



A PART OF IT

Annual Report 2017

STRABAG
SOCIETAS EUROPAEA

INNOVATION

STRABAG is a technology group for construction services. For a technology-focused company, it is essential to embrace innovation to remain competitive in the long term.

The trend towards **integrated end-to-end solutions** is increasingly taking hold in the construction sector as well. Clients want benefit, rather than things and individual functions. This results in complex changes. The function of buildings and transportation infrastructures is increasingly seen over the entire lifecycle – in terms of technology, profitability and environmental impact. Yet today **production costs** still **decide** over most contract awards. This price competition can be countered not only through increased efficiency but also by applying innovative solutions. Clients are increasingly looking at the operating and lifecycle costs; rarely, but more and more, an assessment of the environmental impact of the relevant construction-related processes is wanted. In the future, construction companies will be asked to build highly functioning buildings with maximum comfort, high health standards and low impact on the environment. The bid submission for and execution of the Axel Springer Campus in Berlin is a clear example of this development.

Policymakers are also recognising the role of the resource-intensive construction sector when it comes to tackling challenges such as **climate change** and **resource scarcity**. There is a considerable need for energy-efficient residential and non-residential buildings and, considering the increasing traffic volume, for modern transportation infrastructures. This finds expression in extensive national and European subsidy programmes and announces large investment volumes.

All of these demands fit in well with the basic understanding and the role of a **main contractor**. Whereas in the past contractors were usually invited to join the process at the construction stage – which is quite late in the game –, in the future they will participate earlier and more extensively during the design phase. But “Front-loaded Design”, which involves comprehensive planning early in the project’s lifecycle, also means that the people, information, means and materials necessary to carry out a project are made available promptly, fully and comprehensively. This is why we offer our clients the STRABAG teamconcept contract scheme to commit all participants to the project as soon as possible.

The aim is to recognise the scope and, ideally, the implications of the changes. Because entrepreneurial success in the future will depend on the ability to recognise trends in time and to be prepared for this new complexity. Our innovation activity must therefore be steered strategically.

Initially, an organisation’s desire to innovate stands in conflict with the aim to successfully do business using tried-and-tested technologies, methods and products for as long as possible. Because innovation stands for a process leading to novelties. That requires changing routines, overcoming resistance and adapting the organisation. For innovations to become successful, they must be introduced into the organisation’s structure as prudently as possible and under consideration of the varied interests of the different stakeholder groups – including shareholders, clients and employees. Allowing a balanced **freedom to try out** new ideas makes it possible to better estimate and manage risks; moreover, such freedom is often instrumental for new solutions, it motivates employees and it is seen as especially attractive among job applicants.

Production costs
usually still decide
over award

Strategically steering
innovation

Rules and responsibility areas

One **STRABAG SE Management Board member**, Peter Krammer, acts as a sponsor of innovation and digitalisation within the group. **Innovation managers** at the **divisions and central divisions** collect development proposals and approve their realisation in line with the strategic alignment of their business field. They are

supported by the **Innovation Management** team from Zentrale Technik on how to recognise relevant trends; on questions pertaining to the systematic development of new solutions, public funding or development partnerships; and on the internal and external rollout and reporting on the group-wide innovation activities.

Objectives and indicators

We want to develop new solutions (products, processes, systems and services), tap new business fields and be a forward-looking employer. The following indicators show us if we are on the right path to reach our objectives:

- Provision of research and development funding by the company: € ~11 million
Objective: maintain at least the previous year's level
- Number of subdivisions with at least one person responsible for innovation: 23 (out of 100 subdivisions total)
Objective: increase the ratio of innovation managers per subdivision to total number of subdivisions in the group next year

- STRABAG events on the topic of innovation (e.g. Innovation Day):
 - Number of participants: 339
 - Number of participating organisational units: 61
 Objective: maintain at least the previous year's level
- Publication of relevant development projects to inform of the group's innovation activities (Research, Development & Innovation brochure and via digital channels): 40
Objective: maintain at least the previous year's level

Projects and initiatives

On average, about **100 development projects annually** are carried out in the group which encompass the entire construction value chain: from the measurement of topographical data using drones to the analysis of traffic data by our subsidiary EFKON AG, from the development and adaptation of tools for model-based working methods for design and construction logistics to facility management, where we are working together with Microsoft on the use of the HoloLens data glasses.

Our annual **group brochure** Research, Development & Innovation features reports on the most important works and serves to network management, clients, investors and our employees.

Another networking tool is the STRABAG platform **connect**, which allows our employees to

exchange ideas and propose solutions quickly across organisational and geographic boundaries. An especially active community is the LEAN.Construction community (see below). The employees use the community to share improvements through the use of LEAN methods with other LEAN interested people.

Our second Innovation Day took place in Bratislava in 2017. The purpose of this internal fair-like event was to make the operating entities aware of recent innovations within the group. The Innovation Day was attended by more than 330 people from eight countries.

Since 2004, the group has been a proactive member of the European Network of Construction Companies for Research and Development (**ENCORD**) and the European Technology Construction Platform (**ECTP**).

You can download the brochure at www.strabag.com > Strategic Approach > Economic Responsibility.

STRABAG LEAN.Construction: Analyse. Understand. Improve. Build.



More than 200 employees support the construction teams during planning and on site to help execute the projects more easily and more efficiently. They do so by applying various LEAN.Construction methods. Here are some examples.

- **Pull planning** is used to establish the construction milestones as a team (including all internal and external project participants), starting from the date of completion and going all the way back to the very first task to be performed on the construction site. Potential scheduling conflicts are discussed in time and solved appropriately.
- The **STRAtakt paving planner** ensures even, continuous asphalt paving and avoids waiting times for the trucks.