



Balance 4P:

Balancing decisions for urban brownfield regeneration
– people, planet, profit and processes

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Balance 4P: Balancing decisions for urban brownfield regeneration – people, planet, profit and processes

- **Project duration:**
Oct 1, 2013 – Dec 31, 2014 (NL + B) / June 30, 2015 (SE)
- **Partners:**
Deltares (NL), TU Delft (NL), VITO (B), Chalmers (SE, co-ord.)
- **Subcontractors Chalmers:**
Envenco Environmental Economic Consultancy, City Planning Office municipality of Goeteborg, R3 Environmental
- **Funders:**
Formas (SE), SKB (NL), OVAM (B), The municipality of the Hague, in-kind contribution from Deltares & TU Delft

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Funding from others: € 50 000

Total funding: € 395 043

Dissemination: €33 873



Background - need

- to prevent urban sprawl as a result of urbanisation, there is a need for sustainable redevelopment of brownfields and renewal of existing urban areas
- the responsibilities, tools and knowledge of subsurface engineering and urban planning and design are not fully integrated, they work together but sectorial
- the problem of underused land is owned by a range of different public and private stakeholders whom are impacted in both the short and the long term
- to arrive at sustainable solutions, integrated tools and processes, involving stakeholders are needed



Background

- Exploration of the link between soil and spatial planning (e.g. Van der Krogt et al., 2004; Werksma et al., 2007, Van der Meulen et al., 2010, Maring et al., 2011)
- Sustainability assessment of remediation, redevelopment and land re-use (e.g. SuRF, NICOLE, US EPA: Green remediation)
 - Technology "Sustainability appraisal" DSS (e.g. SRT, Site-Wise, REC, ABC, SCORE)
 - Land-use "Scenario appraisal" DSS (MMT, DESYRE)



Background

- Soil ecosystem services (ESS) as a link between the socio-economic system and the physical system
(e.g. Van der Meulen et al., 2012; Fisher et al., 2009)
- Social aspects of sustainability (urban development, remediation)
(e.g. Weingaertner & Moberg, 2010; Dempsey et al., 2011; Littig & Griessler, 2005)
- Sustainability as a conscious act of finding a balance between the socio-economic needs and the conditions of the natural system – the process, enabling implementation
(Van Dorst and Duijvestein, 2004; Hooimeijer, 2011)

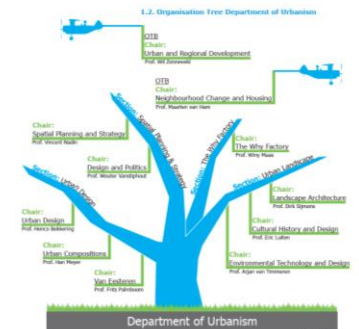


References & experiences

- **Deltares:** *Linda Maring & Suzanne van der Meulen*
 - The HOMBRE project, HOlistic Managment of Brownfield Regeneration, FP7 EU
 - Implementation of Ecosystem Services in redevelopment areas

- **TU Delft, Dept of Urbanism:** *Fransje Hooimeijer*
 - Design with the subsoil/
sustainable use of the subsoil
(with Deltares)

Deltares



References & experiences

- **VITO:** *Steven Broekx, Alistair Beames, Kaat Touchant, Jan Bronders*



- ADVOCAT - **Adv**ancing Sustainable In Situ Remediation for **Contaminated** Land and Groundwater (Socio-economic implications of *in situ* remediation) – EU Marie Curie
- Natuurwardeverkenner – pragmatic methods to value ecosystem services

- **Chalmers, Civil and Environmental Engineering:** *Jenny Norrman, Lars Rosén, Yevheniya Volchko*



- SNOWMAN MCA – Soil functions
- Sustainable and cost-effective remediations in the built environment
- SCORE - Sustainable Choice Of REmediation



References & experiences

- **Chalmers Architecture:** *Jaan-Henrik Kain*
 - URBES - Urban Biodiversity and Ecosystem Services
 - URBAN-NEXUS, FP7, enabling knowledge transfer and dialogue to deal with integrated sustainable urban development
- **Enveco Environmental Economics Conculancy:** *Tore Söderqvist*
 - Ecosystem services as a link between environmental effects and impact on human wellbeing
 - Economic valuation of ecosystem services
 - Economic and social impact assessments as a part of sustainability appraisal



References & experiences

- **City planning office, Göteborg:** *Anders Svensson*
 - Project coordinator in the project RiverCity Gothenburg
 - Tool for planners to evaluate social impact in physical planning

- **R3 Environmental:** *Paul Bardos*
 - HOMBRE project, FP7
 - SuRF UK, CL:AIRE
 - Rejuvenate, SNOWMAN
 - ...



Balance 4P outline

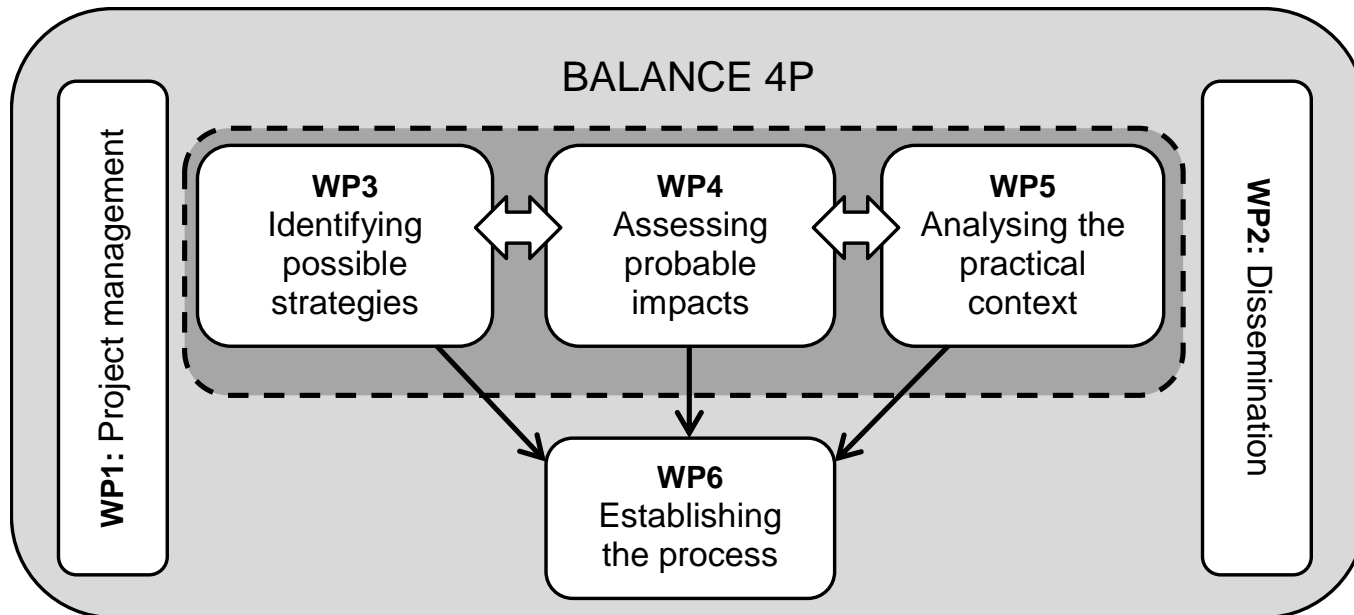
The overall aim of the proposed project is to deliver a holistic approach that supports sustainable urban renewal through the redevelopment of contaminated land and underused sites (brownfields). In order to reach the overall aim, the specific project objectives focus on different parts of the holistic approach:

- application and assessment of methods for design of urban renewal/land redevelopment strategies for brownfields that embrace the case-specific opportunities and challenges;
- development of a method for sustainability assessment of alternative land redevelopment strategies to evaluate and compare the ecological, economic and social impacts of land use change and remedial technologies;
- development of a practice for redevelopment of contaminated land in rules and regulations to enable implementations.



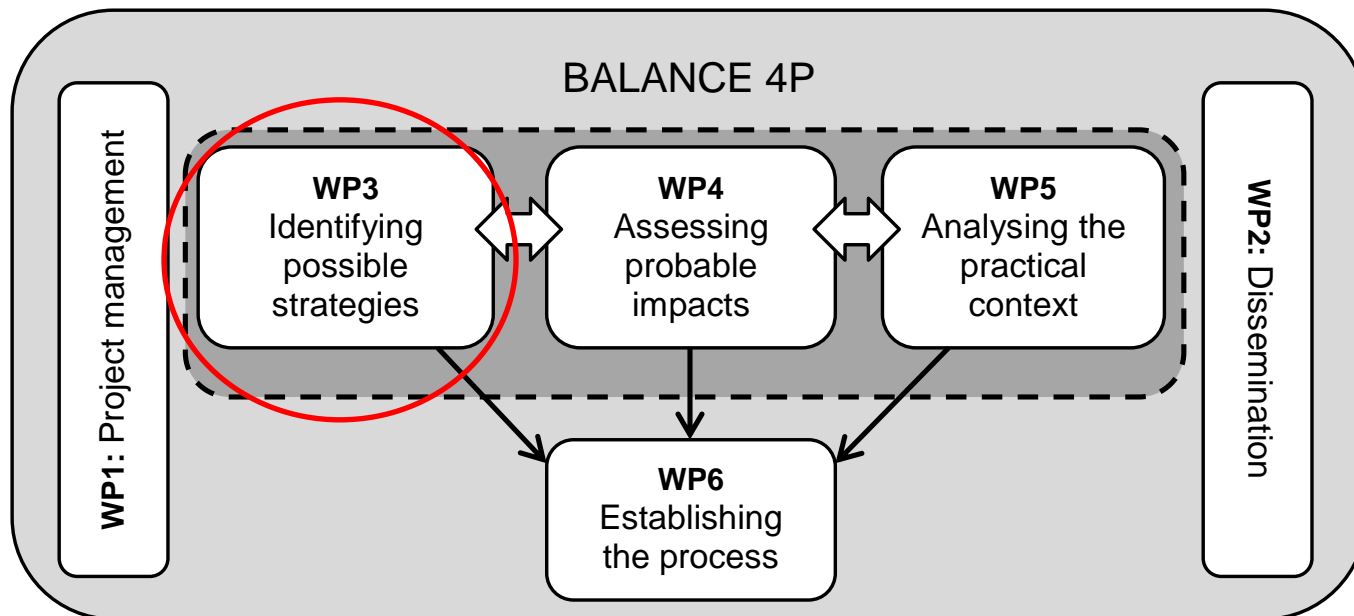
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The different parts will be integrated into a decision process framework to support urban renewal through the redevelopment of contaminated land and underused sites. The framework will have a strong focus on integrating urban planning and soil issues, such as remediation decisions and will facilitate proper accounting for the soil functions currently under-considered in land management.



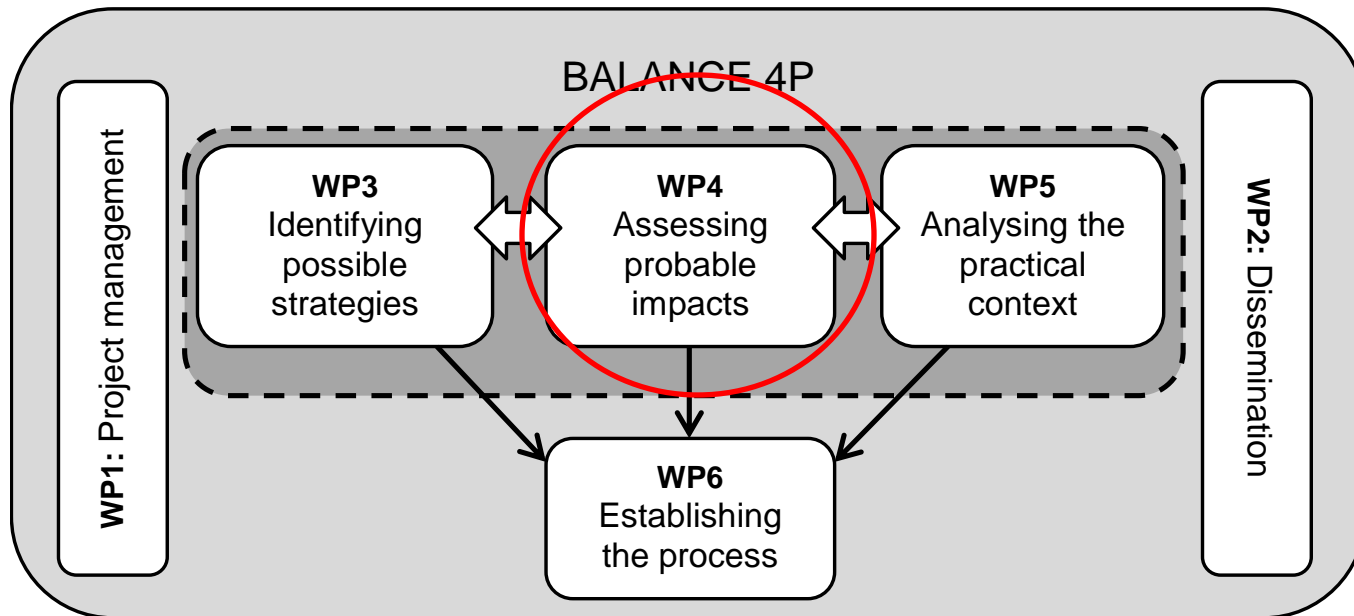
WP3: Application and assessment of methods for design of land redevelopment strategies

- Apply and assess existing methods for design of land redevelopment strategies for brownfields.
- Create insight and awareness of the main barriers and expected opportunities for redevelopment in three urban cases with tools that can be used by the stakeholders/lead stakeholder.
- Design of potential redevelopment plans for the case studies, focussing on both the natural science aspect and for socio-economic aspects.



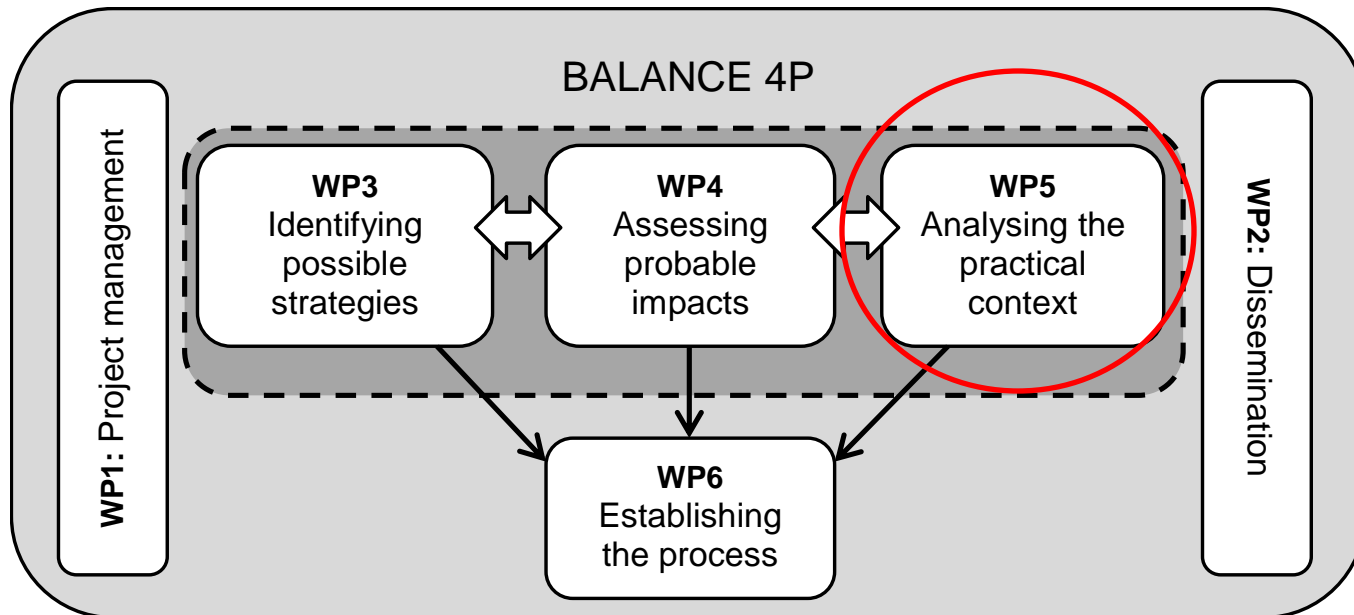
WP4: Sustainability assessment framework for alternative remediation and redevelopment scenarios

- The objective of WP4 is to develop a sustainability assessment method for evaluating alternative brownfield regeneration strategies, comparing the environmental, economic and social impacts of land use change in a broader context.



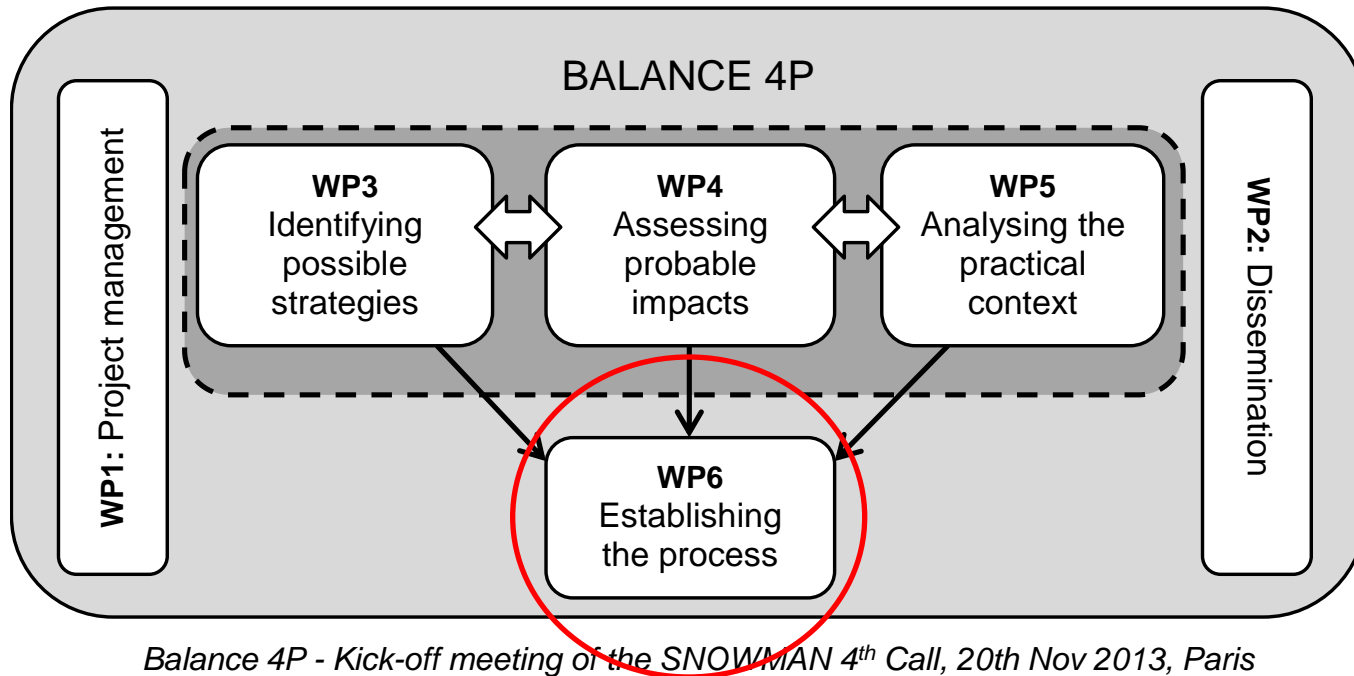
WP5: Implementation of 4P in planning process/project

- The aim is to underpin the holistic approach in rules and regulations to enable implementations, how do these methodologies land in practical situations, what are the boundary conditions?



WP6: Integrated decision process framework

- The objective of WP6 is to develop a decision process framework of a holistic approach to support urban renewal through the redevelopment of contaminated land and underused sites.



Main deliverables

- A method for designing alternative land redevelopment strategies and visions for the cases on their specific questions and redevelopment. (WP3)
- A method for sustainability assessment of land redevelopment strategies by evaluation of ecological (including soil ESS), social and economic impacts as an effect of land use changes and remedial strategy. (WP4)
- An analysis of the possible changes or challenges for integrating the subsurface engineering and urban planning sectors by formal institutions (regulations), informal institutions (how things are usually done) and technological entrepreneurship (process of cooperation between the professionals). (WP5)
- A decision process framework in the form of a flow chart showing which steps to take, suggestions on existing tools and methods as well as important communication and participation tasks in the different phases of an urban renewal project, including guidelines on uncertainty management. (WP6)

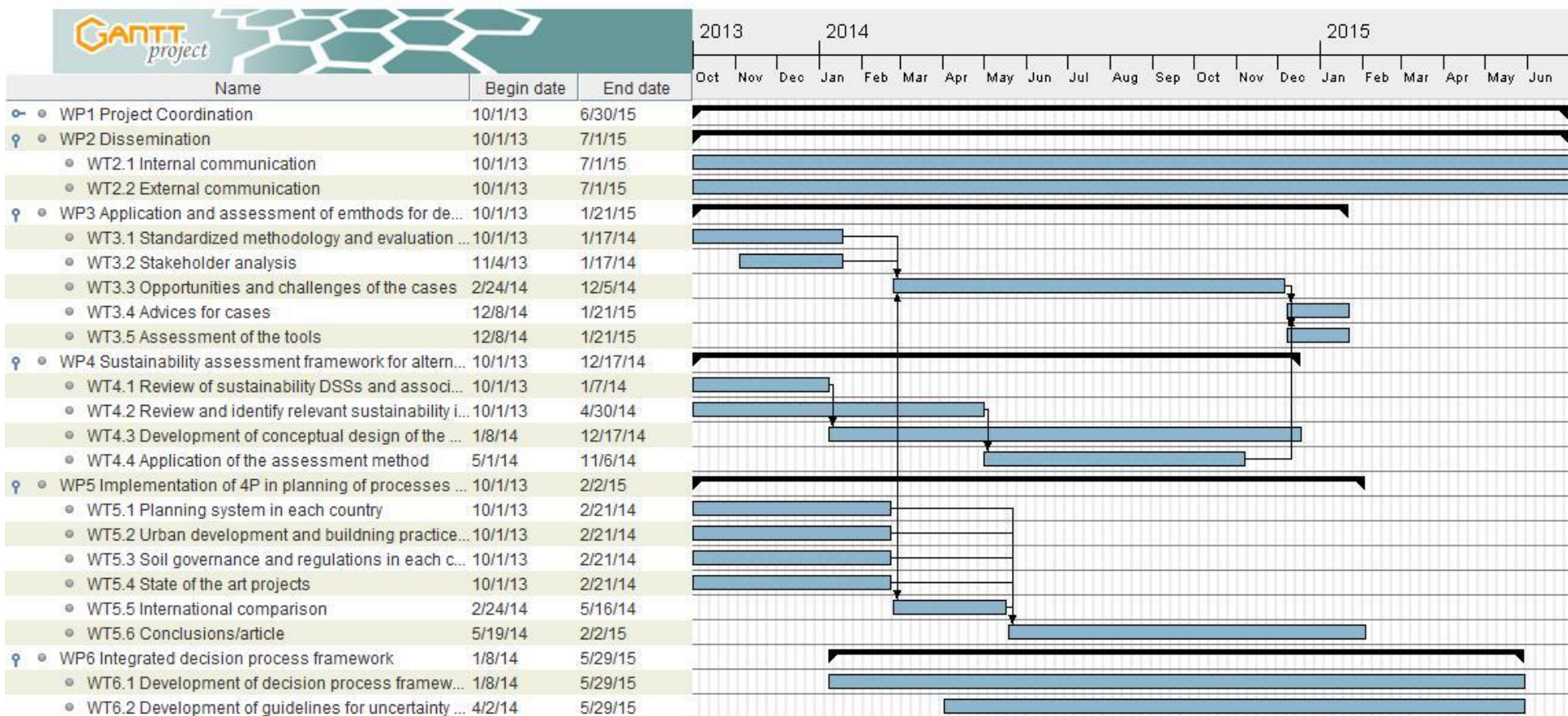


Work plan/method

- Reviews (DSSs, sustainability criteria, planning systems)
- Method development (designing alternative land redevelopment scenarios, sustainability assessment)
- Case studies (Rotterdam/Scheveningen harbour, Vilvoorde Machelen, RiverCity Göteborg)
- Workshops with stakeholders (for testing of methods in case studies, collection of input to assessments, and feedback on method development)
- Analysis and evaluation



Timetable



List of deliverables

No. of D	Title
1.1	Consortium agreement
1.2	Mid-term report progress report (with contributions of all WPs)
1.3	Draft final report (with contributions of all WPs)
1.4	Final report Part I (with contributions of WPs 3 – 5)
1.5	Final report Part II (with contributions from WP6)
2.1	Internet based dissemination and communication, including project specific webpage and information (project factsheet) and Dropbox platform.
2.2	Article for 1) field of spatial planning and 2) environmental sciences (to be published in national magazines in national language)
2.3	Participation in national and international workshops and conferences.
2.4	Executive summaries of results for web publication.
3.1	Methodology for stakeholder analysis and analysis case specific workshops
3.2	Advice for the cases (in national language and English)
4.1	Scientific article reviewing existing DSS systems
4.2	Review of mapping ESS and system boundaries
4.3	Conceptual design of sustainability assessment method
4.4	Recommendations for the application of the sustainability assessment method
5.1	Scientific article on implementation 4P in planning process/project
6.1	Scientific article on the integrated decision process framework for sustainable urban planning and regeneration of brownfield sites.
6.2	Separate guidance report on the decision process framework.

Dissemination plan

- Target group 1: The project partners and the “SNOWMAN community”: This group is defined as the direct stakeholders, end users, professionals and students involved in the project.
- Target group 2: The professional community : This group is defined as practitioners close to, but not joining the project, primarily related to the environmental and spatial planning fields and includes, among others, commercial developers.
- Target group 3: The scientific community: The focus of reaching the scientific community is mainly on the European level.
- Target group 4: The wider community: This group is defined as the people not involved in the environmental and spatial planning field, but interested in the project (e.g. national or regional regulators) and especially the cases (e.g. local regulators, local community in vicinity of cases, etc).



Action	Target group	Objective	When	M/D	WP + partner
SNOWMAN meetings	Balance 4P Project partners SNOWMAN, Project Board and SNOWMAN projects	Discuss progress, exchange ideas and results, possible adjustments to planning	Start, midterm and end of the project	M1.2 M1.3 M1.4 M1.5 M1.6	WP1 Chalmers
Internal Skype, webinars, telephone meetings, use of Dropbox.	Balance 4P project partners	Communication between project partners. Information on progress, discuss issues between WPs	Planned on a regular basis by the coordinator	D2.1	WP2, Task 2.1 Chalmers
Skype, webinars and (telephone or face to face meetings) with cases	Balance 4P project partners and cases	Ensure the communication between project partners and cases	Planned on a regular basis by the national partner for each case	D3.2: M4.4 M5.3:	WP2, Task 2.2, all WPs related to cases Deltares, VITO, Chalmers
Public access to project description, progress and deliverables by a project website	Professional / wider community – European level	External communication and dissemination of the results, the project's scope and its deliverables easily accessible.	Continuously	D2.1:	WP2, task 2.2 Chalmers
Two-page project factsheet	Professional community – European level	Inform and interest the professional community about the project and the stakeholder workshops	Start of project (beginning 2014)	D2.1	WP2, task 2.2 Chalmers with input of all partners
Executable summaries of results in English for web publication	Professional community – European level	Inform the professional community about the project results, to ensure the use of best practices from the project.	End of project (2015)	D2.4	WP2, task 2.2 Chalmers with input of all partners
Three national case workshops	Project partners, SNOWMAN community – European level	1) To analyse cases, stakeholders and to come to different scenarios for the cases, exchange ideas (theory-practice) and to test different methods.	Within project, May 2014	D2.3: D3.1: M3.3:	WP3 Deltares with input of all partners
International stakeholder workshop on the cases	Project partners and SNOWMAN community – European level Attention paid to involvement of the golden quadrant: knowledge, regulators, business, community/society	Workshop to test interim outcomes of project and identify common grounds between cases (shared problems and knowledge gaps). We want stakeholders to become ambassadors of the project results	Within project (~aug 2014)	M2.1 D2.3	WP2 Chalmers and all partners

Action	Target group	Objective	When	M/D	WP + partner
Two final stakeholder workshops, (SE + NL/B)	Project partners, SNOWMAN community European level	Review of the suggested framework by stakeholders (from the cases and interested potential target groups.	Start 2015	M6.1 M6.2	WP6 Chalmers
Course TUD AquaTerra Urban design (in english)	SNOWMAN community – European level	Schooling of students by the specific elective course “AquaTerra Urban design”	Within project 2014	M5.4	WP 6 TUD
Scientific article: reviewing existing DSS systems (EN)	Scientific community – European/ international level	To disseminate the results to the scientific community (Europe/Internat.)	Within project (Dec 2014)	D4.1	WP4, VITO
Scientific article: implementation strategies (EN)	Scientific community – European/ international level	To disseminate the results to the scientific community (Europe/Internat.)	Within project (Dec 2014)	D5.1	WP5, TUD
Scientific article on the integrated decision process framework (EN)	Scientific community – European/ international level	To disseminate the results to the scientific community (Europe/Internat.)	Within project (May 2015)	D6.1	WP6, Chalmers
National and international conferences and seminars	Professional community - national level and European level, possibly international level	To disseminate the results of BALANCE 4P to the professional and scientific community	Bodembreed Nov 2014 The Swedish Network for Cleaner Soil Spring Meeting (March 2014/2015) AquaConsoil fall 2015 (after project)	D2.3	WP2, with input of all partners
Articles (national languages) in spatial planning based national magazines and environmental magazines	Professional community - national level	To disseminate the results of the project on a national basis in magazines relating to the different sectors	Within project May-Nov 2014	D2.2	WP2, Chalmers and all partners
(Local) newspapers, short articles, publications on websites, related to the cases, e.g. www.soilpedia.nl, the Mistra Urban Futures website.	Professional and wider community – national level	To reach a larger audience, people not involved in the environmental and spatial planning field, but interested in the project, better and more sustainable environments (e.g. national or regional regulators) and the cases (e.g. local regulators, local community in vicinity of cases, etc).	Within project (Dec. 2014). The actions here will be defined by the dynamics of the project	D2.1	WP 3-6 Chalmers, VITO, Deltares, TUD

Risks discussed during kick-off

Event	Measures/actions
Stakeholder engagement and commitment - Large consequence since the project is depending on stakeholders input	- Plan dates early!, - Communicate!, - Find good contact person for each case! Plan B <ul style="list-style-type: none"> • Small community to meeting • Interviews • “model” stakeholder opinion based on single person Plan C <ul style="list-style-type: none"> • Change case site
Organization/communication between partners – large consequence, the result of the project will not be “holistic”	Schedule Skype meetings to ensure continuous communication, both on regular basis and in connection to milestones and deliverables
End 2014 – Snowman board changes New expectations on Balance 4P?	Discussed with Project board chair, the project board chair will also see to the continuity for the project.
Staff change/absences	All research groups are working in teams which is good, discuss in each research group. TU Delft now have more researchers involved
Student involvement, Risk to depend to heavily on student output	Carefully plan students involvement Project should not rely on students output
Scientific paper deliverables – the publishing is not guaranteed	Discussed with Project board chair – the manuscripts are monitored after the Balance 4P project is finished
Disputes in the project group – being our own research subjects - being our own object of study is liability, we need to get outside of our comfort zone to really develop an integrative approach	Communicate! Discuss! Value other partners knowledge and contributions

Thank you

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