

EXCEPT

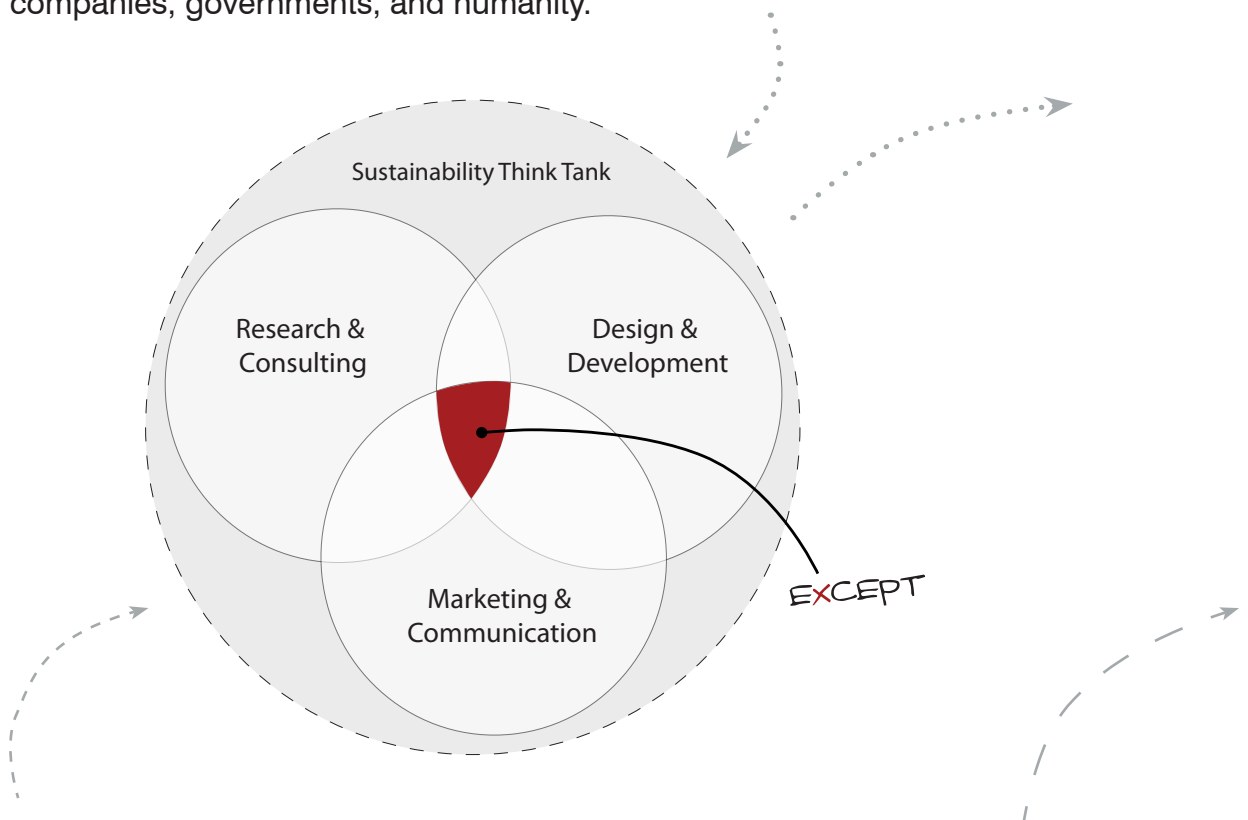
Integrated Sustainability Consulting & Design
Creating the Foundation for a Sustainable Future
Project Sample Booklet - 2011



What is Except?

Except is a partner for those wishing to lead the way towards a sustainable future. Since 1999 our multi-disciplinary team of consultants, researchers, and designers has offered the complete range of services required for sustainable development for businesses, governments and NGOs.

We develop strategies and concepts for the future of cities, industries, policy, design, food, CSR strategy, and more, charting a path through the complexities of sustainability. With our clients and partners we explore the full landscape of possible solutions for the future of companies, governments, and humanity.



Process

The foundation of all of our work is scientific research. From this solid base, we help businesses and society move towards sustainability, create inspiring designs and devise practical, affordable and innovative solutions.

Drawing on our network of associates and partner organizations, we can develop projects from concept to execution. With experts located on four continents we embrace local knowledge and global solutions.

Method

Symbiosis in Design (SiD) is a new methodology developed in-house by Except for solving complex, multifaceted problems.

SiD enables the integration of knowledge from a wide variety of disciplines, makes new relationships visible, and allows solution implementations that optimize any system, from logistics to food, and from building to policy. Read more about Symbiosis in Design on our website: www.except.nl.

Our Services

Consulting & Research

- Corporate Social Responsibility (CSR) and Business Strategy
- Integrated Sustainability Reviews
- Life Cycle Consulting and LCA
- Indicator Design
- Material Flow Analyses and Optimizations
- Environmental Engineering
- Ecological Research
- Policy Development & Review

Design & Development

- Architecture
- Urban Design & Planning
- Industrial and Product Design
- Landscape Architecture
- Agricultural & Ecosystem Design

Marketing & Communication

- Communication Strategy
- Facilitation and Group Processes
- Process & Methodology Design and Review
- Sustainability Workshops
- Photography & Visualization
- Animation & Video Production
- Graphic Design & Pre-press



Collaboration and Open Source

Except develops autonomous projects as varied as software tools for sustainability assessment and carbon footprinting, books, conferences and other public events. These projects are released under the Creative Commons licensing system, making them available to everyone as open source knowledge.

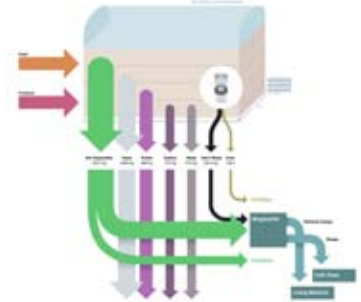
Except works closely with clients, partners, and stakeholders in a collaborative setting. SiD steers this collaborative process, and balances research and creativity.

This booklet contains a sampling of our projects from Except's last 10 years.



Sustainable Schiebroek-Zuid

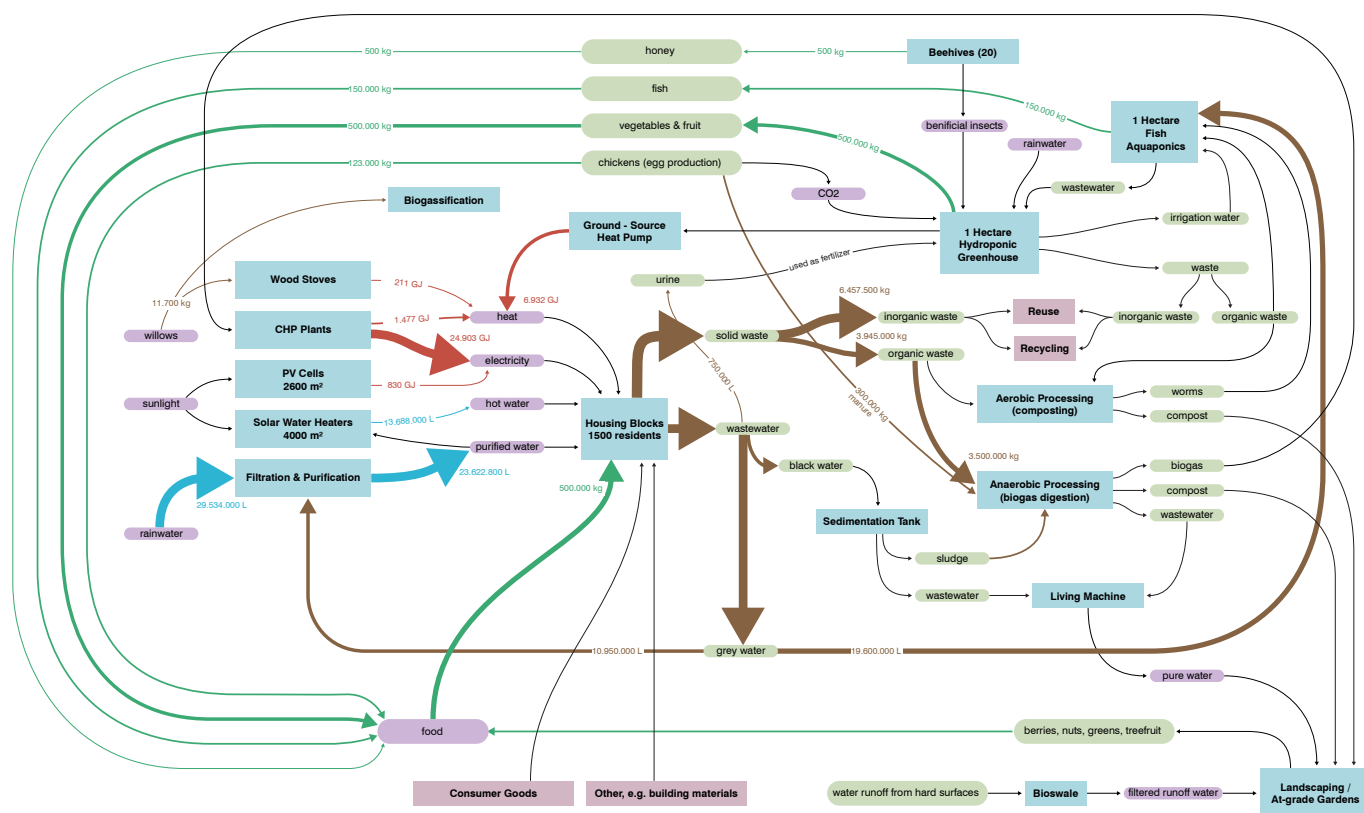
Re-development of post-war social housing into a resilient, autonomous community



Sustainable Schiebroek-Zuid is a sustainability vision for the post-war social housing area Schiebroek-Zuid in Rotterdam. The project, commissioned by housing corporation Vestia and agricultural research network InnovatieNetwerk provides a roadmap for converting the neighborhood into a self-sufficient, resilient and sustainable area.

As a first of its kind, the Sustainable Schiebroek-Zuid project provides a template approach to converting a commonly problematic housing typology into a beautiful, equitable and resilient sustainable community, and makes all research publicly available. The plan combines socio-economic programs and proven technologies to create a closed-loop urban metabolism (see diagram on the right). The plan focuses on augmenting existing social and physical structures rather than a tabula-rasa approach.

All energy and water are locally provided and most wastes are handled on site. Local agriculture is the “biological engine” that drives many aspects of the plan, such as energy generation, nutrition, education, recreation, social programs, and local economic activities. The ingredients include many social programs for neighborhood target groups such as the elderly, children, teenagers, immigrants, and entrepreneurs. Using a combination of biogas-fueled power plants, solar installations, and heat capture from rooftop greenhouses, the area can supply all of its required electricity and heat.



The **above** diagram shows the closed loop metabolism in the neighborhood. **Below** an artist impression of the new neighborhood center, featuring greenhouses, water sports, elderly programs, and on the foreground elements of the urban farming areas. **Top-left** shows the central marketplace, school, rooftop greenhouses and rainwater cascade system.



San Francisco Transbay Transit Center

Transportation Terminal + City Park, San Francisco, USA - 2007 - Under Construction





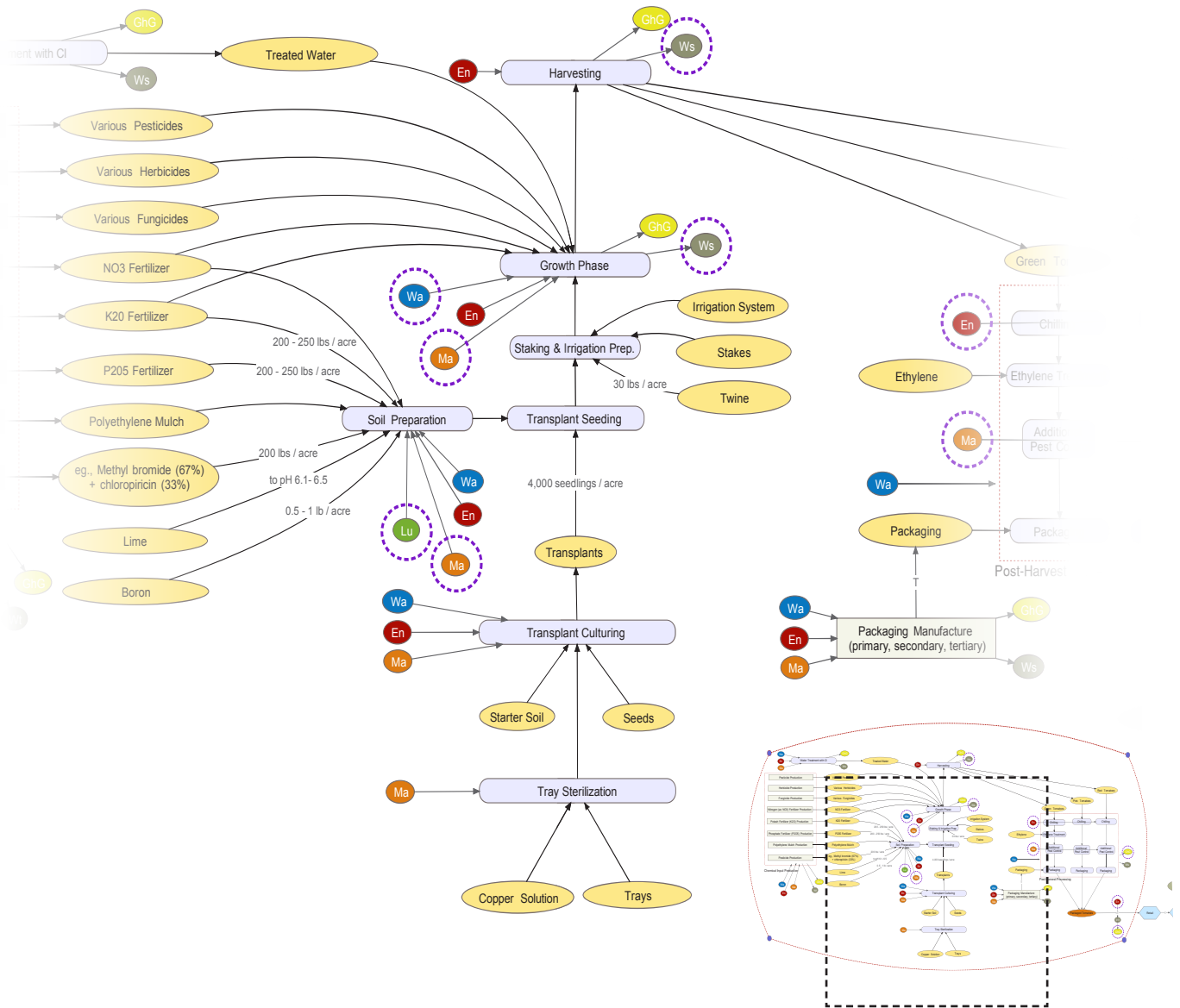
Except developed the concept of an ecological-services park as a way to refurbish the old transportation center in San Francisco. Currently the largest ecological roof park in the world, Except's Transbay Terminal concept helped Pelli Clarke Pelli Architects win the decade's largest architectural contest - the Transbay Terminal competition.

The park is sited in a dense inner city area, on top of one of the largest transportation terminals in the US. Natural ventilation systems remove fine particulates from the underground air, while the landscape above helps sequester other forms of air pollution, including CO₂. All rainwater is captured and filtered for use on site. Funiculars carry people from grade up to the park.

Construction of the terminal is scheduled to be complete in 2015.

Life Cycle Consulting

Applying life cycle thinking to company strategy and product design



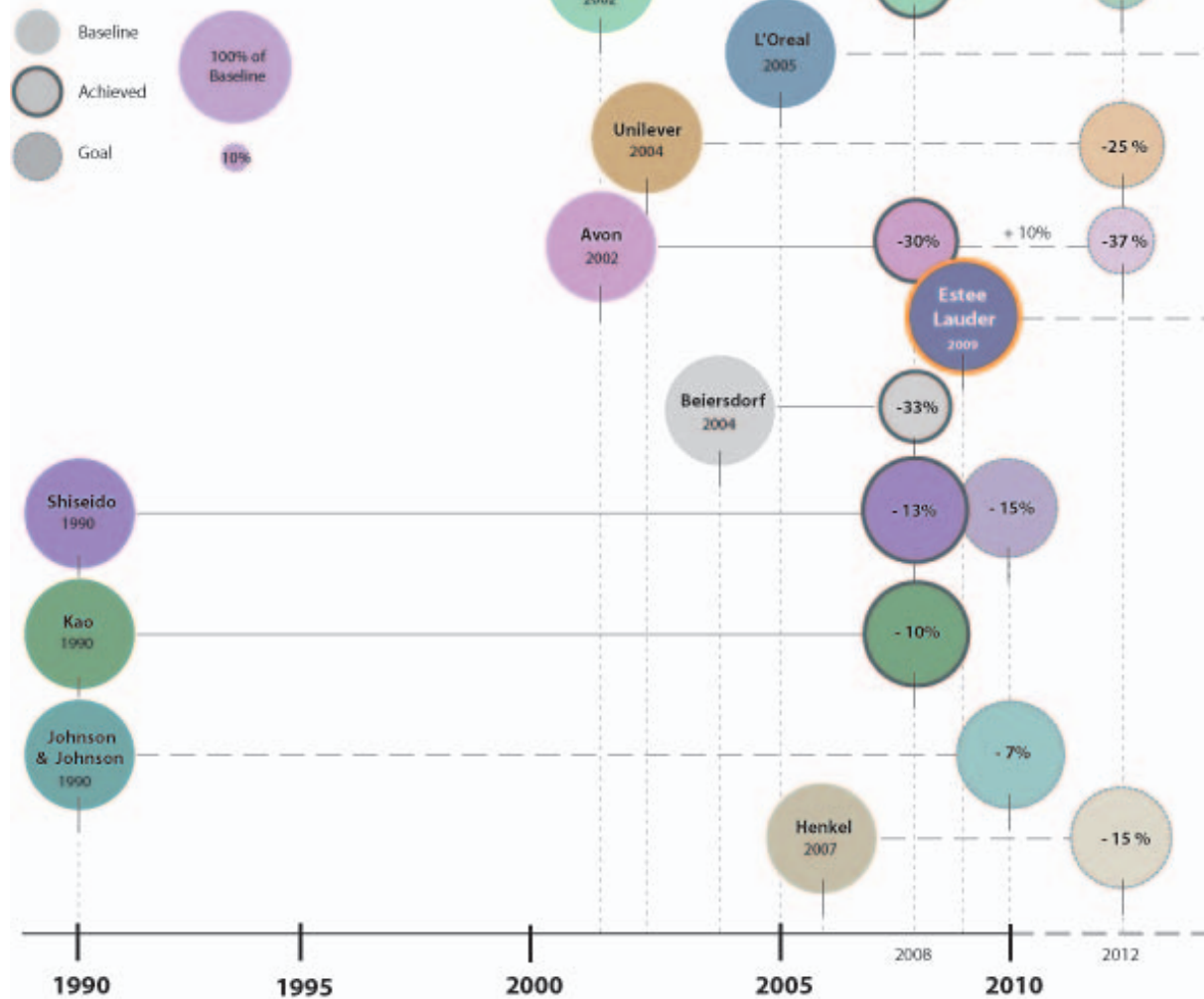
This sketch of the life cycle of a tomato was developed as part of the design for a sustainable food tool. Once complete, this tool will allow our client to factor in environmental impact criteria when making company food purchases.

Life cycle thinking can be used in almost every aspect of decision making for sustainability. From picking construction materials for a new building to selecting supply chain partners, this mental approach can provide key insights on the impact of our choices. In addition to consulting on life cycle thinking, we are also experts in Life Cycle Assessment (LCA), the formal impact analysis tool for product chains.

Corporate Social Responsibility

Developing management and communication strategies for companies

CO₂ Reductions and Commitments by Company



Except has consulted various multinationals and governments on CSR strategy and policy. Examples include the cosmetics company Estée Lauder, Cognis (BASF) and packaging producer Smurfit-Kappa, as well as several small to medium businesses.

Corporate Social Responsibility (CSR) is a new field of management and strategy for companies wishing to become part of the larger social transition to sustainability. The graphic above was developed for a corporate client who needed insight on how to set sustainability goals for the next decade.

We help companies develop personal visions and strategies for moving towards sustainability. Every company is different, and our first priority is to really understand each company's culture and specific needs. Our work ranges from conducting background research to devising comprehensive communication strategies to writing annual CSR reports.

Greenhouse Planning & Design

Venlo, the Netherlands - 2010 - in development



Venlo is one of the gateways to the Netherlands. In this border town, the current scattered and inaccessible greenhouse sector is preparing itself for a creative rebirth. In the near future, this area may well be regarded as the national hub of inspiring and sustainable greenhouse agriculture.

The plan emerging from our preliminary research and consulting work in Venlo would result in a greenhouse industry that adds to biodiversity, is a beautiful and enjoyable asset to the landscape, cares for water, can generate its own energy, and close nutrient cycles. No doubt, it would also be a spectacular place to go for a picnic.

Sustainable Building Conversion

Various projects 1999 - 2010



Converting our existing building stock into the sustainable built environment of the future is one of the most exciting challenges of this era. Building upon old structures rather than following a cycle of demolition and newbuild has many advantages. It allows us to retain the value and culture of existing stock, maximize the material and economic utility of existing structures, preserve the Genus-Loci of each area, and make smarter phasing possible. Huge environmental gains are made by simultaneously converting existing structures into zero-impact designs.

Except has developed a variety of building conversion designs and strategies on structures including: single family houses, prisons, 60s office blocks, and old factories and warehouses. These can be made entirely energy-neutral or energy-positive, water-neutral, as well as redesigned into highly attractive urban architectural spaces.

Wesleyan Teaching Museum

Sustainable Educational Museum, Middeltown, CT, USA - 2007



This project for Wesleyan University resulted in a new typology, a unique environment, and several new approaches to sustainable design. The Wesleyan Museum design demonstrates that buildings constructed for extreme durability can, in fact, elegantly support the need for flexible programming. The structure integrates the latest science, an innovative use of materials, and world-class architecture.

The museum sets new standards for zero-energy buildings. It is designed as much for the present as for the future, with flexible layouts, precise controls for lighting and climate, and expressive gallery spaces. Ancient Egyptian building techniques are combined with the latest innovations to achieve both the flexibility that changing collections require, an open and pleasant space for visitors, and zero net energy requirements.



Centrum Ecological Chapel

Cultural Center, Toronto, Canada - 2008



On the steep slope of a ravine system in Toronto, Canada, Except planned and designed a non-religious place for contemplation, introspection, and shared spiritual expression. This ecological chapel, where humans and nature are invited to coexist, is exemplary of a non-technologically-focused way of building sustainably.

The chapel is designed to engage visitors on a variety of levels by weaving together light, water, music, and nature. The strong symbolism of the chapel's structure, depicted through the broken concentric pattern of the paths and wall structures, is continued in the material selection and the building's functional operations. Adding further to its ecological credentials, the chapel has been designed for natural ventilation, self-contained water treatment, and as an anti-erosion structure that preserves local topsoil.



Consult: BKCity TUDelft Faculty Building

Refurbishing the Technical University of Delft's architecture faculty building



Co-locating the places we work, live, play, and run errands leads to lively and exciting cities. This co-location reduces the need for transportation outside the area, which can strengthen local communities and cut environmental impacts. Except creates new typologies that combine smart programming and beneficial ecosystems with attractive architecture to help make these next generation habitats a reality.

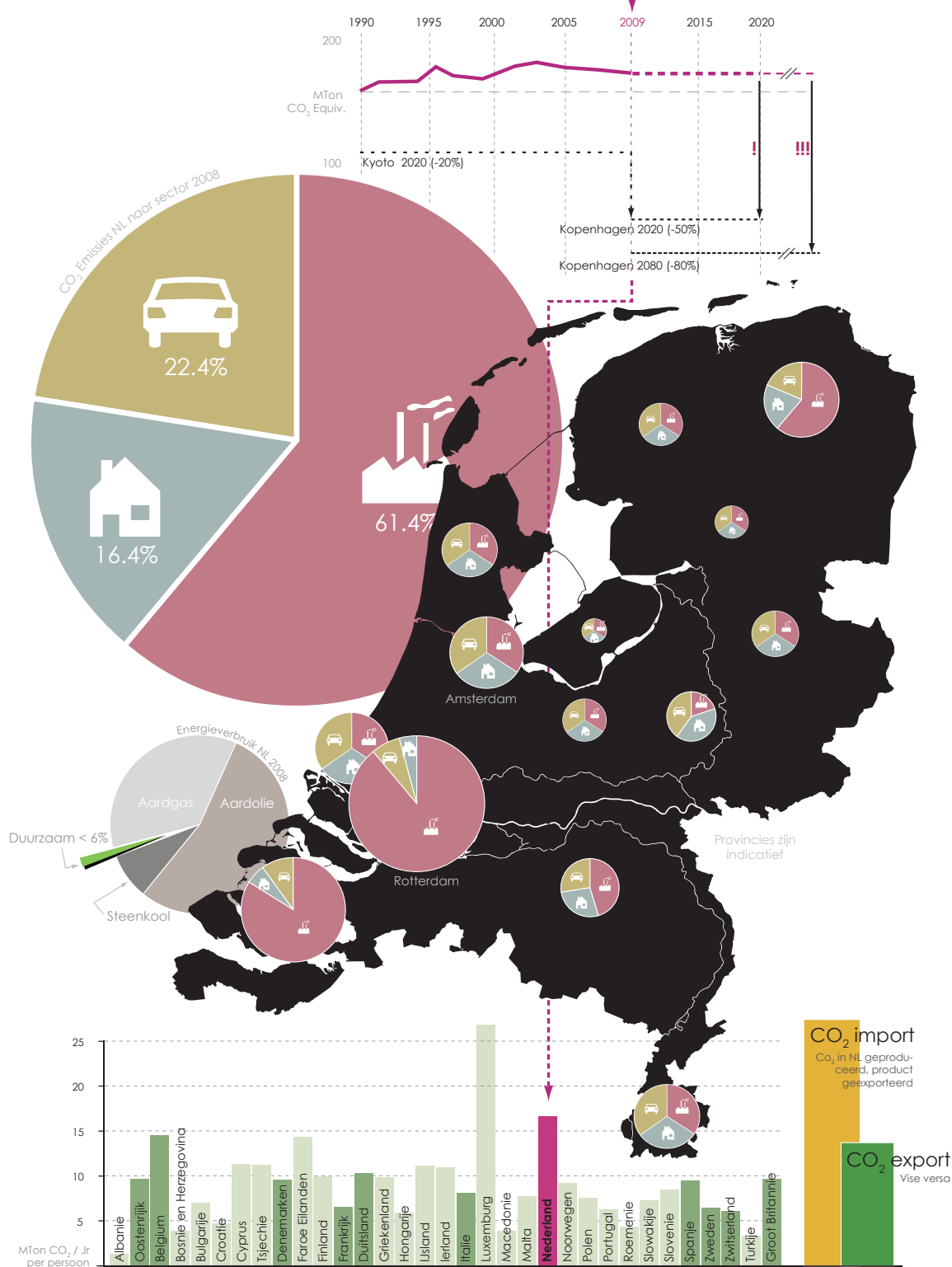
BKCity is a magnificent listed monument of more than 30.000m² functioning as the faculty of Architecture of the TU Delft. The BK City Slim Project provided an ideal opportunity to apply Except's integrated approach to sustainable refurbishment.

Except created a phased plan to make a historic educational building energy and carbon neutral within ten years, while converting the building into a didactic tool that puts sustainability at the heart of education for the generations of architects that will pass through its halls.

Research: Environmental Policy

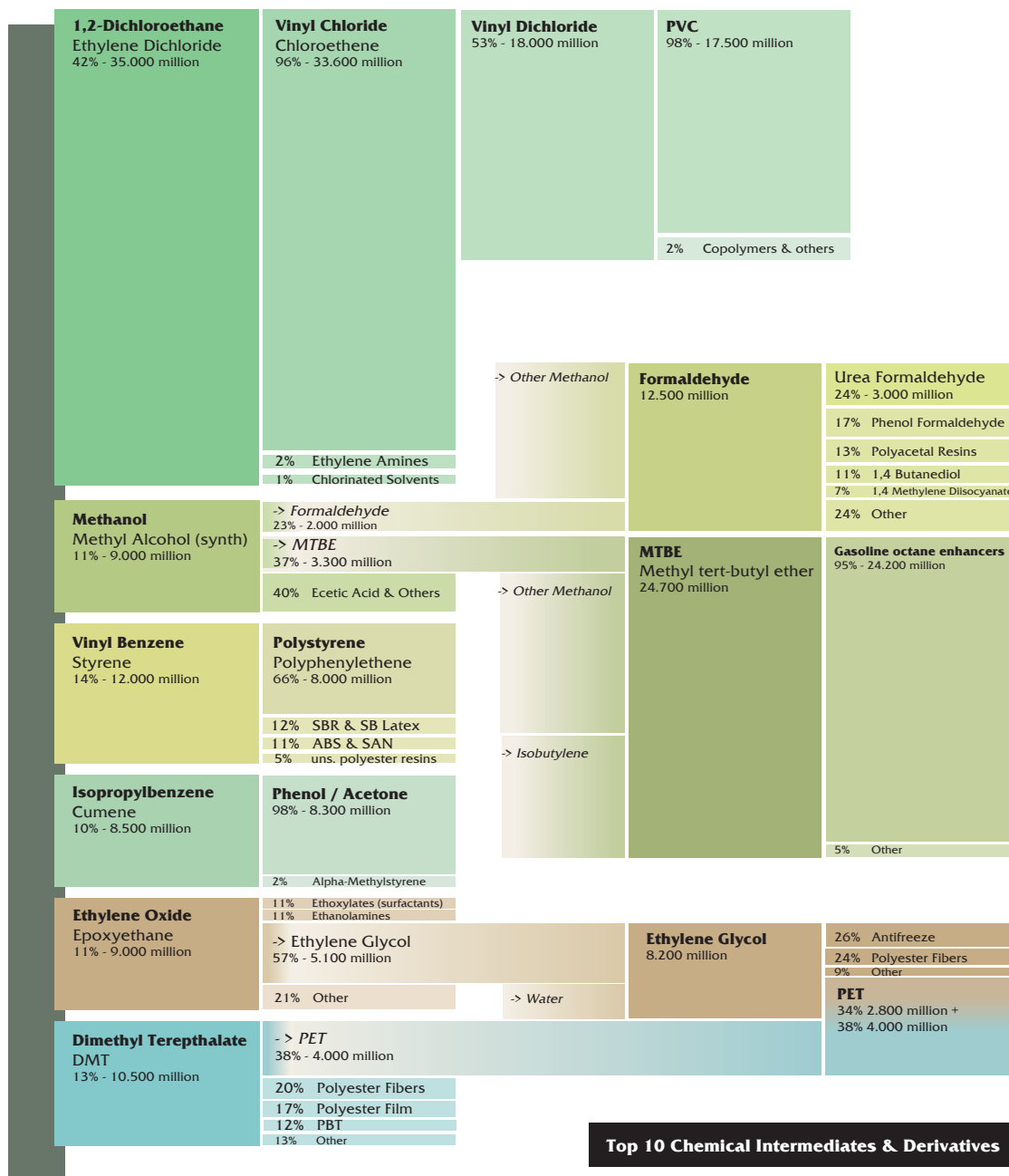
Scientific analysis in areas from international policy to new technologies

De Nederlandse CO₂ Situatie...



Research: Industry & Materials

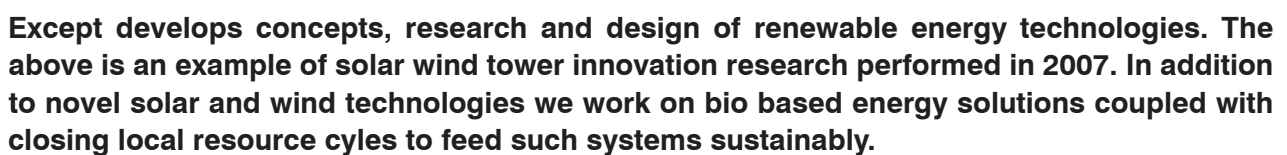
Scientific analysis in areas from international policy to new technologies



Except produces peer-review-quality research on a large range of topics. Some of this work is done directly for clients who are looking for basic data and some is done as part of our project work with specific designs in mind. We also perform autonomous research to keep our own knowledge base sharp and up-to-date and to develop cutting edge tools that anticipate future development.

The diagram above shows the top ten global flows of chemicals and their derivatives. It was developed during a feasibility study for a green chemistry program in the cleaning products sector.

Scientific analysis in areas from international policy to new technologies



19

Growth Planning 2.0

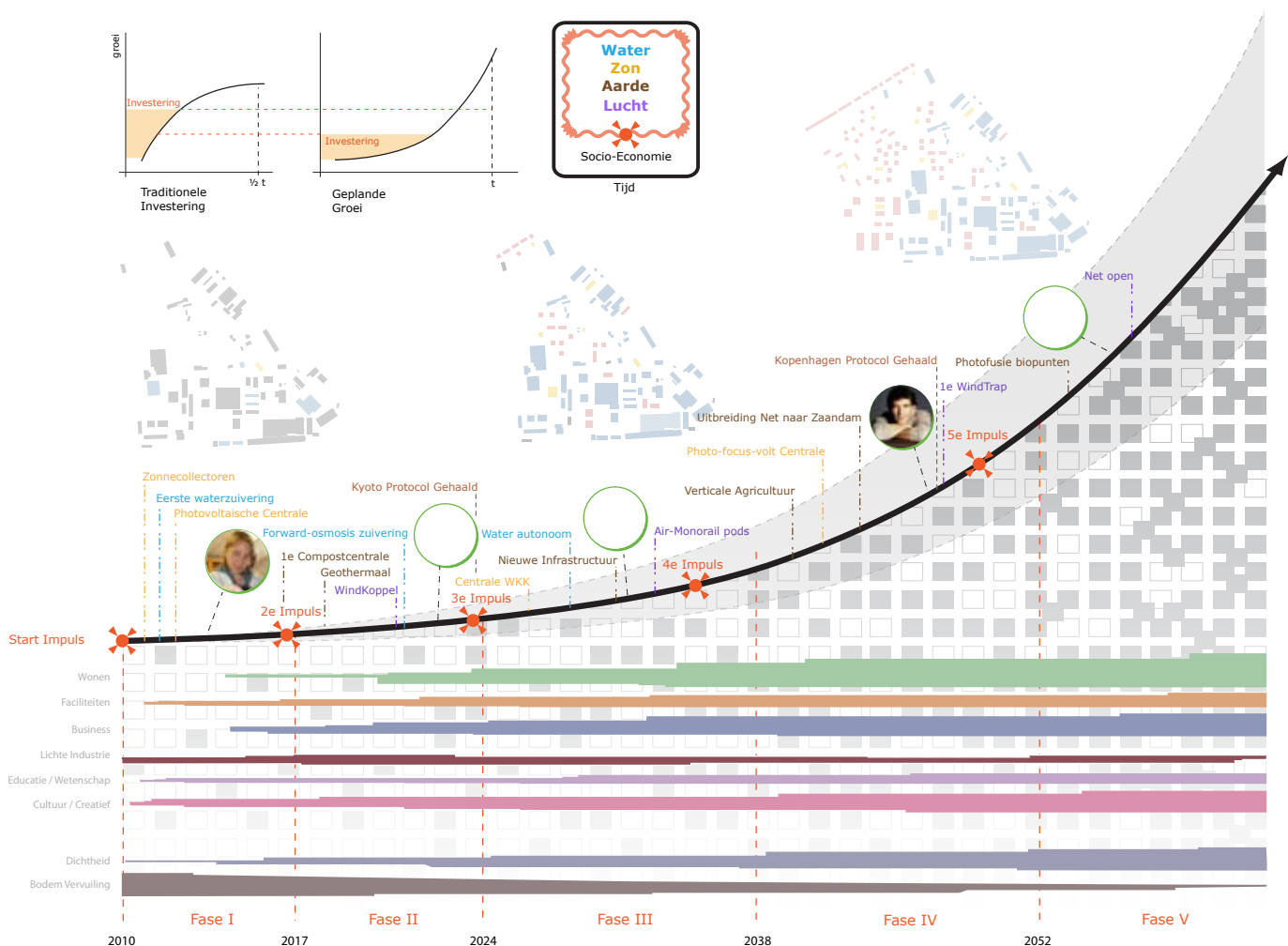
Next Generation Sustainable City Planning - 2008

Growth Planning 2.0 is Except's new strategy for area development and city planning based on organic growth, maximizing spatial potential and new investment models. It allows for sustainable development to take place in a realistic framework of growth, while maximizing quality, value, and user participation over a long-term planning period.

Traditional city planning has largely failed at accurately foreseeing the needs of future communities. Most city plans take their final shape 10 to 50 years from the moment they are launched, a sufficiently long time span for the world to have become an entirely different place.

Moreover, recent observations of area planning projects have revealed that no matter how creative or insightful the initial plan, standard planning generally results in communities lacking strong economic motors - insuf-

ficiently adaptable to changing conditions and often possessing limited urban quality. This project introduces an entirely new approach to planning. Rather than defining specific programmatic requirements, Growth Planning instead applies socio-economic impulses to the area within certain performance edge conditions. It revolutionizes the task of city design by requiring the urban fabric to organically respond to market stimuli, and allows for increased value, quality, and development over time.



Growth Planning vs. Investment Planning

The core of traditional investment planning is to assign various programs to portions of a map. Housing, offices, commercial zones, services, and open space are combined by designers into a mix that is to result in the “ideal” neighborhood or city for a certain location. A great deal of knowledge is available on how to plan properly, but most of this knowledge is abstract and has little to do with observed growth and development patterns.

Using the growth planning approach, we avoid pre-determining an area’s program, and instead allow it to evolve on its own in response to local needs. To achieve this, we apply planned socio-economic stimuli to the region in order to encourage investment and growth in the area. These stimuli can take almost any form other than the construction of physical structures. For example: the creation of land co-ops, festivals or gatherings, educational programs, etc. Community participation is encouraged in this phase.

These stimuli are directed and managed over time to let the area grow and develop. While the stimuli are a planned component, the exact physical manifestation of the area is not. Personal initiative as well as corporate investment are both encouraged.

Performance targets rather than regulations

A secondary essential component of this kind of planning is the establishment of strict performance goals and boundary constraints. For example, one such requirement adopted in the case of one of our projects is that no energy be imported - in any form, which includes electricity - across the border of the development. These edge conditions are intended to push the area aggressively in the direction of sustainability, by requiring cutting edge and creative solutions from those who choose to develop in the area, without predescribing specific technical solutions.

Sustainable Growth Development

This kind of performance-oriented approach to sustainability, with a focus on preserving monuments, safety, and other concerns, allows us to discard a great number of unnecessary regulations. Locally-tailored solutions can be developed using the knowledge of the local population and stakeholders. Another example of a boundary condition for sustainability is to place prevent waste from leaving the site. It does not matter what solutions are sought to these preconditions, or how the agents within the area resolve their needs for resources. As long as these conditions are met, the area will be an exemplary development. Because technology evolves much faster than rules and laws can keep up with, it is likely that a situation much closer to optimal sustainable development than seen in traditionally planned areas.

City Design 2.0

A large area in the north of the Netherlands presented a unique opportunity for this radically new approach to city planning. Various parties worked together to restructure an abandoned area with many monument-status buildings. Except partnered with social housing corporations, local government officials, and developers to develop the growth planning concept and apply it in this unusual location.



Shanghai Sustainable Masterplan

Integrated Renovation, Urban Agriculture & Renewal Plan - 2007



Shanghai currently faces a number of pressing problems, including pollution, high traffic, the need for housing, the loss of agricultural land, and runaway development. This urban masterplan integrates solutions to all of these key issues. It also reconnects the Lilongs, historical social housing districts, with a new urban metabolism. The focus on urban agriculture creates new opportunities for the local inhabitants, most of whom are poor agricultural migrants.

The masterplan uses vertical farming as a central component of an integrated solution that addresses infrastructure, water supply, energy generation, groundwater cleaning, community building, economic development, mixed use city development, and traffic infrastructure. The plan allows for the distribution of many “seeds” of sustainable growth within the area, which contain all of the aforementioned components, and which give the local inhabitants all they need to grow and recreate the city from within.



Creating the Foundation for a Sustainable Future

EXCEPT

Integrated Sustainability

e: info@except.nl
w: www.except.nl
t: +31 (0) 10 7370215

Stadhuisplein 15
3012 AR Rotterdam
the Netherlands

