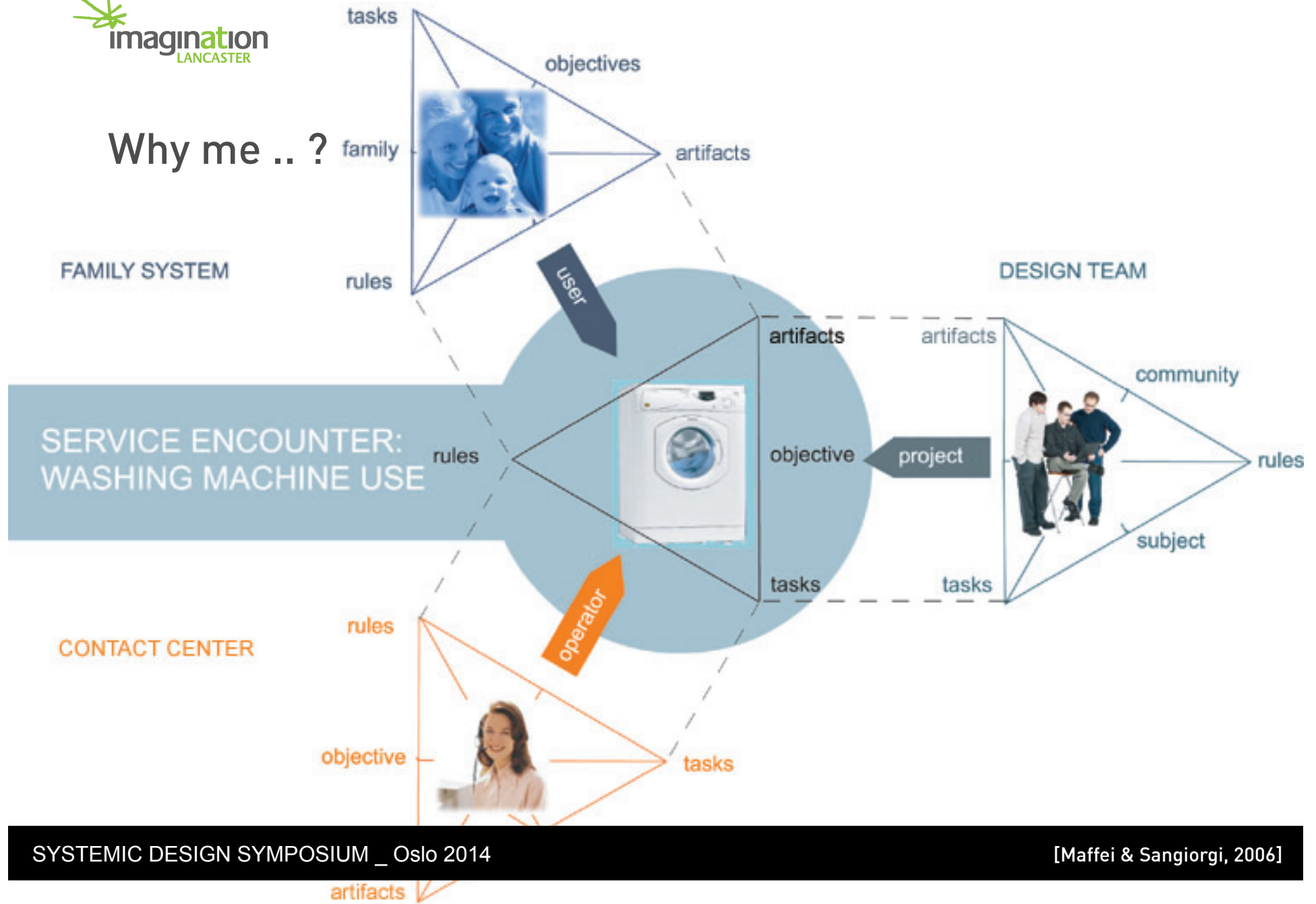


London Creative and Digital Fusion

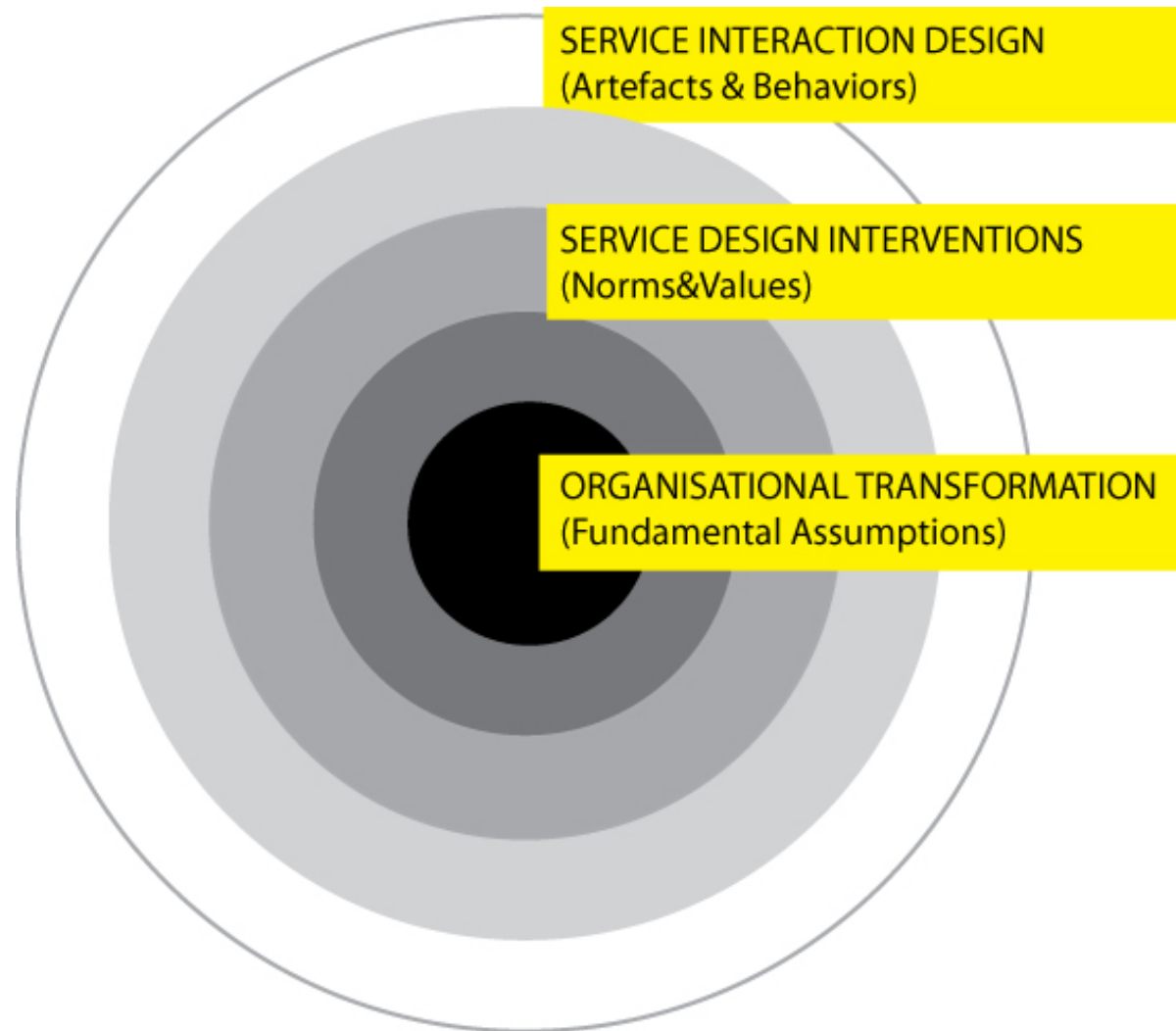
About me ...



Why me .. ?



Why me .. ?



Systemic perspectives in Design for Services

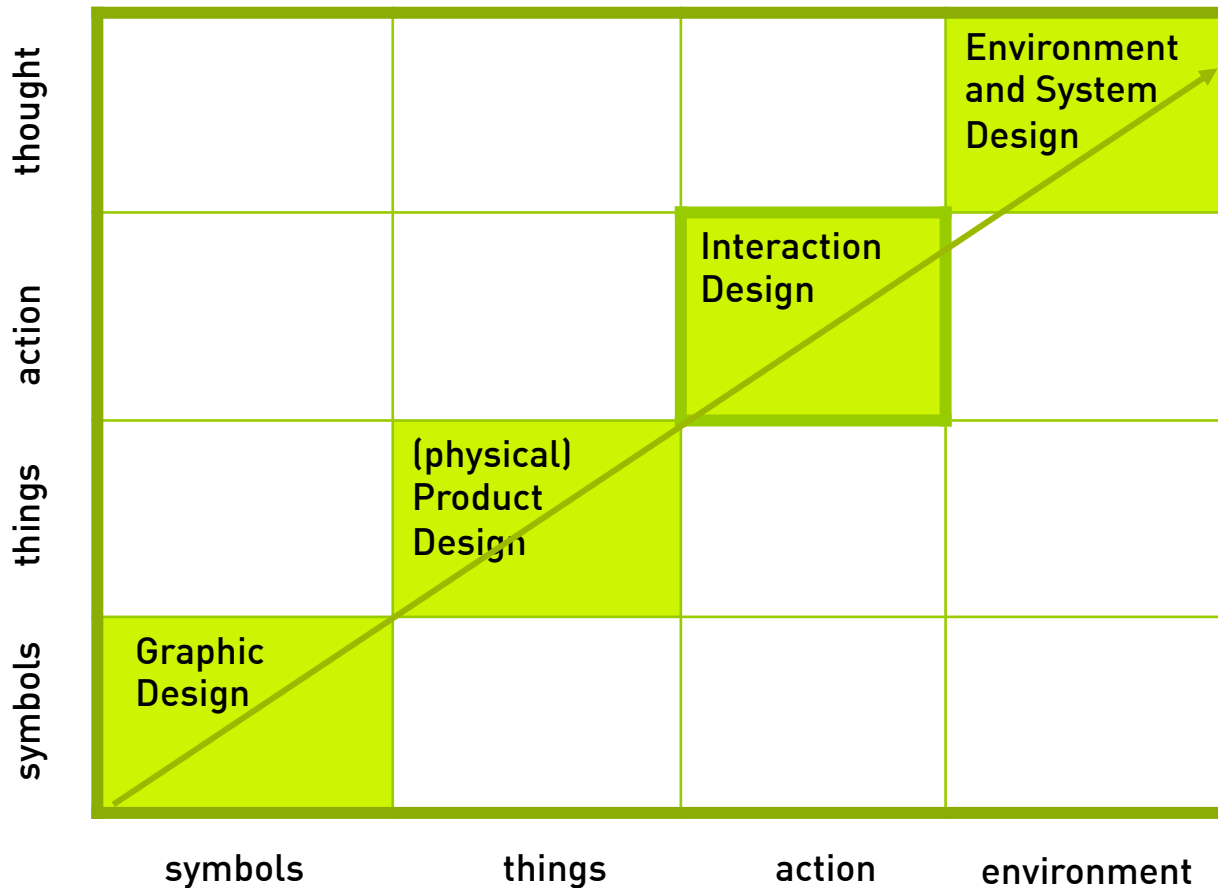
(Service) Design evolution

Systemic Considerations in Service Design

- *Scaling*
- *Participation*
- *Transformation*

Conclusions

Models of design evolution



Interaction Design:
“focusing on how
human beings relate
to other human
beings through the
mediating influence
of products”

Models of design evolution



Models of design evolution

Table 1. Four Generations of Design Methods

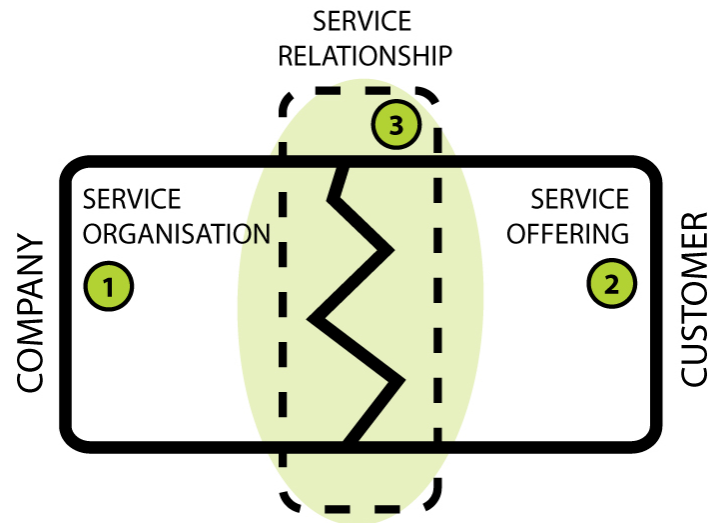
Generation	First	Second	Third	Fourth
Orientation	Rational 1960's	Pragmatic 1970's	Phenomenological 1980's	Generative 2000's
Methods	Movement from craft to standardized methods	Instrumentality, Methods customized to context	Design research and stakeholder methods Design cognition	Generative, empathic & transdisciplinary
Authors & trends	Simon, Fuller Design Science Planning	Rittel, Jones Wicked problems Evolution	Archer, Norman User-centered Design Participatory Design	Dubberly, Sanders Generative Design Service Design
Systems influences	Sciences Systems engineering	Natural systems Hard systems	System dynamics Social systems Soft systems	Complexity

Service Design origins

Two first contributions:

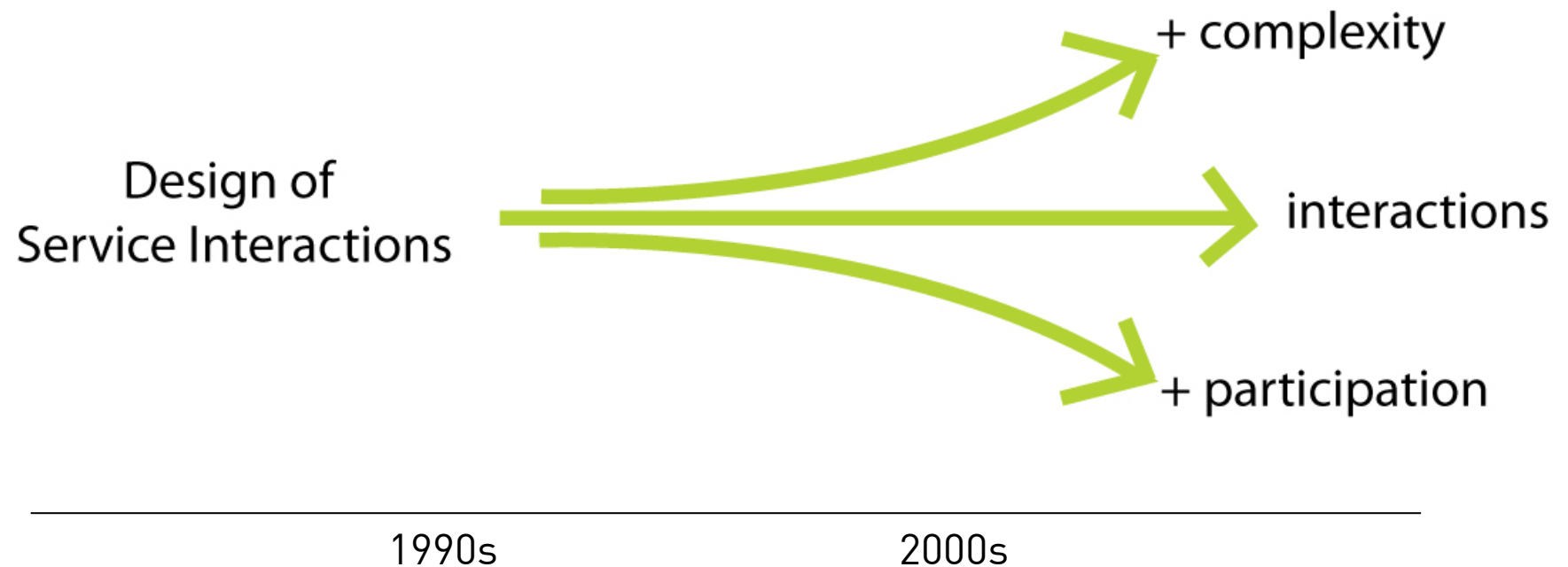
- **SERVICE AS A PRODUCT:** service as an object of design → focus on the design process/design management (Mager, 1997: Hollins, 1991)
- **SERVICE AS A COMPLEX INTERFACE:** from a concept of services as complex organisations to the one of complex interfaces to the user → focus on the specificity of design intervention (Pacenti, 1998)

Interaction paradigm



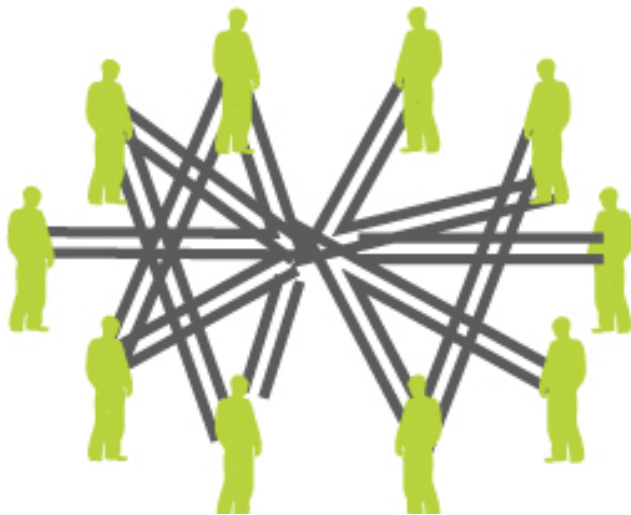
‘set of concepts, values and tools that derive from the interpretation of services and of Service Design, starting from the area and the moments of interaction between the user and the supply system’ (Sangiorgi, 2004).

Emerging practices



Changing of practices because of the growing of complexity and collaborative nature of service projects and society demands.

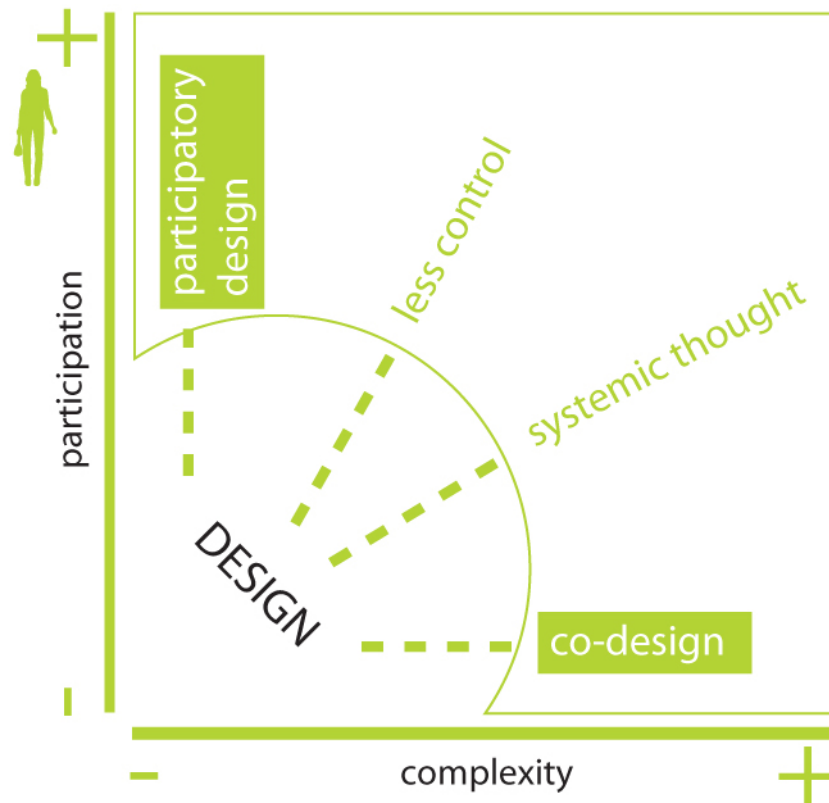
Emerging practices



Change in the context and nature of the service interactions :

- from one-to-one to many-to-many interactions;
- from sequential to open-ended interactions;
- from within to amongst organisations.

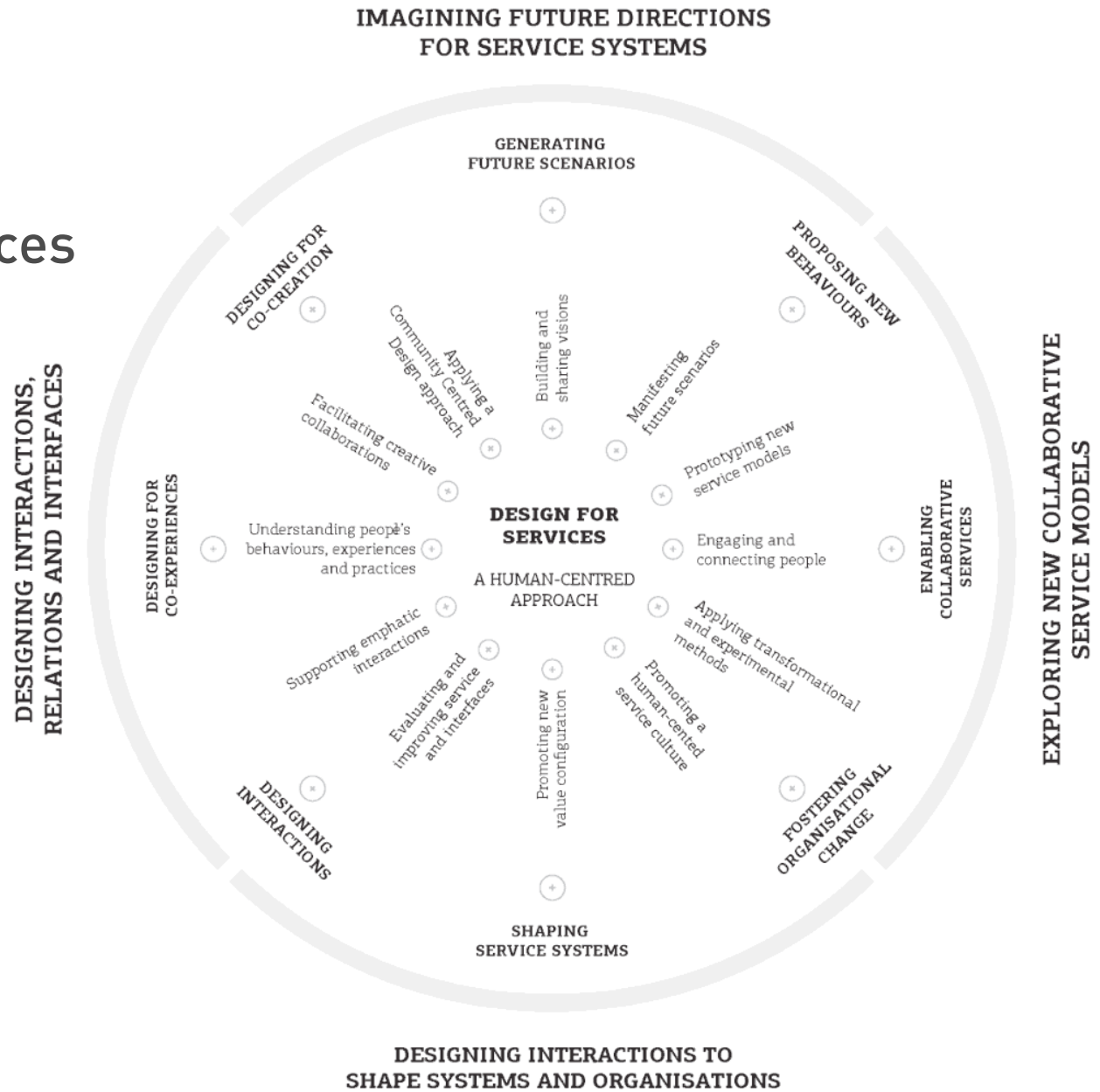
Emerging practices

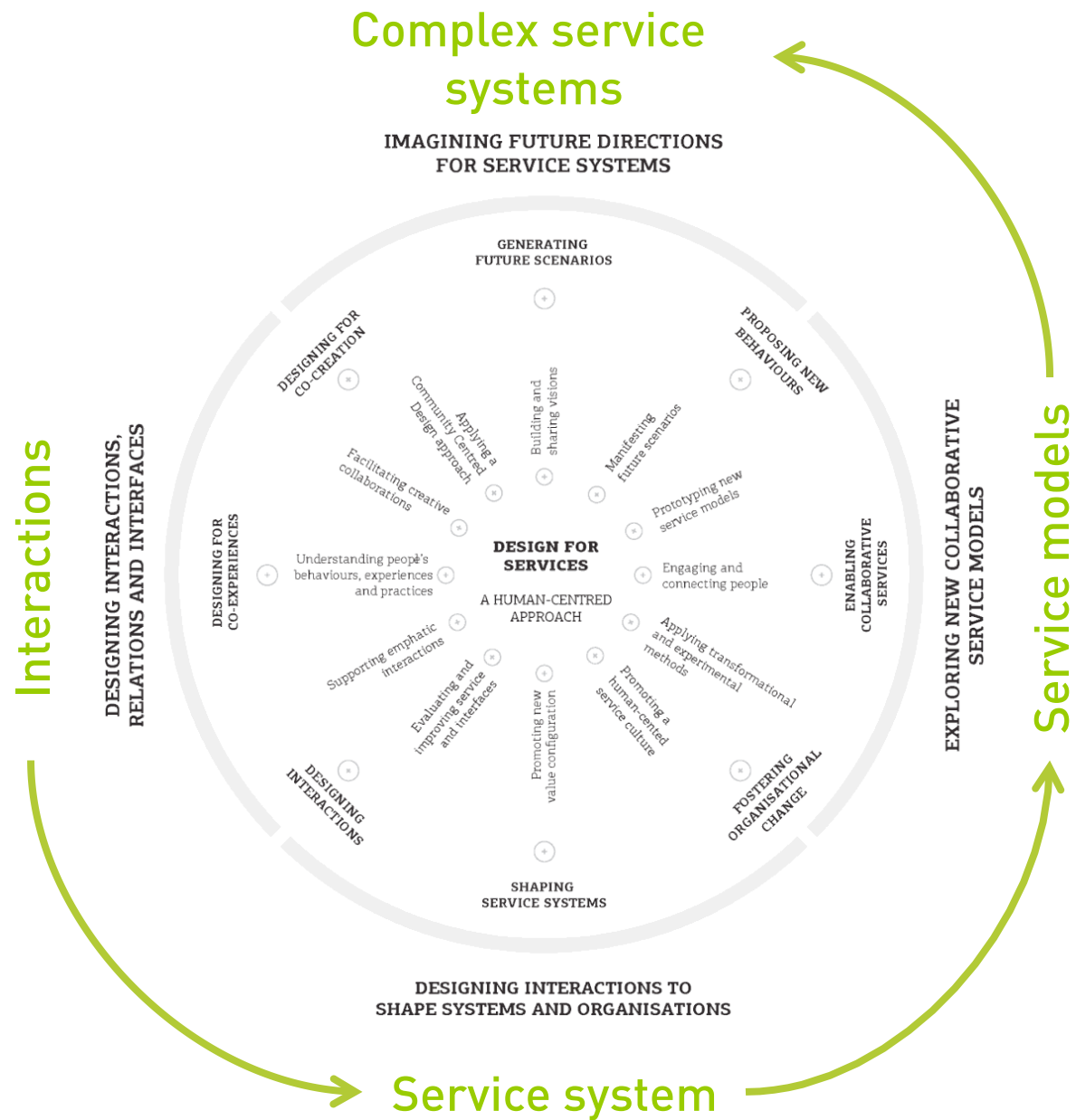


Service Design is

- ‘scaling up’ (complex systems)
- ‘reaching out’ (working with different disciplines and professions)
- ‘deepening in’ (working within service organisations and user communities)

Design for Services Map





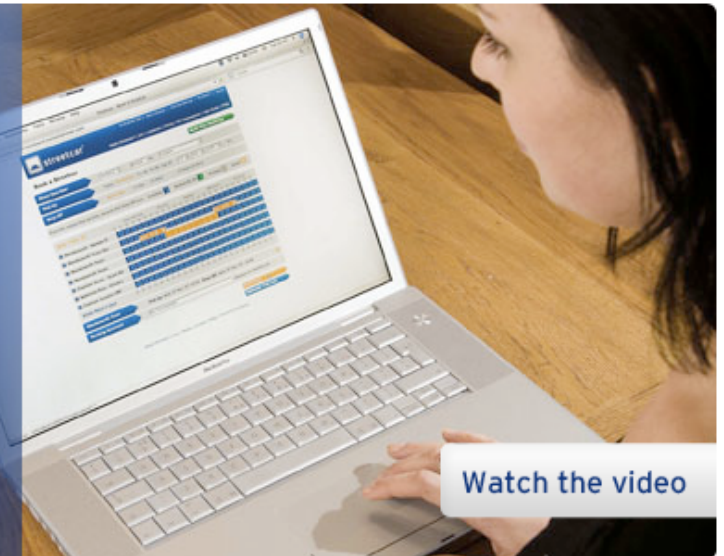
Service Interactions Design



The self-service pay-as-you-go car

Streetcar's range of self-service cars and vans are available 24/7 for rent by the hour, day, week or month.

Book any car in the fleet online or by phone, and then use your Streetcar smartcard to pick up and return the car. Hourly rates start from £3.95, or £39.50 for 24 hours.



6 to 1

Studies show car sharing significantly reduces the number of cars on the road. Every car shared results, on average, in 6 private cars being taken off the road.



Product-service system



Product #1

R&D phase

0.5 litre min⁻¹ capacity

2000

Product #2

Plate & frame reactor

41 litre min⁻¹ capacity

2005

Product #3

Tube reactor

250 litre min⁻¹ capacity

2009

Product #4 (+ Service)

Deployment treatment unit

667 litre min⁻¹ capacity

2011

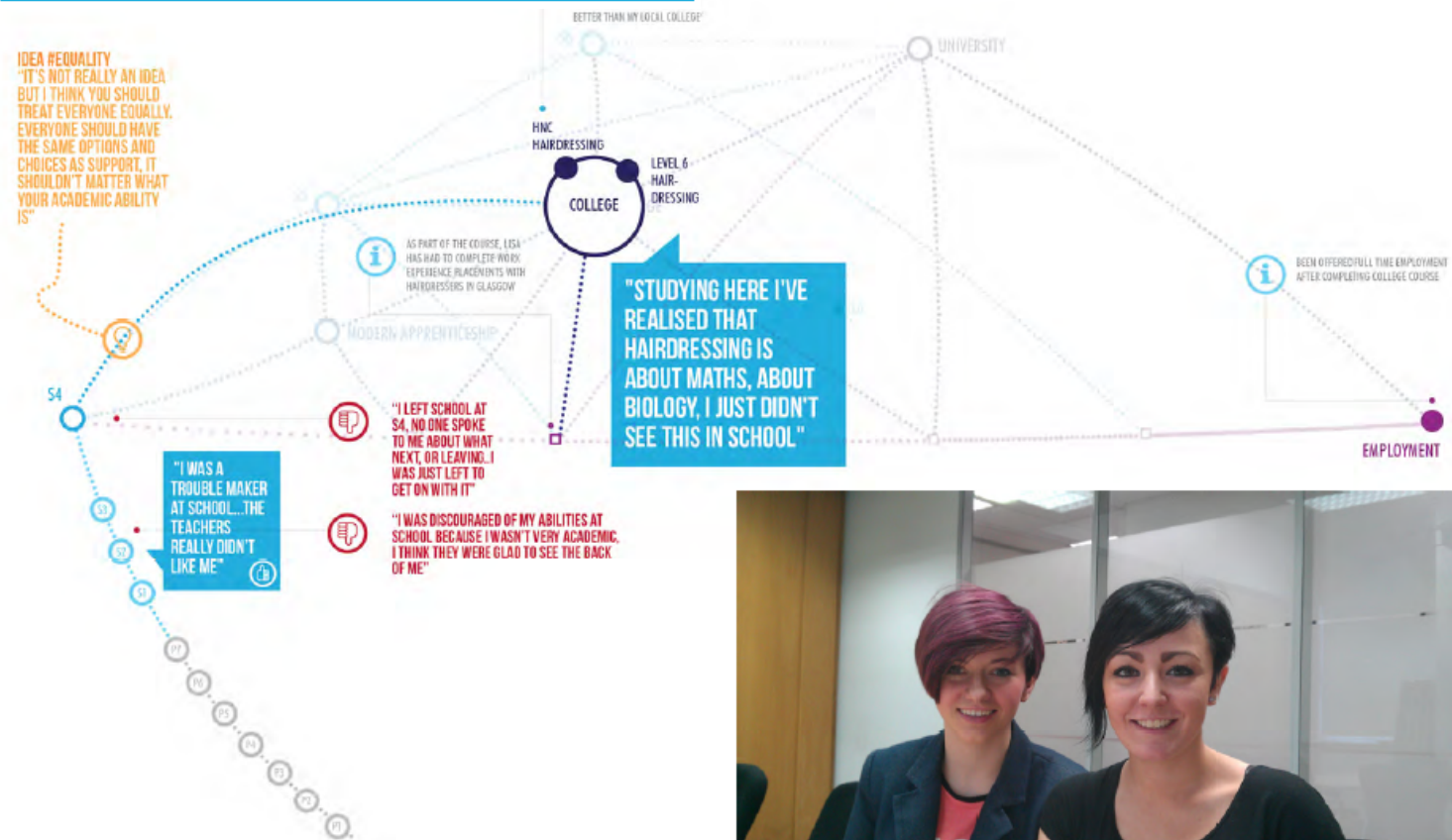
New Service Models



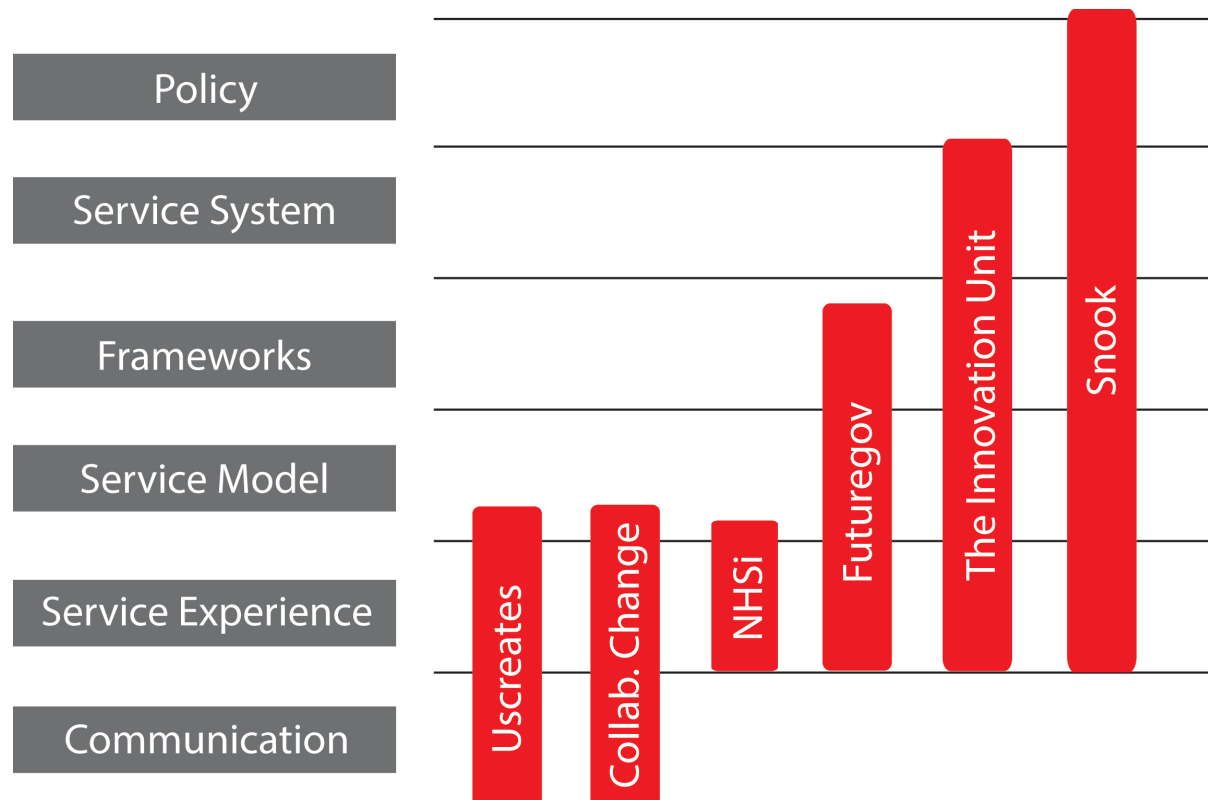
Complex Service Systems / Policy

DESIGN
FOR
GOVERNMENT

POST-16 EDUCATION IMPROVING THE LEARNER JOURNEY



Different levels and modes of practices



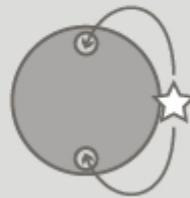
Different models of practices



Embedded designer

Full time strategic-level employee responsible for developing organisational design capacity, as well as for specific service redesign programmes.

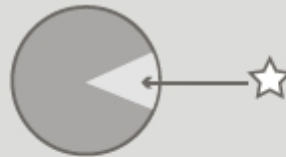
e.g. Cornwall Council, Capita, Helsinki Design Lab Exchange project, Scottish Government.



Internal agency

A service design unit (normally multi-disciplinary) works with other parts of the organisation on a project-by-project basis.

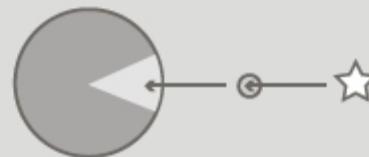
e.g. Social Innovation Lab Kent, MindLab, Behavioural Insights Team.



External agency

Consultancy from an independent design practice on a project-by-project basis.

e.g. Ideo, Snook, Uscreates, ThinkPublic, LiveWork, Engine, STBY – and many others.



Brokered intervention

Organisations such as the Design Council, or Nesta, in order to address a perceived market failure, broker design work for a public sector body, thereby introducing new expertise in a de-risked way, and supporting design businesses through procurement.

e.g. Patchwork, Creative Councils, Design Council Challenges and public service leadership projects.



Design-led startup service

Design-led teams move outside of the traditional public service institutions to start services that meet a specific public need independently.

e.g. Participle, Good Gym, Care4Care.

Design evolution

Systemic perspectives in Design for Services

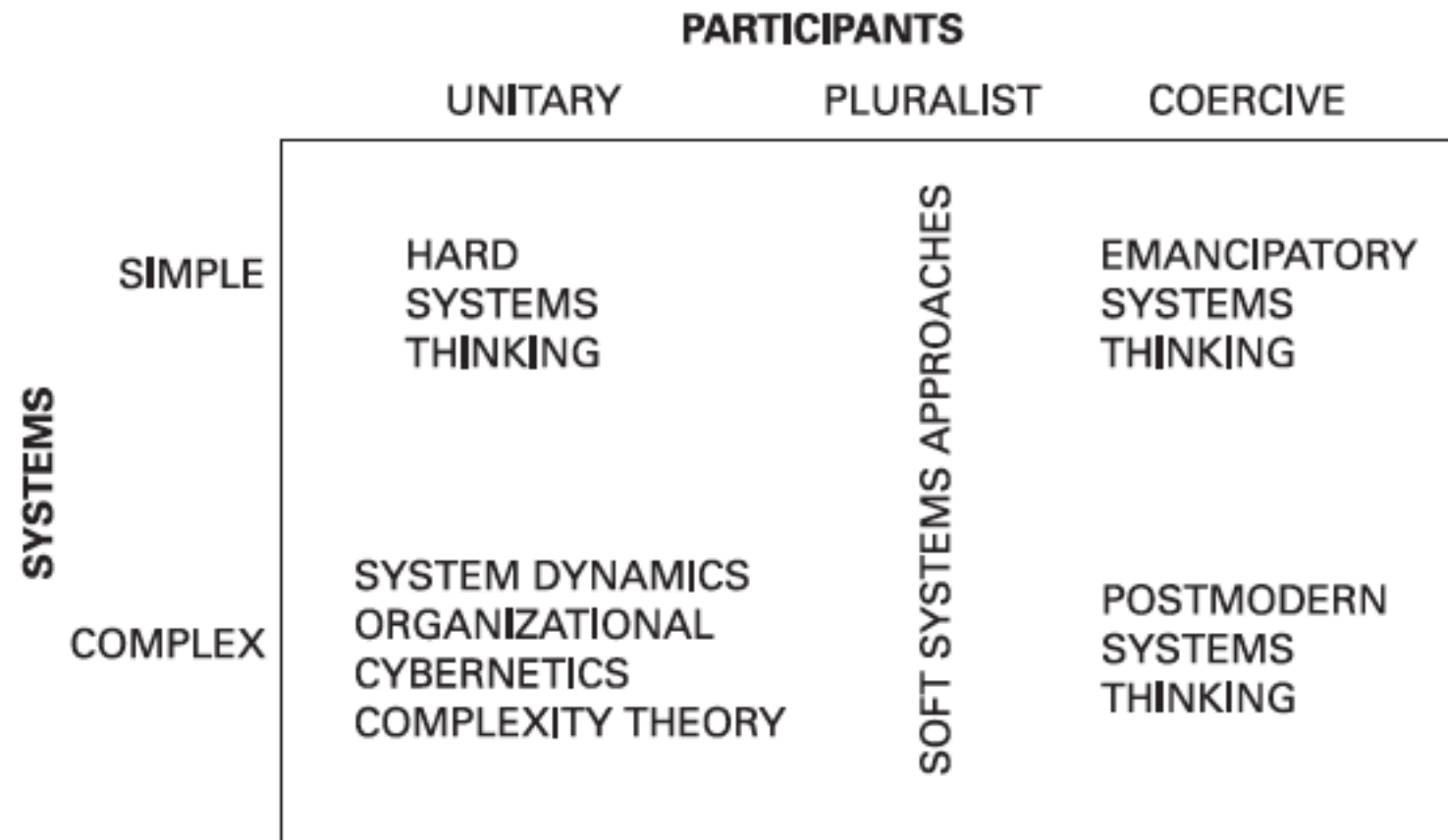
- *Scaling*
- *Participation*
- *Transformation*

Conclusions

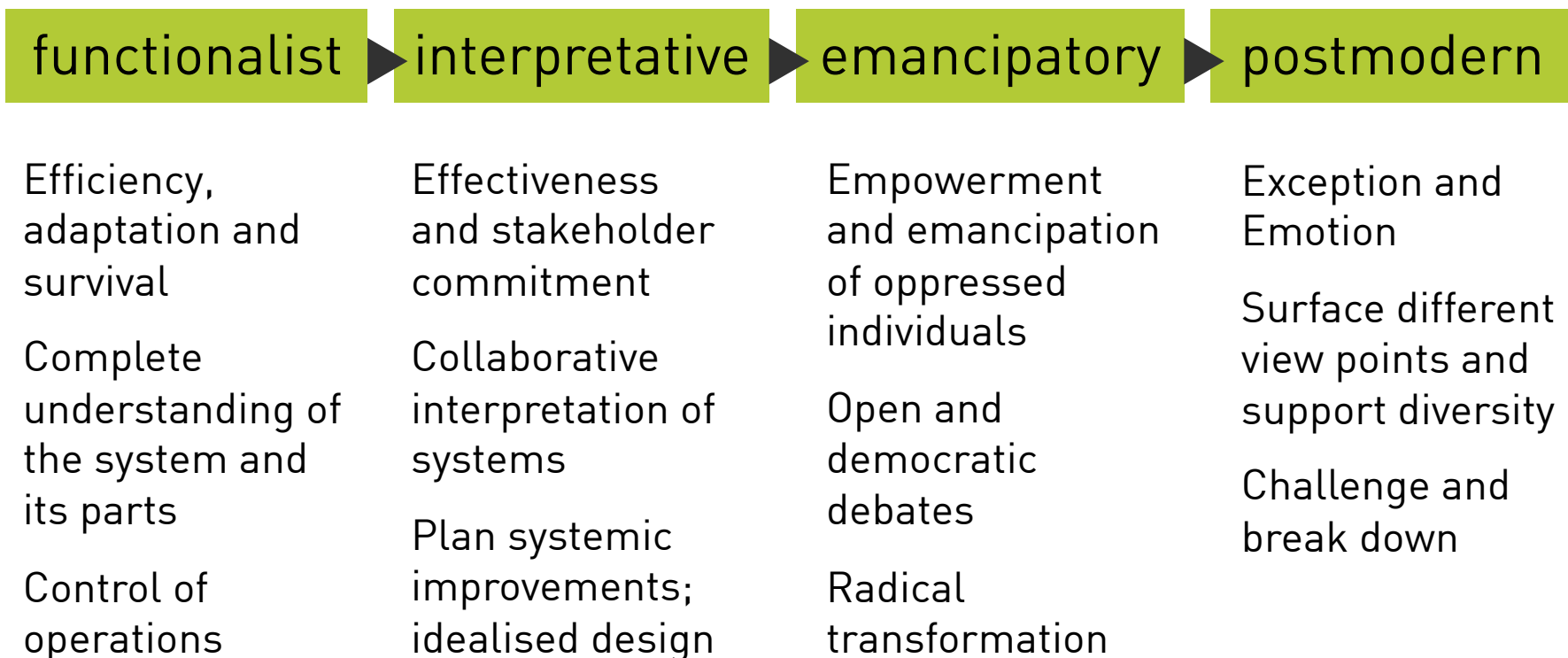
Systems metaphors and approaches

		PARTICIPANTS		
		UNITARY	PLURALIST	COERCIVE
SYSTEMS	SIMPLE	Simple–Unitary	Simple–Pluralist	Simple–Coercive
	COMPLEX	Complex–Unitary	Complex–Pluralist	Complex–Coercive

Systems metaphors and approaches



Systems models and approaches



Drivers for complexity

A light green arrow pointing to the right, containing the word "SCALE" in white, uppercase, sans-serif font.

SCALE

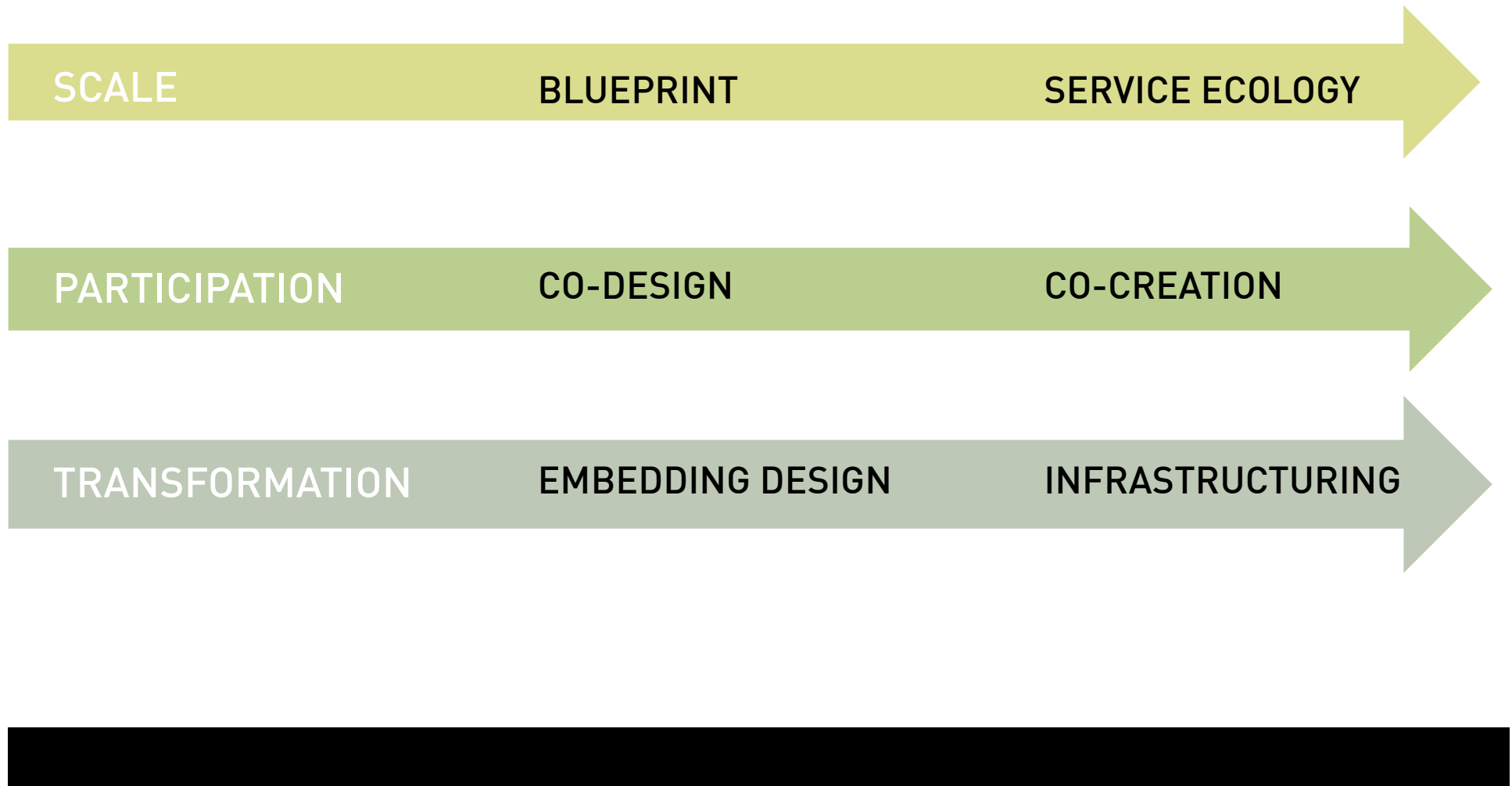
A medium green arrow pointing to the right, containing the word "PARTICIPATION" in white, uppercase, sans-serif font.

PARTICIPATION

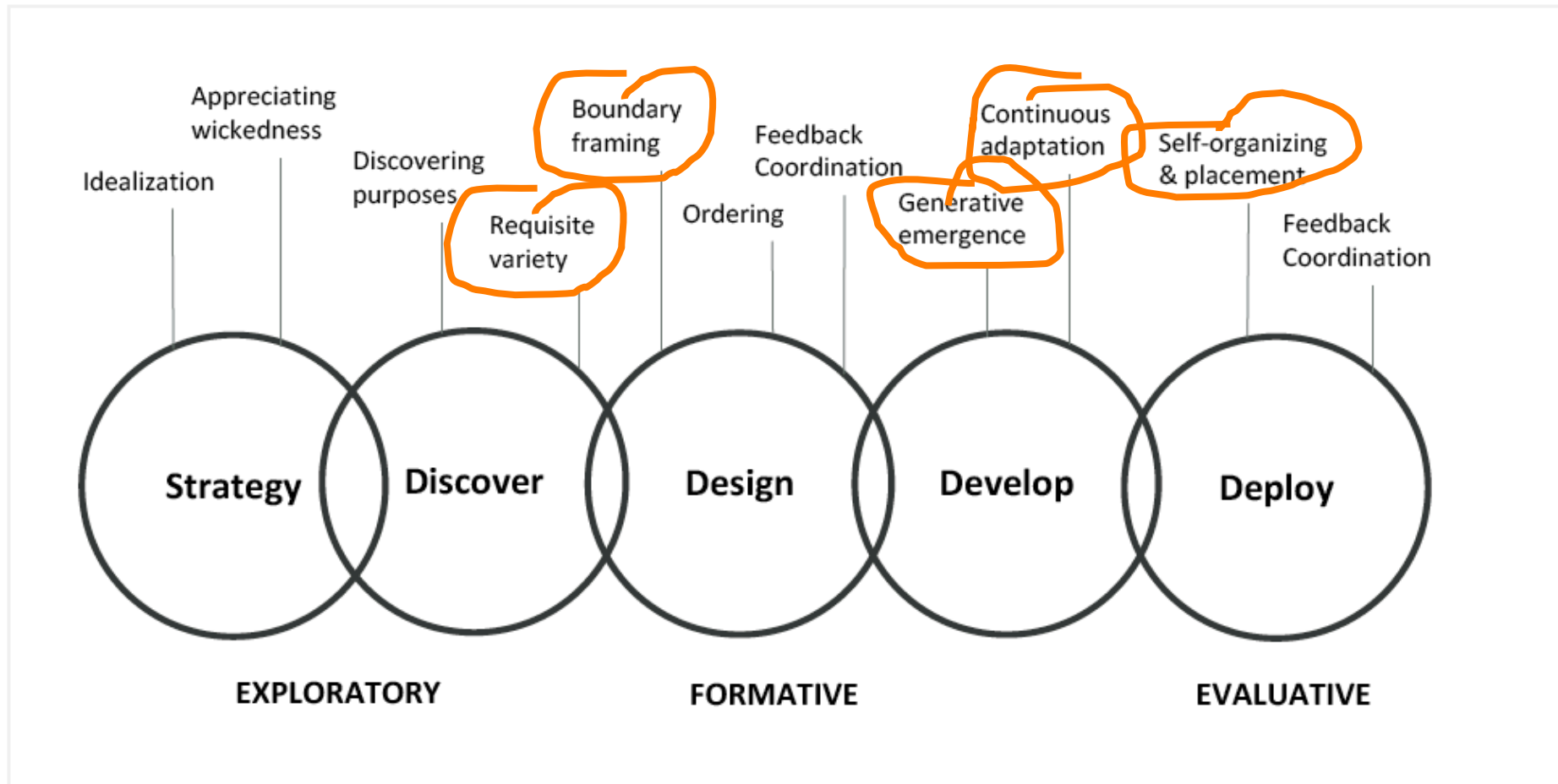
A dark green arrow pointing to the right, containing the word "TRANSFORMATION" in white, uppercase, sans-serif font.

TRANSFORMATION

Systemic perspectives



Systemic design principles



Design evolution

Service Design evolution

- *Scaling*

- *Participation*

- *Transformation*

Conclusions

Tell your Scaling Story...

We're looking for budding Steven Spielbergs to film and make a documentary about their experiences of using end of life and neck services.

Don't you take the opportunity, you can work with our professional film maker to produce your own documentary.

**YOUR
EXPERIENCE
MATTERS**
PATIENTS AND STAFF DESIGNING
SERVICES TOGETHER.

For more information contact:

The Lush and Dunstable Hospital
NHS
Institute for Innovation
and Improvement

Experience
based Design



Education system
re-design



SYSTEMIC DESIGN SYMPOSIUM _ Oslo 2014

Service Systems

Service supply system: “coherent and systematic organisation of the all physical and human elements of the client-company interface, that are necessary for the building of the service performance whose commercial and quality levels have been already defined” [Eigliere Langeard, 1987]

SERVICE BLUEPRINT

Complex service systems are configurations of people, technologies, and other resources that interact with other service systems to co-create value (Maglio et al. 2009).

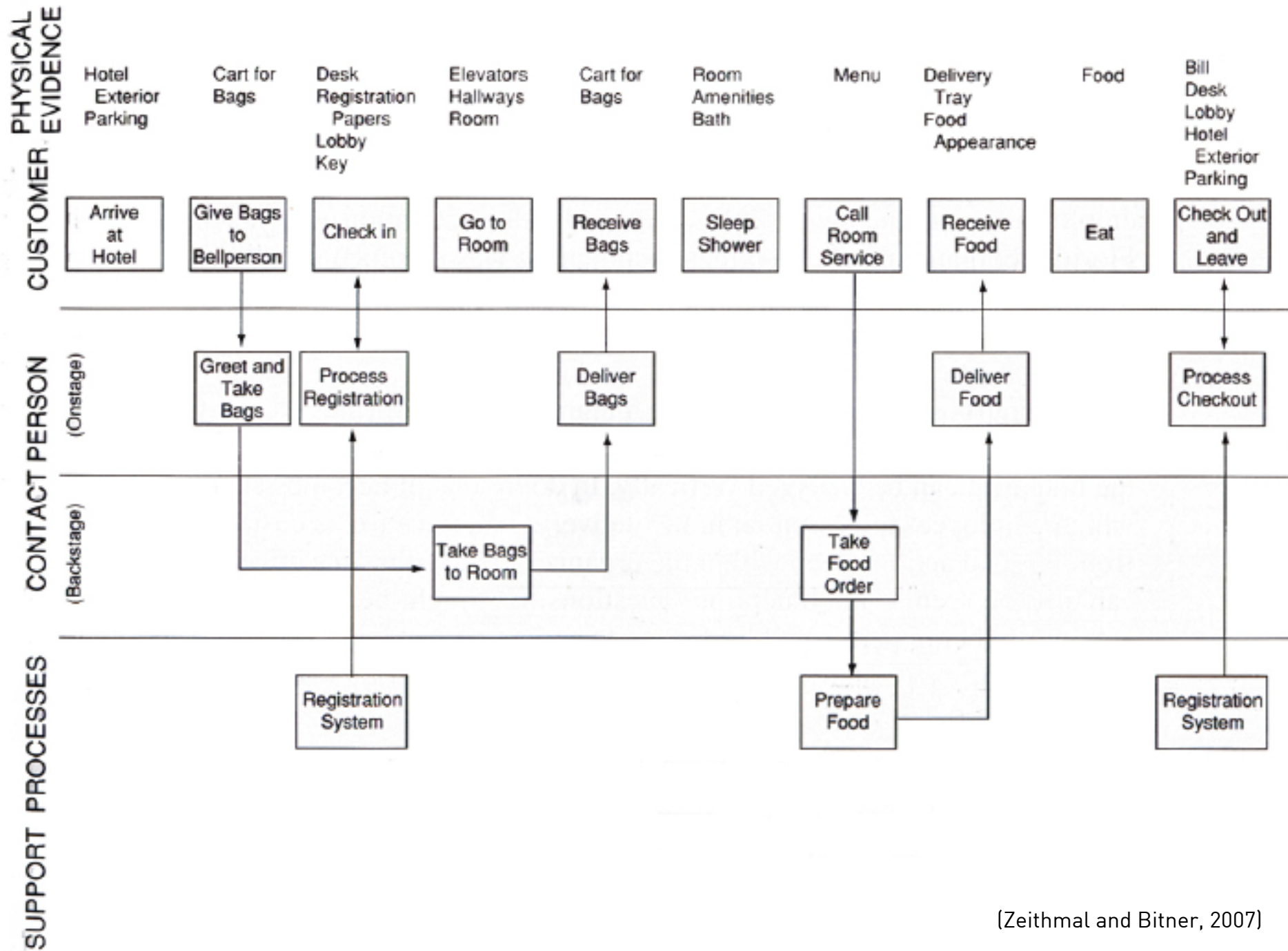
SERVICE ECOLOGY

Blueprint

A **service blueprint** is a picture or map that accurately portrays the service system so that the different people involved in providing it can understand and deal with it objectively regardless of their roles or their individual points of view.

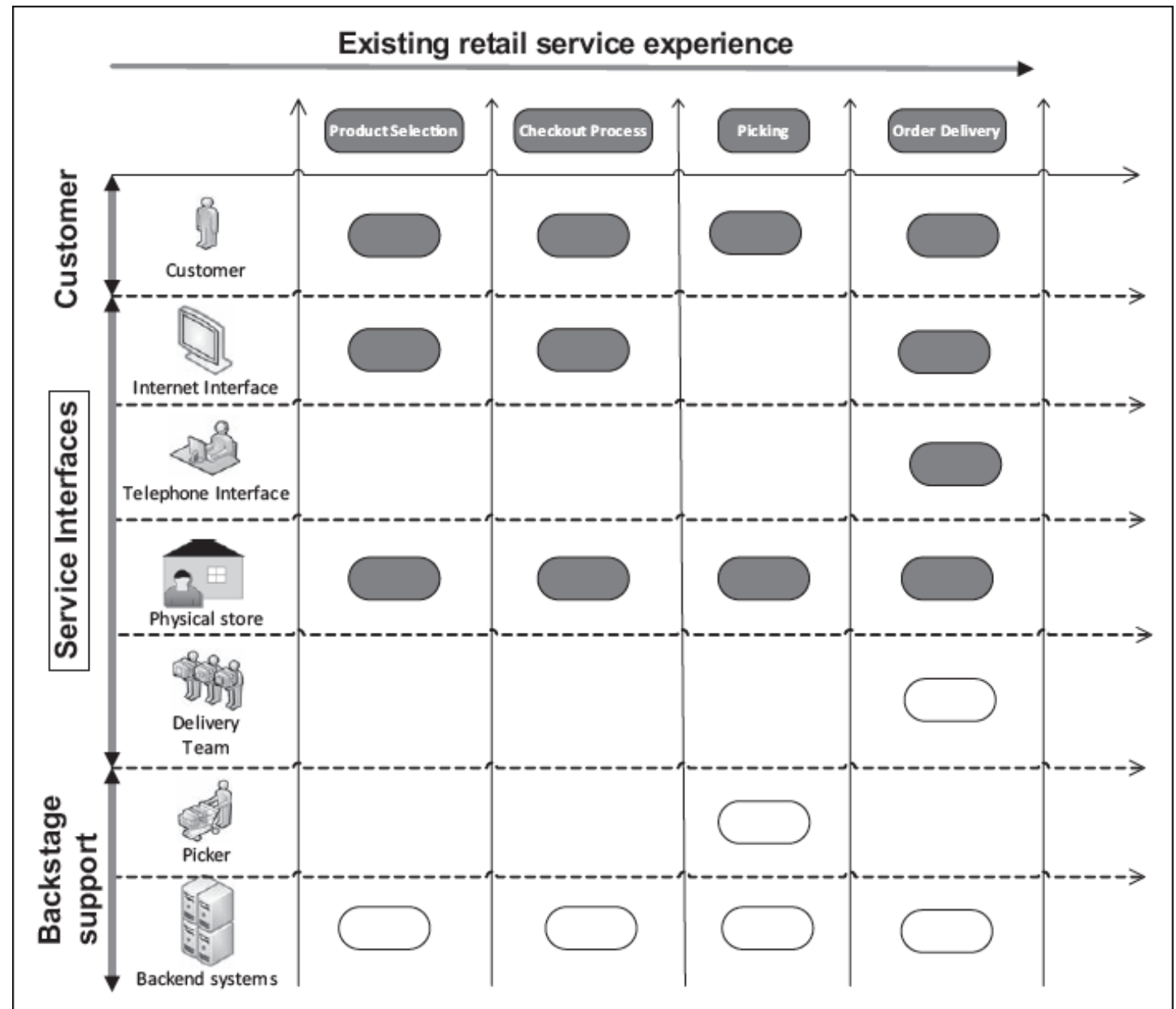
It visually displays the service by simultaneously depicting the process of service delivery, the point of customer contact, the roles of customer contact, the roles of customers and employees and the visible elements of the service.

[Zeithmal and Bitner, 2007]



(Zeithmal and Bitner, 2007)

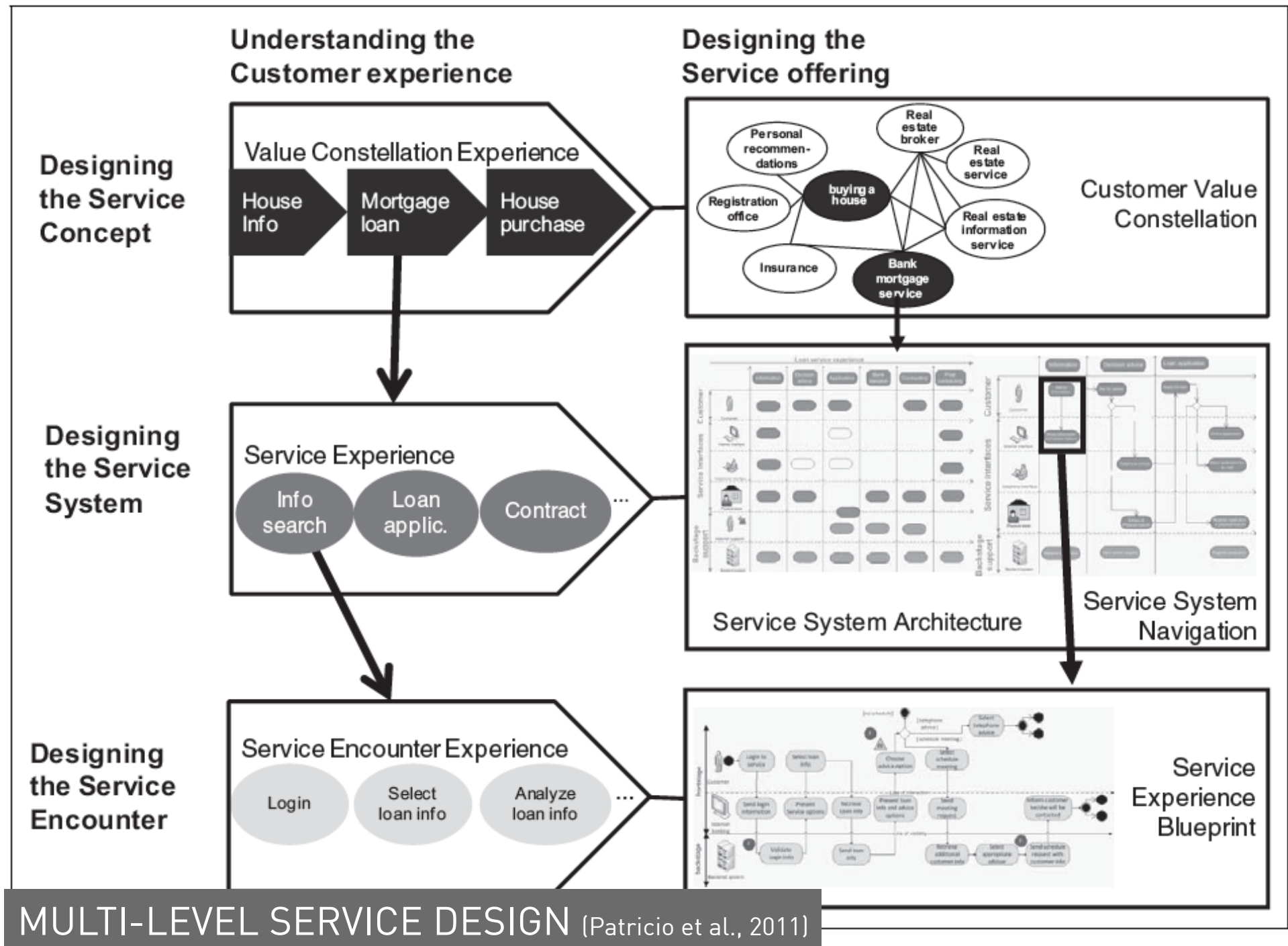
Service blueprint



Interdependence & interactions

“A system is a complex whole the functioning of which depends on its parts and the interactions between those parts” (Jackson, 2010: 3)

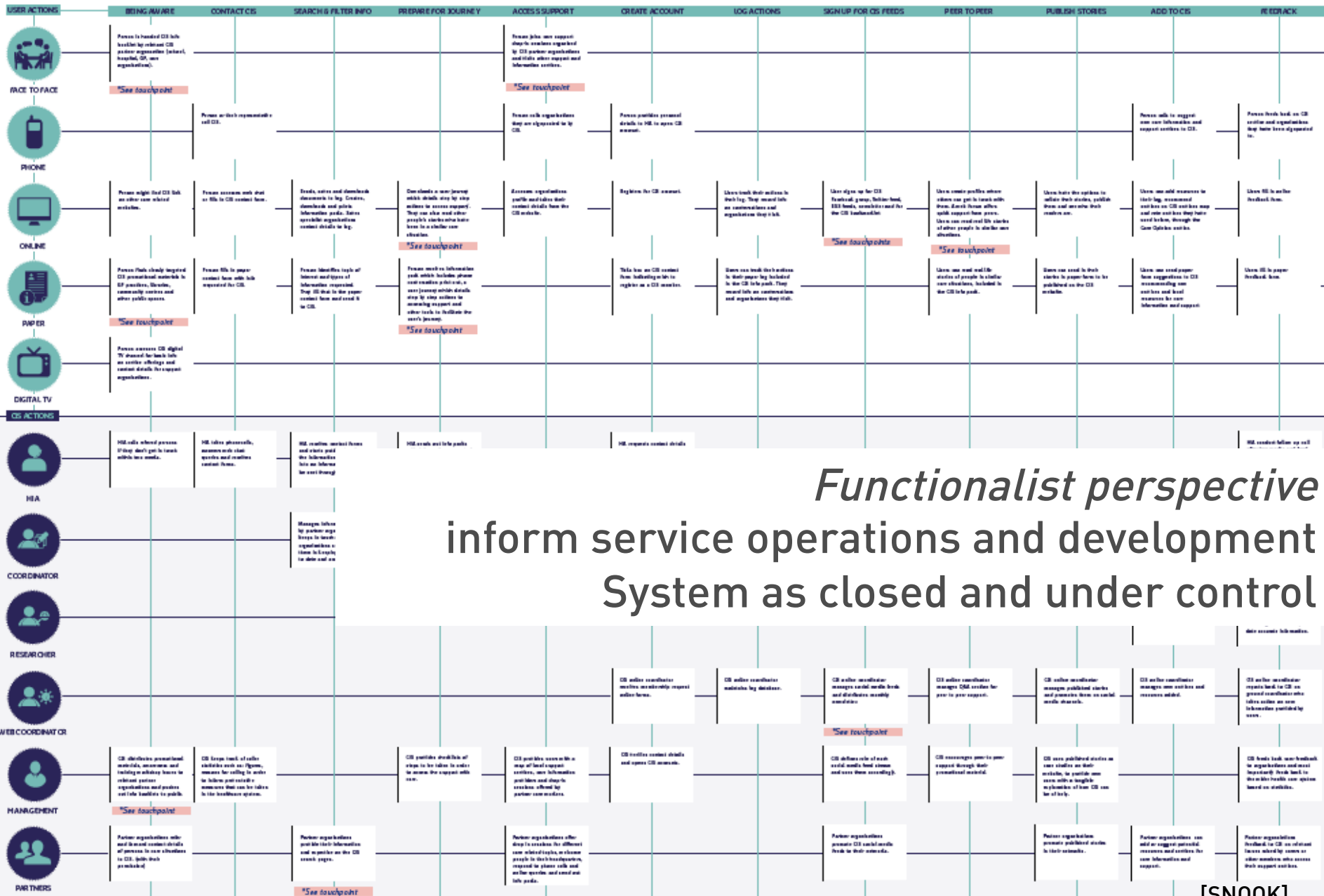
“Models are explicit, simplifying interpretations of aspects of reality relevant to the purpose at hand. They seek to capture the most important variables and interactions giving rise to system behaviour. They are used to experiment on as surrogates for the real-world system.” (Jackson, 2010: 55)



HOW DO PEOPLE BECOME AWARE OF CIS?

HOW DO PEOPLE USE AND JOIN CIS?

HOW DO PEOPLE GROW WITH CIS?



Functional perspective
inform service operations and development
System as closed and under control

[SNOOK]

Service ecology

A service ecology is a system of actors and the relationships between them that form a service. The service ecology takes a systemic view of the service and the context it will operate in.

Service ecologies include all actors affected by a service, not only those directly involved in production or use.

Ultimately, sustainable service ecologies depend on a balance where the actors involved exchange value in ways that is mutually beneficial over time.

Source: Livework Studio Ltd

Service ecology - system

Like a biological ecology, a service ecology is marked by **strong interrelationships and dependencies** among its different parts.

In an intensive care unit, for example, the jobs of nurses and doctors can be seen to fit together in complementary ways, and the nature of their work is both extended by and dependent on the technologies they use in patient care

Change in an ecology is systemic. When one element is changed, effects can be felt throughout the whole system.

(Nardi, 2000)

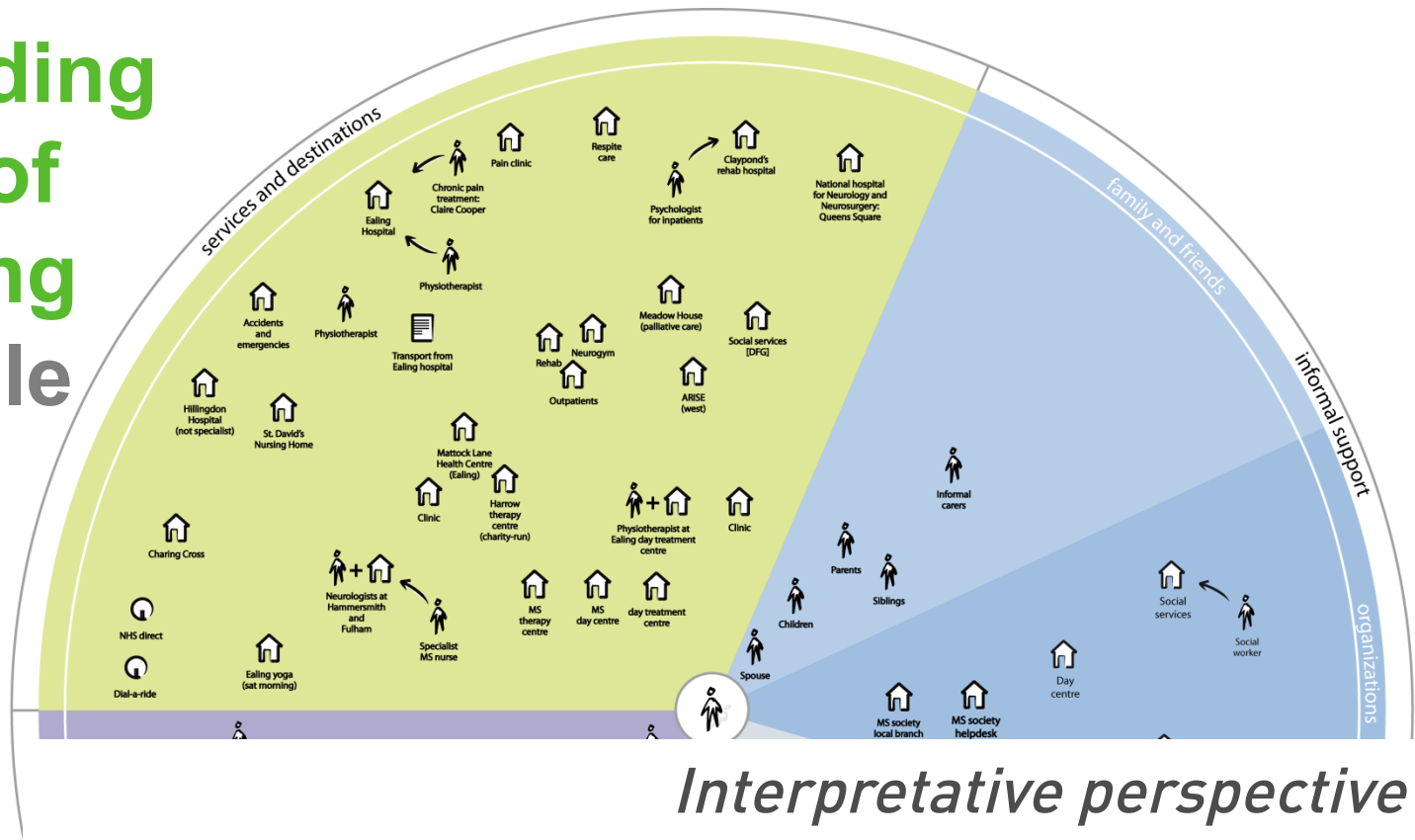


The mind map is centered on 'FOOD'. Major branches include:

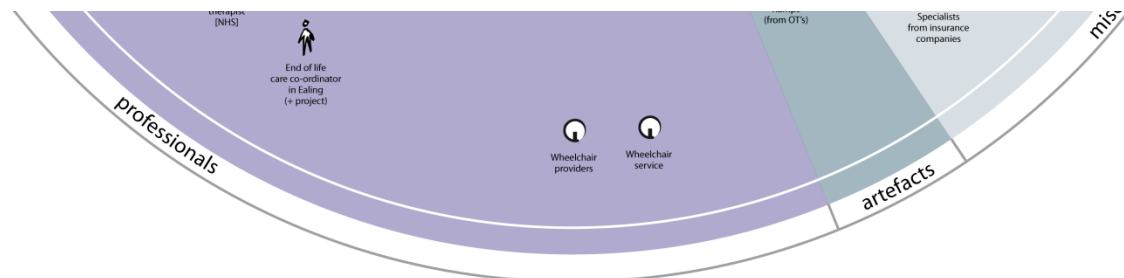
- Production**
 - Equipment
 - Concepts
 - Local food
 - Raw food
 - Superfood
 - Low carb
 - Health
 - Health
 - Sickness
 - Cancer
 - Heart
 - Diabetes
 - Obesity
 - Alcohol
 - Smoking
 - Stress
 - Sleep
 - Exercise
 - Yoga
 - Meditation
 - Herbs
 - Spices
 - Tea
 - Coffee
 - Alcohol
 - Smoking
 - Stress
 - Sleep
 - Exercise
 - Yoga
 - Meditation
 - Herbs
 - Spices
 - Tea
 - Coffee
- Distribution**
 - Packaging
 - Plastic
 - Paper
 - Glass
 - Aluminum
 - Geographic situation
 - Transportation
 - Truck
 - Ship
 - Plane
 - Train
 - Car
 - Motorcycle
 - Bicycle
 - Foot
 - Market
 - Free
 - Market
 - Store
 - Restaurant
 - Cafe
 - Bar
 - Club
 - Dance
 - Party
 - Event
 - Concert
 - Theater
 - Museum
 - Garden
 - Park
 - Beach
 - Mountain
 - City
 - Village
 - Town
 - Country
 - World
- Consumption**
 - Eating
 - Breakfast
 - Lunch
 - Dinner
 - Snack
 - Drink
 - Alcohol
 - Smoking
 - Stress
 - Sleep
 - Exercise
 - Yoga
 - Meditation
 - Herbs
 - Spices
 - Tea
 - Coffee
 - Drinking
 - Water
 - Juice
 - Soda
 - Beer
 - Wine
 - Whisky
 - Vodka
 - Gin
 - Rum
 - Banana
 - Apple
 - Orange
 - Lemon
 - Lime
 - Pineapple
 - Mango
 - Papaya
 - Guava
 - Peach
 - Cherry
 - Plum
 - Apricot
 - Peach
 - Cherry
 - Plum
 - Apricot
 - People
 - Family
 - Friends
 - Colleagues
 - Strangers
 - Animals
 - Plants
 - Minerals
 - Vitamins
 - Proteins
 - Carbohydrates
 - Fats
 - Fibers
 - Enzymes
 - Hormones
 - Antibodies
 - Antigens
 - Antibiotics
 - Antivirals
 - Antifungals
 - Antiparasitics
 - Anticancer
 - Antidepressant
 - Antipsychotic
 - Anticonvulsant
 - Anticoagulant
 - Antidiabetic
 - Antihypertensive
 - Anticholesterol
 - Anticancer
 - Antidepressant
 - Antipsychotic
 - Anticonvulsant
 - Anticoagulant
 - Antidiabetic
 - Antihypertensive
 - Anticholesterol
- Culture**
 - Traditions
 - Christmas
 - Easter
 - Summer
 - Autumn
 - Winter
 - Spring
 - Summer
 - Autumn
 - Winter
 - Spring
 - Social
 - Family
 - Friends
 - Colleagues
 - Strangers
 - Animals
 - Plants
 - Minerals
 - Vitamins
 - Proteins
 - Carbohydrates
 - Fats
 - Fibers
 - Enzymes
 - Hormones
 - Antibodies
 - Antigens
 - Antibiotics
 - Antivirals
 - Antifungals
 - Antiparasitics
 - Anticancer
 - Antidepressant
 - Antipsychotic
 - Anticonvulsant
 - Anticoagulant
 - Antidiabetic
 - Antihypertensive
 - Anticholesterol
 - Health
 - Sickness
 - Cancer
 - Heart
 - Diabetes
 - Obesity
 - Alcohol
 - Smoking
 - Stress
 - Sleep
 - Exercise
 - Yoga
 - Meditation
 - Herbs
 - Spices
 - Tea
 - Coffee
- Environment**
 - Weather
 - Hot
 - Cold
 - Wet
 - Dry
 - Cloudy
 - Sunny
 - Rainy
 - Stormy
 - Clear
 - Breezy
 - Still
 - Windy
 - Humid
 - Arid
 - Temperate
 - Tropical
 - Polar
 - Subtropical
 - Continental
 - Oceanic
 - Highland
 - Lowland
 - Mountain
 - Valley
 - Plateau
 - Desert
 - Savanna
 - Tundra
 - Forest
 - Grassland
 - Wetland
 - Swamp
 - Meadow
 - Field
 - Park
 - Garden
 - Yard
 - Backyard
 - Frontyard
 - Street
 - Highway
 - Freeway
 - Interstate
 - Expressway
 - Express
 - Expressway
 - Express
 - Climate
 - Hot
 - Cold
 - Wet
 - Dry
 - Cloudy
 - Sunny
 - Rainy
 - Stormy
 - Clear
 - Breezy
 - Still
 - Windy
 - Humid
 - Arid
 - Temperate
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 - Backyard
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 - Street
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 - Freeway
 - Interstate
 - Expressway
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 - Expressway
 - Express
 - Geography
 - Mountain
 - Valley
 - Plateau
 - Desert
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 - Swamp
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 - Field
 - Park
 - Garden
 - Yard
 - Backyard
 - Frontyard
 - Street
 - Highway
 - Freeway
 - Interstate
 - Expressway
 - Express
 - Expressway
 - Express

Understanding the needs of people living with Multiple Sclerosis

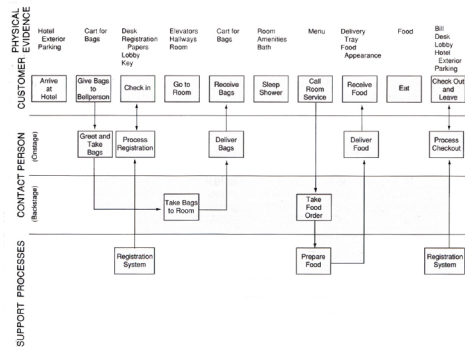
(NHS Institute)



Interpretative perspective
If used within collaborative processes
Open system –
close interrelationships between its
subsystems



Service Blueprint



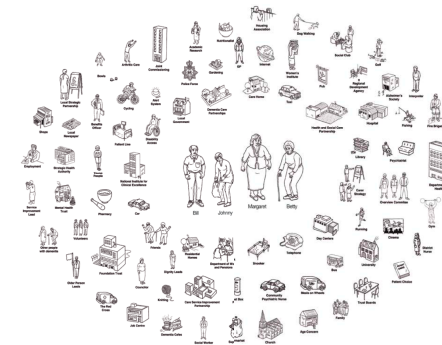
Efficiency

Complete understanding of the system and its parts

Control of operations



Service ecology



Worldviews

Collaborative and emergent interpretation of systems

Effective (re)use of what is there

Design evolution

Service Design evolution

- *Scaling*

- *Participation*

- *Transformation*

Conclusions

Customer participation

Low: Customer presence required during service delivery

Moderate: Customer inputs required for service creation

High: Customer co-creates the service product

Products are standardized

Service is provided regardless of any individual purchase

Payment may be the only required customer input

Examples:

End consumer

Airline travel

Motel stay

Fast-food restaurant

Client inputs customize a standard service

Provision of service requires customer purchase

Customer inputs (information, materials) are necessary for an adequate outcome, but the service firm provides the service

Hair cut

Annual physical exam

Full service restaurant

Active client participation guides the customized service

Service cannot be created apart from the customer's purchase active participation

Customer inputs are mandatory and co-create the outcome

Marriage counselling

Personal training

Weight-reduction programme

Business-to-business customer

Uniform cleaning service

Pest control

Interior greenery

maintenance service

Agency-created advertising campaign

Payroll service

Independent freight transportation

Management consulting

Executive management seminar

Install wide area network (WAN)

Source: Adapted from Hubbert (1995)

(Bitner et al., 2007)

Customer as 'partial employee'

Customers can influence both the quality and quantity of production

- Reduce direct contact between customers and service supply system to optimise productivity (service automatisation)
- Consider customers as partial employee and maximise through design and training their contribution (service co-production)

(Bitner et al., 2007)

Service co-design

Setting up user involvement where users and frontline personnel are provided with generative tools and techniques to innovate services (Holmlid, 2009)

- Knowledge sharing (Users/staff as resourceful)
- Engagement & sustained participation
- Legitimacy of participation (they have a permission to change things (Miller & Hamilton, 2008))



[Steen et al., 2011]



[SNOOK]

Techniques and modes to engage & co-design



[Bowen et al., 2013]

Requisite Variety: Who should participate?

SOCIAL SYSTEM VARIETY → optimal selection of stakeholders: “requisite variety amongst stakeholders for a shared problematic situation must account for **social system variety**”

“Social variety considers all distinctions that could make a difference in outcomes and action in the world (values, positions and stands, affiliations, perspectives, level of power, vulnerability, etc.)”



Pluralistic and inclusive approach

Conflicting values, beliefs and needs

Collaborative interpretation of systems

Design led and solution oriented process

(idealistic design)

Service Co-production

Co-production as **a new way of thinking about public services** has the potential to deliver a major shift in the health, education, policing and other services are provided:

Co-production means delivering public services in an equal and reciprocal relationship between professionals, people using services, their families and their neighbours. Where activities are co-produced in this way, both services and neighbourhoods become far more effective agents of change.

(Boyle and Harris, 2009)

Service Co-production

		Responsibility for design of services		
		Professionals as sole service planner	Professionals and service users/ community as co-planners	No professional input into service planning
Responsibility for delivery of services	Professionals as sole service deliverers	Traditional professional service provision	Professional service provision but users/communities involved in planning and design	Professionals as sole service deliverers
	Professionals and users/communities as co-deliverers	User co-delivery of professionally designed services	Full co-production	User/community delivery of services with little formal/ professional
	Users/communities as sole deliverers	User/community delivery of professionally planned services	User/community delivery of co-planned or co-designed services	Self-organised community provision

(Boyle and Harris, 2009)

Participation as Empowerment & Emancipation

When participation is pushed to its extremes it meets other agendas generally named as **community or citizens** 'empowerment': participation here becomes a mean and an end in itself (White, 1996).

Community Action research: participation is part of an **awakening self-reflective process** that questions existing power and societal structures and aims at change as an often conflicting bottom up movement (Ozanne & Saatcioglu, 2008).

Social Change Projects

Alcohol reduction project

Co-create research methods - Methods stations

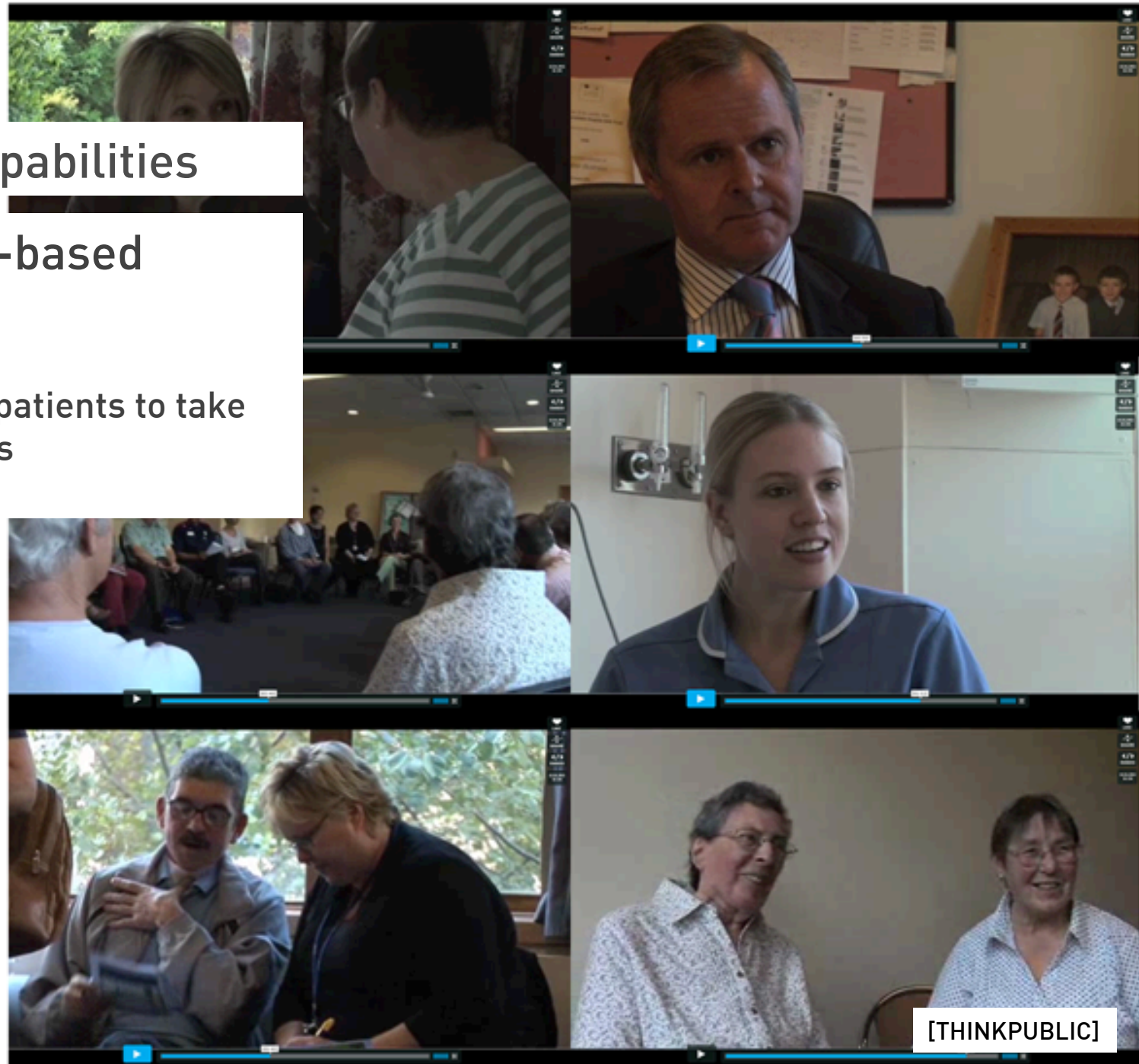
How do you empower people to co-design research when they may not have the expertise to know what options there might be?



Building Capabilities

Experience-based Design

Train staff and patients to take video interviews



Critical Systems Heuristics

Critical Systems Heuristics (Ulrich, 1983, 1998)

- Allow questions to be asked about who benefit from particular system designs;
- Seek to ensure the full participation of those who are affected by systems designs who might not otherwise be involved:
- Make **Boundary Judgments** transparent: assumptions about what is inside the system of concern and what belongs to its environment.

Service Design & Emancipation

Limited critical reflection on **power dynamics & boundary making**:

- Service Design may be hampered by inattention to issues of power and politics (Collins & Cook, 2014)
- “without critical understanding of the different types and facets of power operating within a specific setting [...] the discourses of service user empowerment and democratization of service provision risk being deployed simplistically obfuscating more subtle forms of oppression and social exclusion” (Donetto et al., forthcoming)

EMPANCIPATORY

Empowerment and emancipation:
Give voice & Build Capability
Design Facilitation
Focus on learning and transformation



Co-design



Effectiveness (best solution) & stakeholder commitment

Design leading

Focus on inclusivity and designing



Co-creation



Empowerment and emancipation: Give voice & Build Capability

Design Facilitation ('design oneself out')

Focus on learning and transformation

Design evolution

Service Design evolution

- *Scaling*

- *Participation*

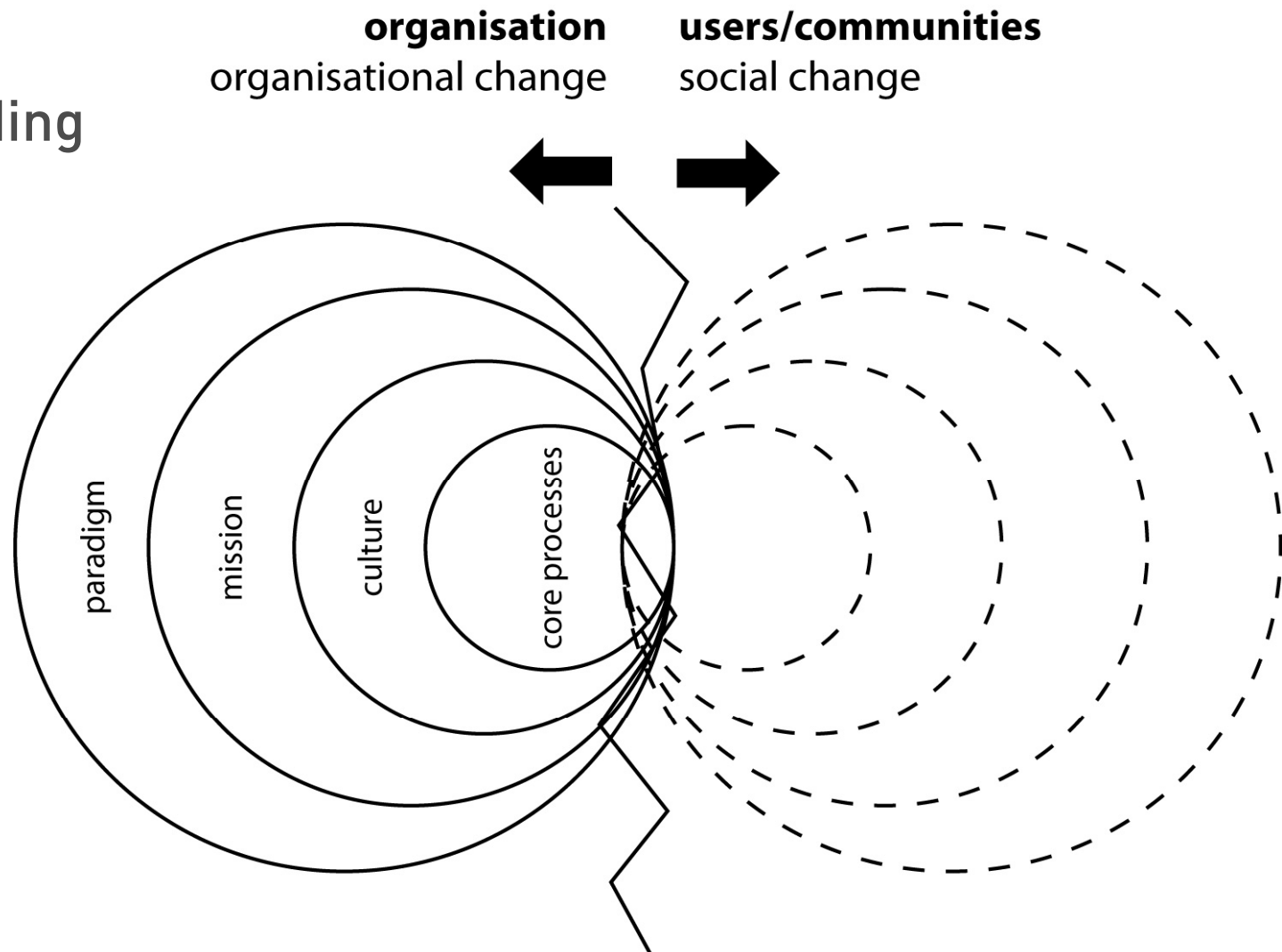
- *Transformation*

Conclusions

Transformation Design

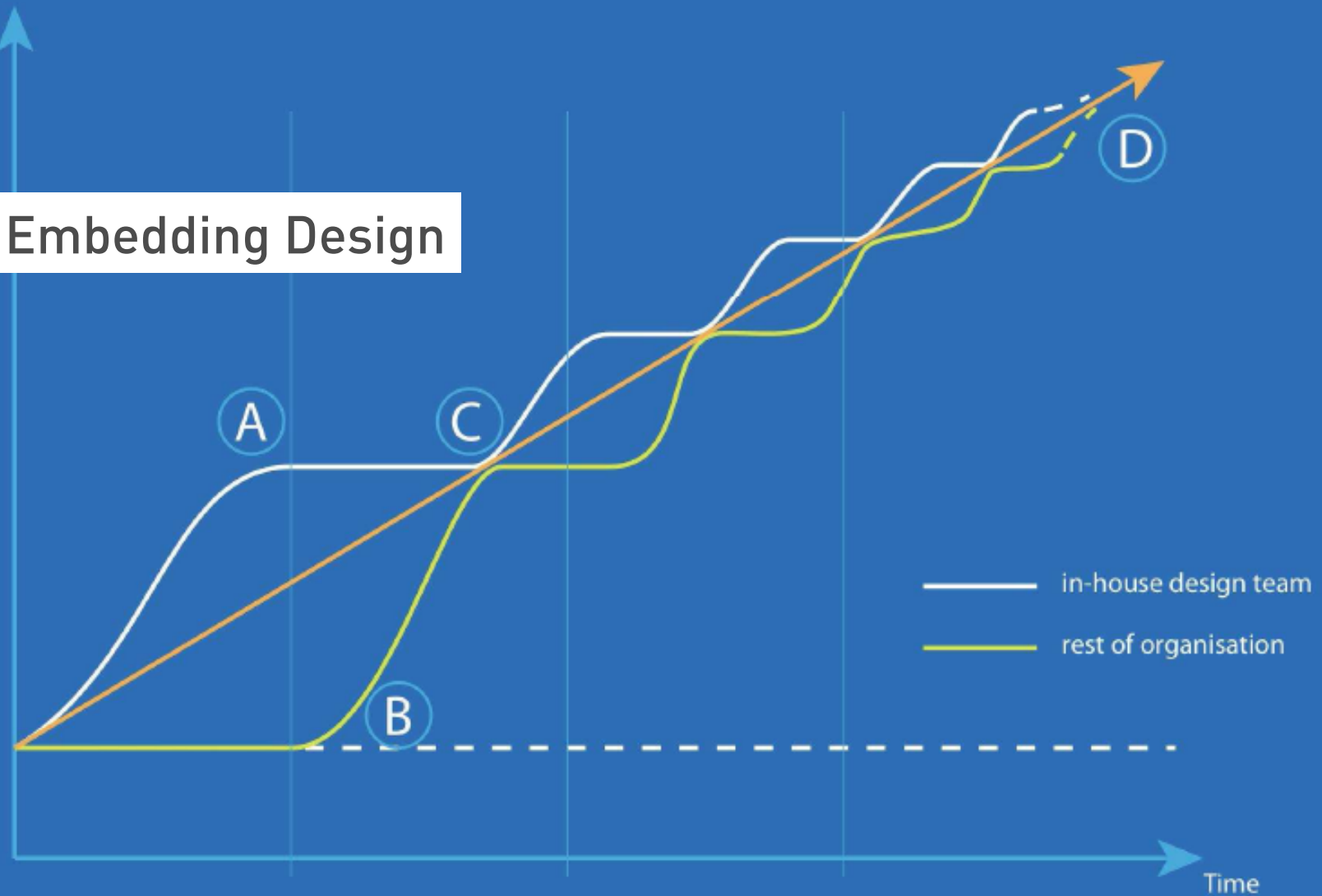
‘because organisations now operate in an environment of constant change, the challenge is not how to design a response to a current issue, but how to design a means of continually responding, adapting and innovating. Transformation design seeks to leave behind not only the shape of a new solution, but the tools, skills and organisational capacity for ongoing change’ (Burns, 2006: 21).

Understanding Change



Design Capacity

Embedding Design





Embedding Design:
toolkits and design labs

BETA Social Innovation Lab for Kent



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Embedding Design



Design legacies

Organizations are full of design legacies, however flawed and poorly suited. If service designers want to effect real change in real organizations, they have to be able to articulate these organizational design practices.

(Junginger, 2014)



Toward More User-Centric O Lessons From the Field of Exper Design and a Case Study

Paul Bates
Chuan Robert
University College London

This article argues for a major shift in focus from the organization development (OD) to a more "user-centred" and "experience-based" design (EBD) approach, which is a subset of the design process. It is a more "user-centred" and "experience-based" design (EBD) approach, which is a subset of the design process. It is a more "user-centred" and "experience-based" design (EBD) approach, which is a subset of the design process.

REDEFINING THE CLIENT AND THE TASK FOR ORGANIZATION DEVELOPMENT

A frequently asked question in organization development (OD) is, "Who is the client, and whom should we be responding to?" Apart from the occasional well-meaning but naive "member-centric" (Bates, 1998, 2004), OD practice for the past half-century has remained mostly "management- or leader-centric."

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Formative Context

Formative Context is

‘the set of **institutional arrangements and cognitive imageries** that inform the actors’ practical and reasoning routines [...]

a major obstacle to effective experimentation and adoption, and more generally to flexibility and innovation, is **limited learning**, that is, the limited capability to reflect upon and reframe the institutional and cognitive grounds that support the habitual “ways of doing things” (Ciborra and Lanzara, 1994).



INTERPRETATIVE

Increase viability and sustainability

Open and purposeful systems in constant transformation

Inform a mind shift in managers

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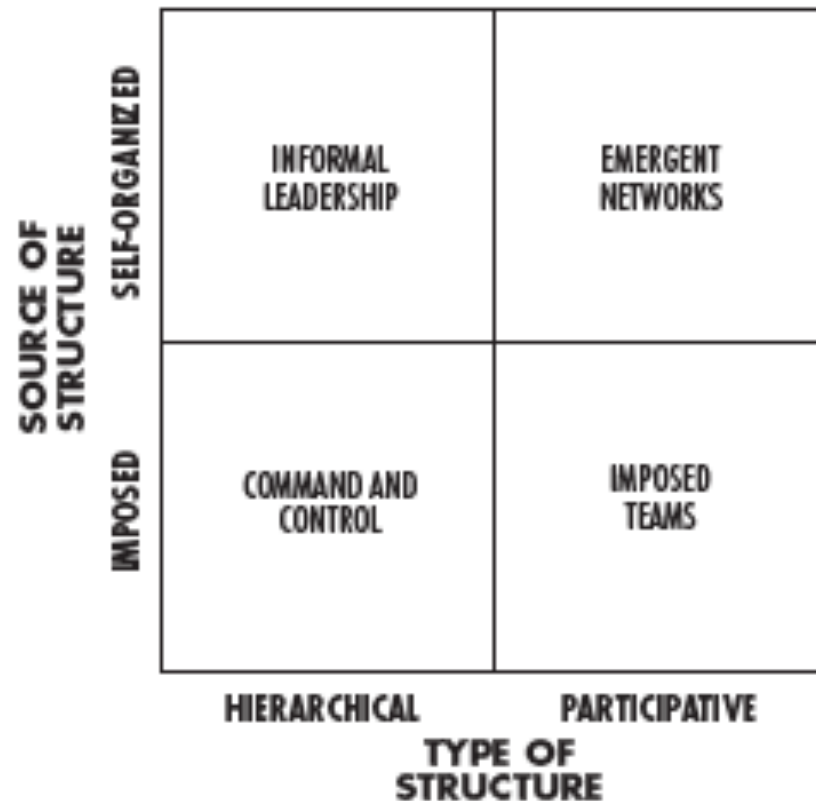
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Indeterminate nature of services

‘the fundamental inability of design to completely plan and regulate services, while instead considering its capacity to potentially create the right conditions for certain forms of interactions and relationships to happen’ (Meroni & Sangiorgi, 2011: 10)

Design an ‘action platform’: ‘a system that makes a multiplicity of interactions possible’ (Manzini, 2011: 3)

Generative emergence



“arising of novel and coherent structures, patterns, and properties during the process of self-organization in complex systems”
(Goldstein, 1999: 49)

Generative emergence

“complexity theory is exploring how the structure and properties seen in emergence partly result from the **serendipity-like amplification of random events** in complex systems. The chance or “noisy” event can be utilized by the organization to explore or test different system configurations and, therefore, may represent an evolutionary response of the social system to changes in the environment” (Goldstein, 1999: 68)

‘Design in Use’



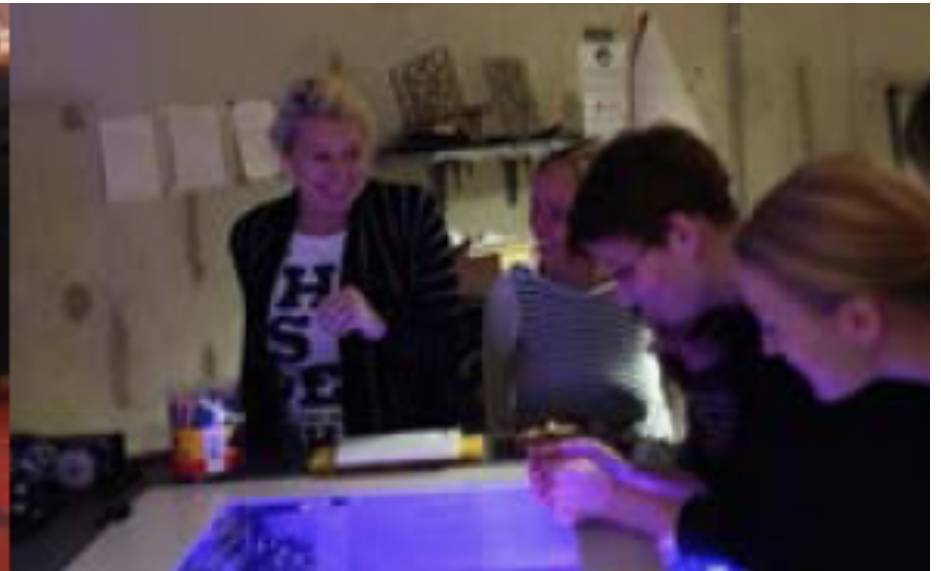
“Rather than focusing on involving users in the design process, focus shifts toward **seeing every use situation as a potential design situation** [...] So there is design during a project, but there is also design in use. There is design (in use) after design (in the design project)” (Bjögvinsson et al., 2012: 106)

‘Infrastructuring’

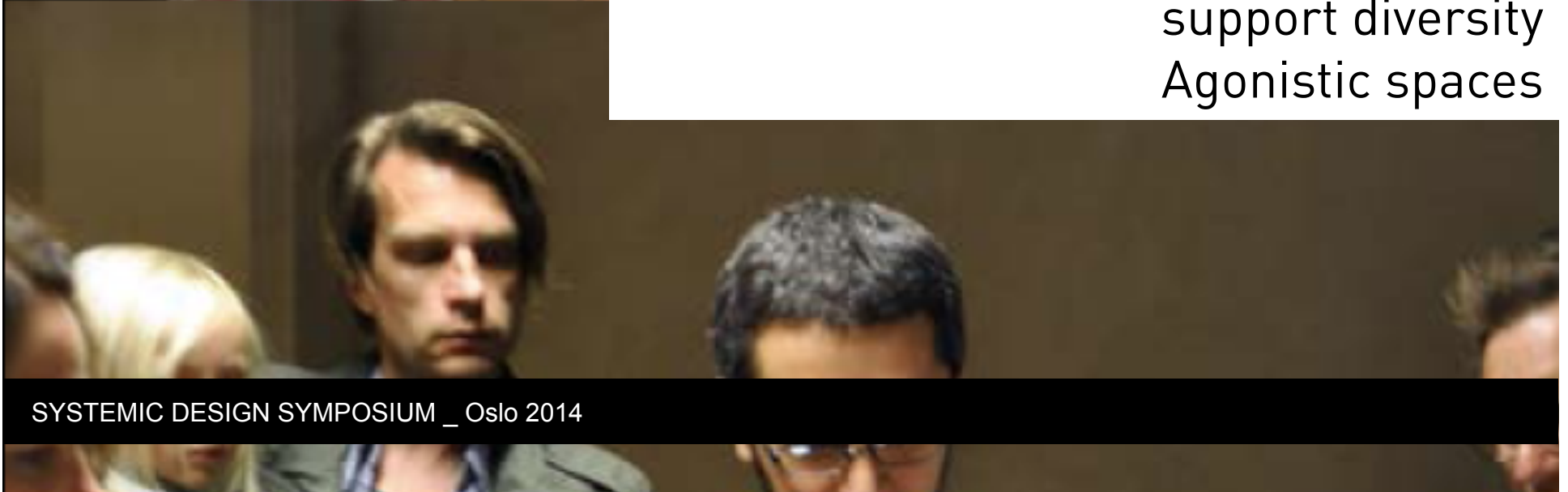
“The really demanding challenge is to design where no such consensus seems to be within view, where no social community exists. Such political communities are characterized by **heterogeneity** and difference with no shared object of design. They are in **need of platforms or infrastructures, “agonistic” public spaces**— not necessarily to solve conflict, but to constructively deal with disagreements.” (Björgvinsson et al., 2012: 116)

Postmodern system thinking

“Postmodernists emphasize, instead, that we have to learn to live with the incommensurable, accepting multiple interpretations of the world and being tolerant of difference. Indeed, they want to ensure diversity and encourage creativity by reclaiming conflict and bringing marginalized voices forward to be heard.” (Jackson, 2003)



POSTMODERN
Exception and Emotion
Surface different view points and
support diversity
Agonistic spaces



Design evolution

Service Design evolution

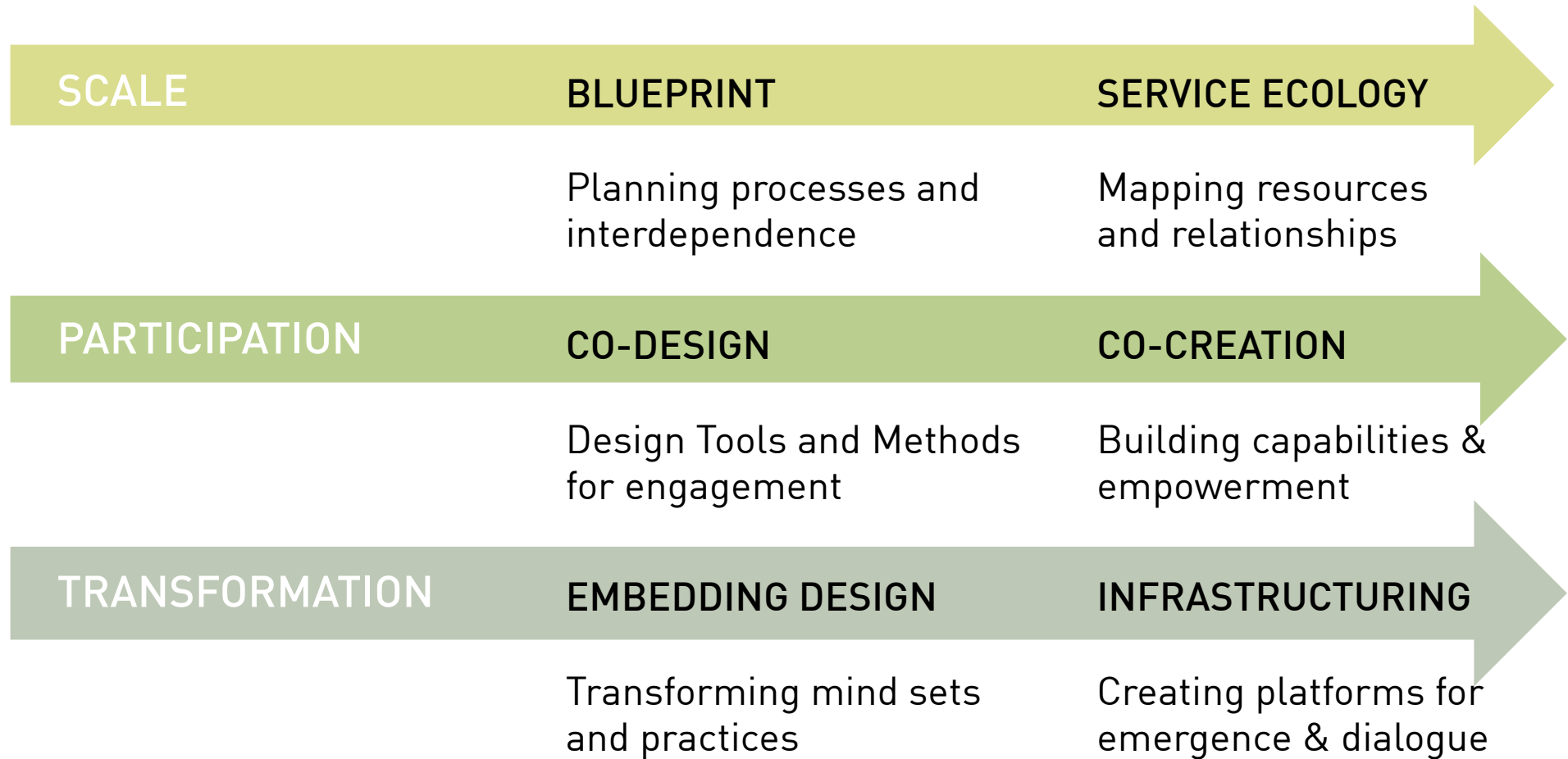
- *Scaling*

- *Participation*

- *Transformation*

Conclusions

Systemic perspectives



BLUEPRINT

Planning processes and interdependence

INTERDEPENDENCE

CO-DESIGN

Design Tools and Methods for engagement

SOCIAL SYSTEM VARIETY

EMBEDDING DESIGN

Transforming mind sets and practices

FORMATIVE CONTEXTS

SERVICE ECOLOGY

Mapping resources and relationships

GIGAMAPPING

CO-CREATION

Building capabilities & empowerment

CRITICAL SYSTEMS H.

INFRASTRUCTURING

Creating platforms for emergence & dialogue

EMERGENCE

**DESIGN LED &
DESIGN CENTRED**

**DECENTRALISED &
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**BOUNDED &
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SYSTEMS &
PROCESSES**

**OPEN &
EMERGENCE
SYSTEM &
PROCESSES**

**TOWARD
CONVERGENCE
& ORDER**

**TOWARD
DIVERGENCE
& DISORDER**

DESIGN LED &
DESIGN CENTRED

DECENTRALISED &
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BLUEPRINT

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Design Tools and Methods
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EMERGENCE

OPEN &
EMERGENCE
SYSTEM &
PROCESSES

BOUNDED &
CONTROLLED
SYSTEMS &
PROCESSES

Existence of tacit
system perspectives & philosophies

Thought 1

Not *stretching* Service Design but positioning within existing knowledge on e.g. system design

“Systemic design is distinguished from service or experience design in terms of scale, social complexity and integration. Systemic design is concerned with higher order systems that encompass multiple subsystems.” (Jones, 2014)

Thought 2

Make tacit understandings of services and systems, *explicit* and an object of debate (together with theories of change)

“Service systems often are described as existing in the world waiting to be discovered by service researchers. Their reification often brings with it an assumption of a coherent, bounded entity where what is inside and outside the system is unambiguous.” (Blomberg & Darrah, forthcoming)

Thought 3

We need to consider not only what designers do and how (methods and approaches), but also what is their role, influence and *position* within the ecology of actors and ongoing processes of change

“recognition of the specificity of location and the generative limits of method, such that a responsible practice is one characterized by humility rather than hubris, aspiring not to massive change or discontinuous innovation but to modest interventions within ongoing, continually shifting and unfolding, landscapes of transformation.” (Suchman, 2011: 16)

Thought 4

Provide tools not only to map and visualise complexity and systems as objects of design, but also to enhance *reflexivity* of practitioners

“the need to introduce new skills and tools for reflexive practices within projects that hold transformational aims is evident. This might include ways to consciously track and reflect on processes, conflicts, roles, design decision points, mapping multiple perspectives and exploring individual and collaborative interpretations and evaluations of design situations and outcomes.” (Sangiorgi, 2011: 37)



THANK YOU

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SELECTED READINGS 01

Blomberg, J., and Darrah, C. (forthcoming). Toward an anthropology of services. The Design Journal Special Issue 'Emerging Issues in Service Design'

Simon Bowen, Helena Sustar, Daniel Wolstenholme, Andy Dearden, Engaging teenagers productively in service design, International Journal of Child-Computer Interaction, Volume 1, Issues 3-4, September-December 2013, Pages 71-81

Donetto, S., Pierri, P., Tsianakas, V. and R. Robert (forthcoming). Experience-based Co-design and healthcare improvement: realising participatory design in the public sector. The Design Journal Special Issue 'Emerging Issues in Service Design'

Jackson, M. (2010). Systemic Thinking. Creative Holism for managers, John Wiley & Sons Ltd.

Jones, P. (2014). Systemic design principles for complex social systems. In G. Metcalf (ed.), Social Systems and Design, Volume 1 of the Translational Systems Science Series, pp 91-128. Springer Japan.

Junginger, S. and Sangiorgi, D. (2009), Service Design and Organisational Change. Bridging the gap between rigour and relevance, IASDR09 conference, 19-22 October, Seoul

SELECTED READINGS 02

Maffei, S. and Sangiorgi D. (2006), From communication design to activity design, in Frascara, J. (edited by), Designing Effective Communications: Creating Contexts for Clarity and Meaning, Allworth Press, New York, 2006, pp. 83 – 100

Meroni A., Sangiorgi D. (2011), Design for Services, Gower Publishing Ltd

Multilevel service design: from customer value constellation to service experience blueprinting

L Patrício, RP Fisk, L Constantine - Journal of Service Research, 2011

Sangiorgi D., Building a framework for Service Design Research, EAD conference 'Connexity', 1-3 April 2009, Aberdeen

Sangiorgi, D. (2011). Transformative services and transformation design. International Journal of Design, 5(2), 29-40.

Steen, M., Manschot, M., & De Koning, N. (2011). Benefits of co-design in service design projects. International Journal of Design, 5(2), 53-60.

Suchman, L. (2011). Anthropological Relocations and the Limits of Design. Annual review of Anthropology, Vol. 40: pp. 1-18