



City of Amsterdam:

Data driven transformation towards
a low carbon energy future

A large, solid red chevron graphic pointing to the right, positioned behind the text "High performance. Delivered."

High performance. Delivered.

Client profile

Amsterdam is the capital city, as well as the commercial and cultural center of the Netherlands. The city is located in the province of North Holland and has 830,000 inhabitants from 180 nationalities. Amsterdam has set itself very ambitious targets for reducing her CO₂ emissions; 40% reduction in 2025 compared to 1990. The city is well known for her innovative and collaborative approach to addressing this challenge.

Accenture has been supporting the city of Amsterdam with the initiation and management of its Amsterdam Smart City program for a few years already. In this period more than 20 innovative projects has been initiated and implemented.

Opportunity

Amsterdam sought to develop a robust, standardized, open methodology to gain insights into how to reduce the city's carbon footprint and identify opportunities for renewable energy in line with Europe's CO₂ emission reduction goals and the city's own targets. The city also wanted to use this methodology to help them engage with their various stakeholders such as grid operators, water and waste management organizations, housing corporations, and knowledge institutes. In line with the sharing economy, this method could be applied to other cities as well.

Most cities have difficulty measuring and visualizing how and where energy is being consumed, as there is no standardized and commonly agreed approach.

A decision support platform that visualizes energy consumption and renewable energy potential, and also has the ability to model the effects of energy reduction measures would be very valuable to cities and their stakeholders in identifying their opportunities and potentials. The city of Amsterdam invited Accenture Strategy to join the TRANSFORM program – a consortium of six European cities, led by Amsterdam – to develop an energy planning decision support environment (DSE). Cooperating with the Austrian Institute of Technology, who brought in their highly-specialized geographic information system, Accenture Strategy provided both strategic and program management support and its prescriptive simulation and optimization capability.

Solution

At the beginning of the TRANSFORM program, Accenture Strategy engaged various stakeholders in a series of two-day workshops held in each of the six participating cities, some of which were attended by more than 60 participants from a wide range of stakeholder groups. These workshops helped the cities identify most promising areas for energy transition and specific challenges and opportunities for carbon emissions reduction.

Based on these insights and decision support requirements of different stakeholders, Accenture Strategy developed the web-based, open data energy planning and simulation platform. TRANSFORM DSE was launched in the summer of 2015. In parallel and to support the roll-out of the platform, Accenture Strategy developed an interactive module around urban energy planning. This interactive simulation gives city stakeholders insights on the need for cooperation and the value of sharing data for speeding up their city's energy transition.

Results

One of the key benefits of the TRANSFORM program was an increased awareness of how important and beneficial a common energy transition platform and processes would be for each of the consortium cities and Europe as a whole. For many stakeholders it was the first time they engaged with each other in an outcome-driven, intensive and open way.

The TRANSFORM DSE is a highly innovative, comprehensive, open, and flexible tool which enables city stakeholders and decision makers to visualize and analyze open energy data, create different transformation plans, and under a variety of future scenarios evaluate their impact on key performance indicators like CO₂ emissions, energy consumption, renewables, and energy costs. It calculates the investments needed and energy and costs reduction delivered. Hence, the tool helps city stakeholders to make decisions within their city's specific context and contributes to the achievement of local and national sustainability targets. Due to its open data structure and flexibility, it can be disseminated and used within a wide range of cities with different characteristics.

Accenture Strategy is now teaming with the Amsterdam Institute for Advanced Metropolitan Solutions to use the TRANSFORM DSE to harness the latest academic research to further develop the platform. Since TRANSFORM DSE is an open platform, it is available to other cities and their stakeholders as well. The "expert community" around TRANSFORM DSE helps to ensure the continuous improvement of its usability and functionality, as well the sharing of knowledge between users and developers. The program's innovative data-driven, open approach is already resulting in a fundamental shift in the way leading cities tackle their energy and sustainability challenges.

About Accenture

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About Accenture Strategy

Accenture Strategy operates at the intersection of business and technology. We bring together our capabilities in business, technology, operations and function strategy to help our clients envision and execute industry-specific strategies that support enterprise wide transformation. Our focus on issues related to digital disruption, competitiveness, global operating models, talent and leadership help drive both efficiencies and growth. For more information, follow [@AccentureStrat](https://twitter.com/AccentureStrat) or visit www.accenture.com/strategy

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