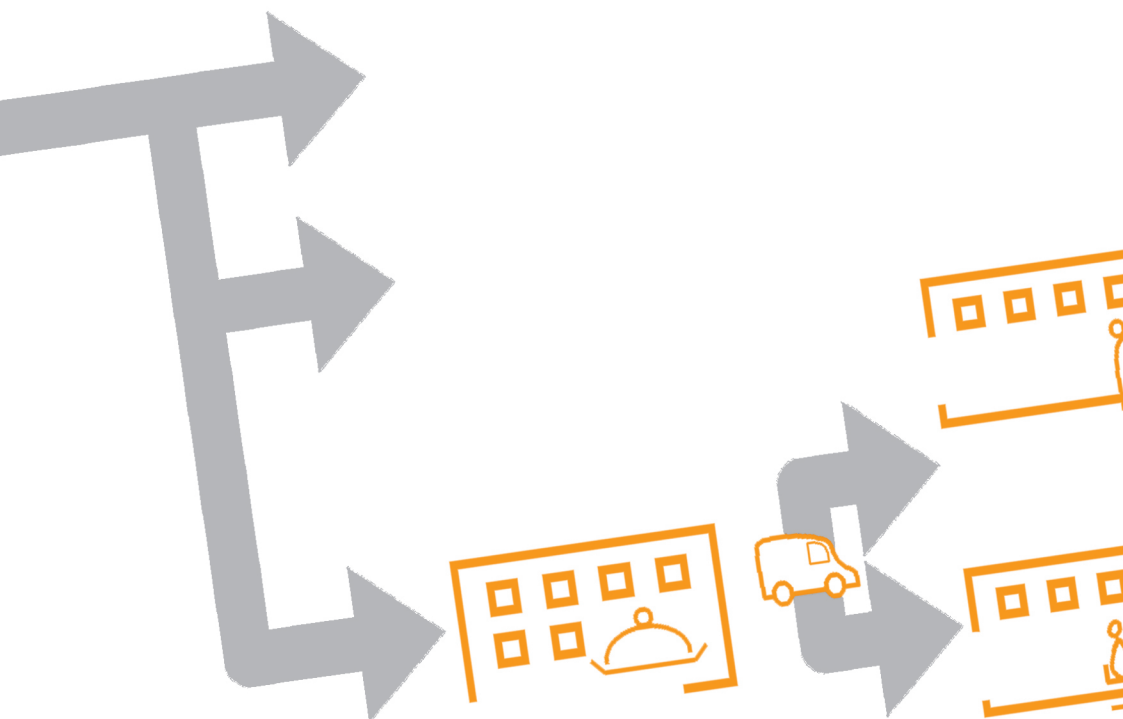


Edited by
E. Manzini, L. Collina, S. Evans

Solution oriented partnership

How to design industrialised sustainable solutions



European Commission GROWTH Programme

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Executive summary

Ezio Manzini

Solution Oriented Partnerships develops dual themes. The main theme concerns the building up of patterns of collaboration between different social players resulting in the *co-production of sustainable solutions*. Given their nature, these solutions are known as *Partner Based Solutions*. The complementary, yet more original, theme relates to the way in which these “result-orientated collaboration patterns” are able to give rise to solutions that are highly contextualised (i.e. sensitive to and appropriate for the specific characteristics of target contexts) and equally highly effective and efficient (i.e. able to offer high quality results while minimising the economic and environmental costs). In developing these themes, this book also aims to promote a new concept of industrialisation: an *advanced industrialisation* with the capacity to get a multiplicity of players together to collaborate in sustainable ways, with sustainable objectives, operating on different scales and following different rationales. This is industrialisation based on a network economy, context specificity, the enterprise of local partners, and the active participation of end users. This book proposes the Solution Oriented Partnership Methodological Framework (SOPMF) as a methodology for achieving this advanced industrialisation. This book deals with issues linked first and foremost with research and projects on *eco-efficient services, product-service systems* and, more generally, the *function-based economy*. Within this main stream of reference, the book develops three themes in particular: *partnership building, focus on context-of-use*, and the definition of *system architecture*. In this way it links up with other lines of research and other disciplines, including: ethnographical research and the sociology of consumption; innovation management and the theory of systemic innovation; strategic design, service design and scenario building methodology.

This book arises from the activities of a group of research centres and European enterprises, in progress from 2001 to 2004 and funded under the European Community 5th Framework Programme. The work, known as *HiCS, Highly Customised Solutions*, takes the form of an *action research* project, the specific subject of which was “*food for people with reduced mobility*”. The results of the design component of this work are presented in the book “*Food Delivery Solutions*” published in parallel to this.

Solution-orientated partnerships is organised in two parts.

The first part, *Themes*, presents issues that are particularly relevant when trying to understand the nature of partner based solutions and their industrialisation. Problematic issues are introduced concerning; the definition of contexts-of-use, partnerships and ways of building them, system architecture and its possible shapes and forms, enterprise strategy, the relationship between the local and global dimensions of solutions, the sustainability of the solutions and the system innovation needed to realise them.

The second part, *Tools*, presents new or adapted methodological instruments for the conception and development of industrialised sustainable solutions. They form a general methodological framework with which to facilitate and orientate the entire planning process (*Solution Orientated Partnership Methodological Framework*) and a series of more specific instruments including; *the Solution Scan, the Design plan, the Benefits plan, Partnership Building*, the methodology for investigating context-of-use, and the methodologies for environmental, social and economic assessment of the proposals put forward.

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SOPMF: Solution Oriented Partnership Methodological Framework

*Anna Meroni**

A methodological framework for developing Partner Based Solutions

The Solution Oriented Partnership Methodological Framework (SOPMF) is a structured, interconnected, methodological reference framework, aimed at the planning and implementation of Partner Based Solutions, and within which to collocate specific methodologies and instruments.

It is the methodological structure that underlies the process by which different social players converge on highly context-based, advanced industrialised solutions; a problem-solving tool for setting up a system innovation project in terms of strategic design. Indeed, working together towards partner based solutions that offer their users results, integrating visions, expertise and assets, is above all a question of identifying common interests alongside individual interests and pursuing these using a shared strategy.

The basic principle of the SOPMF is to include within the solution planning process actions that aim to establish alliances between partners and that bring players face to face with specific contexts. The result is a matrix derived by crossing three streams (rows) - Partners, Contexts and Solutions - with four stages of activity (columns) consisting of a process of Exploration and Development carried out twice in each stream. The twelve resulting cells each suggest a set of key actions that aim to organise this convergence by laying out the important stages of development.

Therefore the value of SOPMF is in outlining the important (and crucial) points on the path towards strategic convergence as simply as possible, using an approach that facilitates the setting up of the system architecture and its supporting platform.

This occurs thanks to the ability of this instrument to:

- define key actions common to all players involved in building the system,

* a first draft of this methodological tool was outlined by: Andrew Burns, Ezio Manzini and Simona Maschi

matching them to specific methodological instruments that are potentially capable of being reshaped ad hoc for each project-link planning factors together and bring out the relationship between system performance and its logical and productive organisation

- define important points at which to assess progress and align strategies
- stimulate discussion in decision-making while viewing the process from different perspectives
- share an effective technical language, able to facilitate the exchange of experiences

The result of the path is a system of Partner Based Solutions delivered, by a Solution Oriented Partnership, in Specific Contexts-of-Use.

Description of the SOPMF

The SOPMF aims to support a complex planning activity by organising it and reducing the margin of risk through the orchestration of a series of actions which back up critical stages in its progress.

- It supplies an interdisciplinary base on which facilitators and integrators with different, complementary expertise, can work alongside a group of stakeholders towards the goal of becoming a Solution Oriented Partnership.
- It is not a step-by-step methodology but rather a flexible, open framework that proposes not a linear path, but a series of actions to be repeated over again. It offers a basic framework on which to draw up different pathways. Within this framework the process of design/generation is continuous, based on a set of specific methodologies, adaptable to different project situations, themes and objectives.
- Each cell corresponds to a key-action or set of actions with a precise aim, summarised in the cell title. Progresses generally occurs from left to right, but the succession of actions that correspond to each cell is not necessarily linear. Action can occur simultaneously in several cells, or move freely from one cell to another adjacent. It is always possible and often necessary to move back to previous, or even to the initial, stages. Action can start from any of the left-hand cells and will end on one of the three right-hand cells.

Revisiting of previous actions is usually necessary when new information, new ideas, or new actors appear.

- Horizontal movement means that progress has been made towards the evolution and completion of the solution and supporting partnership.

Vertical movement means that progress is being aligned across the three themes around which players can converge on a Partner Based Solution.

STREAMS

Here the three streams defining the rows of the matrix are presented.

First stream: partners

The concept of partners used here comes from the idea of partnership as a flexible strategic alliance between different players (economic, social or institutional).

The rules of alliance are laid down case by case in order to achieve the best formula for collaborating in the development of a solution. Such alliances may consequently include leadership and enterprise roles for local actors, advantageous co-operation between *profit* and *non-profit* bodies, synergy between public and private organisations, symbiosis between multinationals and SMEs, the sharing of specific markets, and effective collaboration with users. This is partnership fuelled by the conviction that it is advantageous to ally oneself with others when striving for sustainable objectives despite traditional dynamics of global-local production, using shared scenarios that leave everyone the space to continue pursuing their own specific strategic objectives.

Progress along this stream is defined by the cells: Solution Promoters, Platform Providers, Planned Providers and Solutions Providers

Second stream: contexts

The concept of context-of-use includes all the variables that intervene in the implementation of a solution in a specific situation. This includes not only the user, but also her physical and social habitat, made up of people, products and services. The context-of-use is therefore also a context of activity, potentiality and limits, which the new solution must face. A solution that is able to respond appropriately and effectively to the requirements of a context must, necessarily, measure up to the (practical, organisational and cognitive) capabilities found there and present

itself as a service able to use them to best advantage, according to a strategy of economy of resources and local enhancement. Then a new concept is introduced – the metacontext-of-use – which is a simplified model of the context-of-use, characterised by a reduced set of properties which prove to be common to a set of specific contexts-of-use. It is an abstraction shaped by the need for effectiveness in analysis and design: it involves the adoption of a point of view to filter the reality, allowing only the characteristics important for the specific design process to pass through. The meta-context-of-use, is therefore, a design act that brings with it a vision of what the partners are trying to achieve.

Progress in this stream is defined by the cells: Contexts-of-Use, Meta-Context-of-Use, Target Contexts-of-Use and Specific Contexts-of-use.

Third stream: solutions

The concept of solution used here refers to a system of products and services orientated towards solving a problem through a service of high environmental quality and socio-economic value. Such a result is possible in so far as producers are able to offer a complex service at lower (economic, environmental and user effort) cost than that of the contingent, asystemic combination of individual products and services. To do this it is necessary to plan the interconnection of elements that make up the system, or rather the architecture of the system itself, and the standardisation of the interfaces between them. Progress in this stream is defined by the cells: First Solution Ideas, Solution Platform Elements, Proposed Solutions, Partner Based Solutions.

COLUMNS

Here the four stages of activity that define the columns of the matrix are presented.

First Column: platform exploration

This stage explores and identifies the initial terms on which to base the process of convergence towards a common platform and explores its foundations. The project pathway may spring from any one of the conditions defined by the actions shown in the three cells, or even from the co-existence of several conditions: this means

that there can be one or more partners recognising a Context-of-Use or some possible Solution Idea as interesting, so that they decide to explore a system level innovation addressing that context or that idea. This means that, in any case, action requires the exploration of the other cells and then proceeds towards an initial hypothesis of a system.

Second column: platform development

This stage outlines actions aimed at consolidating the initial results of the platform exploration stage: the effort focuses on the definition of a set of partners, contexts and solution ideas which will constitute the basis of the solution system being developed. The final aim is to propose a hypothesised structure for the platform and to outline the shared Platform Vision from which to start in identifying the integrative competences needed to develop the solutions. At this stage, the platform is shaped by a set of solution elements, making up various solution ideas, designed and delivered by several providers and addressing a set of requirements common to a number of contexts-of-use (the meta-context-of-use).

Third column: solution exploration

Given the Platform Vision as the basis of the system, this stage starts the investigation of specific solutions which together cover the meta-context-of-use. The system architecture is explored as a function of the competence and strategies of the integrative partners needed to implement solutions in specific contexts.

Again, these activities are explorations of new specific possibilities (in terms of solutions, partners and contexts), but beginning this time from the opportunities and constraints of the agreed platform. A first series of project assessments are needed at this stage in relation to the target economic and environmental context-of-use.

Fourth column: solution development

This stage outlines the actions necessary to finalise convergence of the partners, and to implement the various Platform-Based Solutions in real contexts, firstly through pilot experiments and then in industrialised form.

It envisages definition of commercial, general system management, brand

management and intellectual property rights agreements to structure the type of alliance between the various partners.

| | explore | develop | explore | develop |
|------------------|----------------------|----------------------------|------------------------|--------------------------|
| partners | Solutions Promoters | Platform Providers | Planned Providers | Solutions Providers |
| contexts | Contexts-of-Use | Meta-Context-of-Use | Target Contexts-of-Use | Specific Contexts-of-Use |
| solutions | First Solution Ideas | Solution Platform Elements | Proposed Solutions | Partner-Based Solutions |
| | | | | |



Solution promoters

| | explore | develop | explore | develop |
|-----------|----------------------|---------------------------|------------------------|--------------------------|
| partners | Solution Promoters | Platform Promoters | Harvest Promoters | Solution Providers |
| contexts | Contexts-of-use | MicroContexts-of-use | Target Contexts-of-use | Specific Contexts-of-use |
| solutions | First Solution Ideas | Solution Harvest Elements | Proposed Solutions | Implemented Solutions |

The identification of project promoting organisations motivated to build a platform of products, services and competences able to offer solutions. Input: a request by one (or more) partner(s) for a strategic alliance toward a particular objective. Output: a vision of requirements and solution proposals to inform the identification of partners for a solution platform, utilizing convergence on interesting Contexts-of-Use and some initial Solution Ideas.

Context-of-use

| | explore | develop | explore | develop |
|-----------|----------------------|---------------------------|------------------------|--------------------------|
| partners | Solution Promoters | Platform Promoters | Harvest Promoters | Solution Providers |
| contexts | Contexts-of-use | MicroContexts-of-use | Target Contexts-of-use | Specific Contexts-of-use |
| solutions | First Solution Ideas | Solution Harvest Elements | Proposed Solutions | Implemented Solutions |

Here, Platform Promoters undertake systematic exploration of possible Contexts-of-Use and identify emerging demands that may be met by specific solutions. Input: a vision to guide the specific focus on a particular area of demand. Output: an in-depth

analysis of the environmental, social and personal conditions in which some of the possible potential solution-users live, with special focus on existing opportunities and resources.

First Solution Ideas

| | explore | develop | explore | develop |
|-----------|----------------------|---------------------------|------------------------|--------------------------|
| partners | Solution Promoters | Platform Promoters | Harvest Promoters | Solution Providers |
| contexts | Contexts-of-use | MicroContexts-of-use | Target Contexts-of-use | Specific Contexts-of-use |
| solutions | First Solution Ideas | Solution Harvest Elements | Proposed Solutions | Implemented Solutions |

Generation of the first solution ideas, starting from Contexts-of-Use understanding and based on the strategic interests of the Platform Promoters. Input: a series of stimuli, based on the vision of a possible technological production platform, which responds

to the demand arising from defined Contexts-of-Use. Output: a structured set of Solution Ideas that are promising (in terms of added value for the user, competitiveness, profitability, social and environmental sustainability) that can serve to start a strategic dialogue with other players to draw into the partnership. The ideas are expressed as concepts, which could be broken down into the main product and service elements which make up the solution.

Platform providers

| | explore | develop | explore | develop |
|-----------|----------------------|----------------------------|------------------------|--------------------------|
| partners | Solutions Promoters | Platform Promoters | Partner Providers | Solutions Providers |
| contexts | Contexts of use | MetaContexts of use | Target Contexts of use | Specific Contexts of use |
| solutions | First Solution Ideas | Solution Platform Elements | Proposed solutions | Partner-based solutions |

Identification and integration of partners needed to enable full development of all elements in the platform. The partners become fully involved in the project by collectively setting up a shared vision. This takes place through a series of strategic dialogues among players.

Input: the Platform Promoters' vision is a statement of the ability, interest and commitment of the individual players in the project. Output: a group of Platform Providers (including Platform Promoters and new partners) united by a shared vision and the rules by which a common project can be initiated. The first objectives are to identify the reference Meta-Context-of-Use and on the basis of this, a series of possible solutions.

Meta-Context-of-use

| | explore | develop | explore | develop |
|-----------|----------------------|----------------------------|------------------------|--------------------------|
| partners | Solutions Promoters | Platform Promoters | Partner Providers | Solutions Providers |
| contexts | Contexts of use | MetaContexts of use | Target Contexts of use | Specific Contexts of use |
| solutions | First Solution Ideas | Solution Platform Elements | Proposed solutions | Partner-based solutions |

Identification and integration of partners needed to enable full development of all elements in the platform. The partners become fully involved in the project by collectively setting up a shared vision. This takes place through a series of strategic dialogues among players.

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Solution Platform Elements

| | explore | develop | explore | develop |
|-----------|----------------------|----------------------------|------------------------|--------------------------|
| partners | Solutions Promoters | Platform Promoters | Partner Providers | Solutions Providers |
| contexts | Contexts of use | MetaContexts of use | Target Contexts of use | Specific Contexts of use |
| solutions | First Solution Ideas | Solution Platform Elements | Proposed solutions | Partner-based solutions |

Development of the first solution ideas that fit with the partners shared vision and identification of product and service elements that make up the platform. This activity begins by selecting the most promising First Solution Ideas, identifying expertise necessary to implement them and a first draft of a conceivable organizational and technological model for the

platform. Input: the First Solution Ideas and the Platform Providers assessments of the identified Meta-Context-of-Use. Output: definition of the Solution Platform Elements and their articulation within a system. Systematic consideration is given to specific solutions, their various elements and the expertise necessary to implement them.

Planned Providers

| | explore | develop | explore | develop |
|-----------|----------------------|----------------------------|------------------------|--------------------------|
| partners | Solution Promoters | Platform Providers | Planned Providers | Solution Providers |
| contexts | Contexts of Use | Meta-Contexts of Use | Target Contexts of Use | Specific Contexts of Use |
| solutions | First Solution Ideas | Solution Platform Elements | Proposed Solutions | Implemented Solutions |

Exploration of possible partners needed to complete the system and implement the solutions at specific local level, by means of targeted contacts and meetings with possible interlocutors. Input: the vision of the Platform Providers and a statement of missing expertise needed for the development of solutions. Output: a group of partners motivated to contribute to the local implementation of solutions and able to conduct the implementation.

Target-Context-of-Use

| | explore | develop | explore | develop |
|-----------|----------------------|----------------------------|------------------------|--------------------------|
| partners | Solution Promoters | Platform Providers | Planned Providers | Solution Providers |
| contexts | Contexts of Use | Meta-Contexts of Use | Target Contexts of Use | Specific Contexts of Use |
| solutions | First Solution Ideas | Solution Platform Elements | Proposed Solutions | Implemented Solutions |

Selection and analysis of specific Contexts-of-Use for the application of solutions developed by the Solution Oriented Partnerships. Input: a variety of specific contexts outlined in the Meta-Context-of-Use and the real capacities and strategies of possible (local) providers.

Output: an analysis of real contexts and the demands emerging from them, by which to personalize the specific solutions.

Proposed solutions

| | explore | develop | explore | develop |
|-----------|----------------------|----------------------------|------------------------|--------------------------|
| partners | Solution Promoters | Platform Providers | Planned Providers | Solution Providers |
| contexts | Contexts of Use | Meta-Contexts of Use | Target Contexts of Use | Specific Contexts of Use |
| solutions | First Solution Ideas | Solution Platform Elements | Proposed Solutions | Implemented Solutions |

Generation of ideas for Partner-Based Solutions, based on previously agreed platform characteristics and the capacities and strategies of partners. Input: the vision and capabilities of the partners, and an ambition to deliver solutions into real, specific Contexts-of-Use.

Outputs: detailed and contextualised ideas for Partner-Based Solutions, where the organization of the general architecture of the system is clearly visible and the roles and responsibilities of the players involved in the Solution Oriented Partnership is

foreseen. Meta-Context-of-Use. Output: definition of the Solution Platform Elements and their articulation within a system. Systematic consideration is given to specific solutions, their various elements and the expertise necessary to implement them.

Partner-Based Solutions

| | explore | develop | explore | develop |
|-----------|----------------------|----------------------------|------------------------|--------------------------|
| partners | Solutions Promoters | Platform Providers | Managed Providers | Solution Providers |
| contexts | Contexts of use | Meta-Contexts of use | Target Contexts of use | Specific Contexts of use |
| solutions | First Solution Ideas | Solution Platform Elements | Proposed Solutions | Partner-based Solutions |

Final definition of Partner-Based Solutions with fully integrated partner capability, motivation and strategy. This occurs with the detailed planning of solutions and their component elements and the simultaneous definition of the architecture that supports them. This closing stage in project development focuses particularly on defining rules of interface between the elements of the system. Input: the Proposed Solutions and the implementation limits/potential emerging from the context and the abilities of the specific partners. Output: the plan of all the elements and the system organizational architecture that makes up the Partner-Based Solution.

Solution providers

| | explore | develop | explore | develop |
|-----------|----------------------|----------------------------|------------------------|--------------------------|
| partners | Solutions Promoters | Platform Providers | Managed Providers | Solution Providers |
| contexts | Contexts of use | Meta-Contexts of use | Target Contexts of use | Specific Contexts of use |
| solutions | First Solution Ideas | Solution Platform Elements | Proposed Solutions | Partner-based Solutions |

Finalisation of agreements between partners and the negotiation of duties, responsibilities and benefit-sharing mechanisms (economic, image, and other benefits) needed to deliver to the shared mission. This activity requires agreement over the form of strategic alliance and the formulation of a system-oriented business plan. Input: the Proposed Solutions and the economic and organizational limitations arising in specific contexts. Output: a series of organizational, economic and strategic agreements among the Planned Providers as to how to implement the solutions, expressed as a definition of the Solution Oriented Partnership.

Specific Context-of-Use

| | explore | develop | explore | develop |
|-----------|----------------------|----------------------------|------------------------|--------------------------|
| partners | Solutions Promoters | Platform Providers | Managed Providers | Solution Providers |
| contexts | Contexts of use | Meta-Contexts of use | Target Contexts of use | Specific Contexts of use |
| solutions | First Solution Ideas | Solution Platform Elements | Proposed Solutions | Partner-based Solutions |

Detailed analysis of the individual specific contexts, and final assessment of solution impacts and benefits for the user, the environment and society. Input: the Proposed Solutions and knowledge of Specific Contexts. Output: a cognitive vision of the specific contexts, oriented towards the introduction of Partner-Based Solutions.

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Menno studied business science at Rotterdam and is fascinated by innovation, creativity and its management. After working in a Dutch consultancy, he moved to Barcelona leading European research and innovation projects for various companies. Menno then joined CDN, a product design consultancy as Innovation Manager and has led new services and methods for product innovation strategies and their application. Menno is Innovation Manager at CDN, has a passion for the saxophone and for his 3 year old daughter.

Laura Vidal, CDN



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Joanna is Sustainability Project Manager at CDN International, Barcelona where she is responsible for Sustainability and its application into products. She has designed eco furniture and interiors and using biodegradable materials. She has a Masters in Sustainability and Design from Cranfield University and a BA in EcoDesign from Goldsmiths College London. At CDN, Joanna has created sustainability improvements through product strategies and sustainable business models.

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Andrew Burns is a Research Officer at Cranfield University. He lectures in Empathic Design and Consumer Behaviour and has worked on collaborative customer-focused industrial research projects with Nissan Technology Centre Europe, Jaguar and Land Rover. His research interests lie in the positive emotional reactions people have to products and the facilitation of design for this goal. Andy has worked in Market Research, has a doctorate in Consumption Emotion and holds a BSc in Psychology from Birmingham University.

Helma Luiten, M.Sc.



Helma Luiten joins TNO Strategy, Technology and Policy. At the department of Sustainable Innovation she has developed, among other things, scenarios for Households in 2020 and their waste generation, a foresight study on new technologies, and co-developed new sustainable services for an energy company in Holland. She works on social sustainability assessment and on the concept of Inherently Sustainable Business Models where she focuses on customer needs and attractive value propositions.

Emma Van Sandick, TNO



Emma van Sandick joined TNO-STB in 2002. She is currently involved in a number of sustainable system innovation projects. She answers questions like how to implement sustainable systems innovations in a multifactor approach? The management of these practical experiments is also part of her area of expertise. Emma studied industrial design at Delft University of Technology (graduating with honours), after which she held various marketing management and project management posts at KPN Telecom.

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Peter Joore, TNO



Peter Joore works at the Dutch research institute TNO, coordinating multidisciplinary innovation projects in the field of sustainable product and system innovation. He is currently working in the areas of short distance mobility and sustainable food solutions. In the SusProNet thematic network, Peter is responsible for the need area 'Food'. One day a week he works at the Mobility Unit of the faculty of Industrial Design at the Technical University Eindhoven.

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Highly Customised Solutions (HiCS) Solution-oriented design, production and delivery
systems, N° GRD1-2000-25516

Consortium partners:

Politecnico di Milano, Cranfield University, TNO, INETI, CDN, Philips Design, DUNI,
BioLogica, ACU, DALT

Contributors to the implementation phase:

DS Medica, Eurest, PrivatAssistenza, Rubi, Trittico, Whirlpool

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Consortium partners

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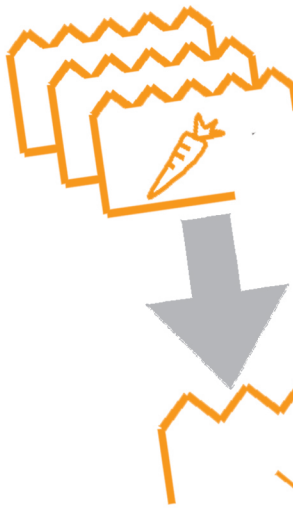
Eurest

PrivatAssistenza

Rubi

Trittico

Whirlpool



Solution Oriented Partnership is about the conception and development of solutions. More precisely: it is about industrialised, contextualised, sustainable solutions that are produced and delivered by networks of partners: the solution-oriented partnerships. It is also about a new idea of industrialisation: an *advanced industrialisation* with the capacity to bring a multiplicity of players together to collaborate in an effective way, with a view to sustainable objectives.

The book is organised in two parts: *Themes*, that discusses the nature of partner-based solutions, and *Tools*, that introduces methodological tools for their conception and development. Partner-based solutions arises from the activity of a group of research centres and European enterprises, funded under the European Community 5th Framework Programme. This research, known as *HiCS*, *Highly Customised Solutions*, was an *action research*, the specific subject of which has been “*food for people with reduced mobility*”. The results of the practical stream of this research are concrete proposals that are presented in a companion book, *Food delivery solutions*.

