



What do we know about cleaning in local authorities?

Nora Johanne Klungseth

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INSIGHT



Economical-ecological building life cycle model

By Helmut Floegl and Christina Ipser



The Aspern IQ technology centre is the latest construction as part of the BMVIT-funded research programme "House of the Future".

The following article on the "Economical ecological building life cycle model" by Dr. Helmut Floegl and Christina Ipser of Danube University Krems is one of the three winning articles of the Best Paper Awards at this year's FM fair.

The Life Cycle Cost Analysis (LCCA) is a generic term for consideration of all accumulated costs for a building from planning up until establishment and operation, including consideration of major repairs up to demolition and disposal. Life cycle costs are a cost flow analysis from the perspective of personal use from a business point of view. Because costs occur at different times in the life cycle, the calculation uses the present values of costs.

The international basis for standardisation of life cycle costs is ISO 15686-51), which lays down a general structure for cost groups of life cycle costs which is not really sufficient for life cycle costings. Normally, life cycle costs fall into four main cost groups, "Construction" (equivalent to the construction costs) "Operation" and "Maintenance"

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Innovation or Cost Reduction?

Andrew Smart MBIFM,
Head of Facilities Management,
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Back-pack vacuum cleaners, condition based maintenance, day cleaning and handheld technologies. Many of us who work within Facilities Management would recognise and

accept these as examples of innovation that have been introduced over the last few years, with varying degrees of success.

Anyone who is either managing, commissioning or delivering Facilities Management services within Europe will be under pressure to drive change. This change will often come under the banner of innovation but, in today's world of facilities, are there

really opportunities for innovation or is the task we are set really just about cost reduction?

The Facilities Management market, across Europe, is both complex and diverse with services being managed and delivered in a wide variety of formats, using a huge range of models including in-house, self-performance and management-led to name a few. One feature that is common across all of these scenarios, however, are the institutional and corporate drivers that shape the scope and standard of the services being managed and delivered. These drivers can be broadly grouped into three categories; firstly the standardisation and improvement of standards within the workplace, secondly increasing the efficiency in the occupation and use of the workspace and finally simple cost saving. Often the overall objective placed on Facilities Teams is not one but a combination of these three.

In meeting these objectives we, in Facilities Management, are traditionally called upon to look at the specification of services, the

sourcing of supply solutions, the equipment / technology and the staffing arrangements from management through to delivery teams. Using our collective skills we review, refine, design and optimise our service organisations, processes and tools in order to deliver the requirements of our employers, clients and customers. Having refined, optimised and achieved this we are then challenged to deliver innovation as well.

So, what is innovation and why are we being asked to deliver it? To answer this question we must first take a step back and think carefully about what Facilities Management really represents. There have been numerous attempts, over the last thirty years, to define Facilities Management but in the context of innovation we are really talking about a range of services that are, almost exclusively, managed and/or delivered by human beings. These humans use tools and processes to enable the services to be delivered and it is only in these two areas that innovation can truly be sought.

There have been a few genuine innovations in the tools that we use across Facilities Management but there can be no argument that the use of computers is the single biggest step forward that we have seen. It is my contention,

however, that there has been little or no real innovation in the use of computers since the first maintenance management systems were launched, there have however been numerous and very valuable developments and enhancements.

In considering processes, again I have found limited evidence or solid examples of genuine innovation, mainly just improvement, refinement and efficiency on processes that have existed for decades or more.

Why is it then that we are constantly challenged to seek and deliver innovation? I can only conclude that the answer is the reduction of cost and that this is the real motivation for our employers, clients and customers.

I believe, as a Facilities Management community, we should be strong in our response to the pursuit of innovation and not be afraid to challenge and respond with our own question; "are you really seeking innovation or just lower cost?".



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(equivalent to the cost of ownership) and "End-of-life" (equivalent to the removal and demolition costs) and these main groups are divided into 5-9 subgroups.

A sound basis for life cycle cost calculation was the new ÖNORM B 1801-2 Construction Project and Property Management – Part 2: Downstream costs²). With the help of ÖNORM B 1801-13) or DIN 2764) and ÖNORM B 1801-2, life cycle costs are divided into cost areas and cost elements or into two cost group levels. DIN 189605) (comparable with B 1801-2) sets out cost groups for the usage costs in construction; however, this structure is not suitable for representing costs as a cost flow calculation.

Basis for the method of calculation

An economically correct standardisation of the calculation method for life cycle costs is ÖNORM B1801-46). According to this standard, life cycle costs are the costs which are incurred by owner-occupiers throughout the life cycle of a building. These costs will, in principle, be presented in a cash flow. A representation of the present value (discounted cash flow) is also possible. A third method involves the calculation of future costs from the perspective of the profit and loss account. This view shows no construction costs, but only the annual depreciation over the selected depreciation period, and it takes capital costs i.e. interest and financing costs into account.

In all standards for life cycle costs, profits (e.g. electricity from photovoltaics or from the sale of recyclable materials during demolition) are considered negative costs. According to Pelzeter⁷), in a life cycle approach, the profits should also be considered relative to costs. This is referred to as "Analysis of the success of the life cycle"⁸). The proceeds from the use of buildings must of course be delineated from the core business of use here, as well as the corresponding costs with the core business that are not part of the life cycle costs.

Environmental accounting for buildings in the life cycle

Environmental accounting involves determination of environmental impacts related to material flow throughout the life cycle of products and services. The method was developed out of work performed by SETAC⁹), CML¹⁰) and Nordic Guidelines on Life Cycle Assessment¹¹) and finally standardised in ISO standards 14040 and 14044. According to ISO 14040, life cycle assessment is defined as "Arrangement and assessment of input and output flows, and the potential environmental impacts of a product system (goods or services) throughout its life cycle". The entire life cycle includes raw materials and production, energy and material production up to the application, waste treatment and final disposal (ISO 14040).

When you carry out environmental accounting, the definition of "functional

unit", the object of comparison, is the central element. The inventory lists all input and output items, where each individual balance sheet item can relate to various environmental problems in an effect relationship.

Environmental accounting can be used at different levels in the building sector. On the one hand, it serves to identify environmentally relevant processes or stages, for the comparison of building materials and energy deployment options as part of decision making in planning or evaluation of the entire building from production to dismantling, including all upstream processes.

The LEKOECOS project - economy and ecology in a single model

The goal of the FFG-funded project LEKOECOS¹²) was to create an easy-to-use tool for calculating life cycle resources consumption by buildings. (This programme, which is available free of charge, can be used in building design.¹³) It includes a new building life cycle model based on the FFG-funded life cycle cost model LEKOS from Danube University¹⁴) and the ecological material evaluation tool ECOSOFT from the Austrian Institute for Building and Ecology (IBO). The earlier in the life cycle strategic resource management takes place, the more effective it is. The resulting LEKOECOS building life cycle model enables the economic and ecological optimisation already in the early planning phase, at a time when basic decisions are made and many changes are possible.

ECOSOFT - ecological assessment of buildings

The ECOSOFT programme was developed by the IBO and is used for the ecological assessment of built structures and mechanical components in new constructions and the renovation of buildings. The calculations are based on the IBO values table with ecological characteristics for over 500 materials. It is, by default, included with the programme, however, other data sets can be used in the programme. The following ecological characteristic values can be calculated: Global warming potential (GWP), acidification potential (AP),

Impact category in Unit/MJ of generated energy	GWP kg CO ₂	PEI neq MJ	PEI ern eq MJ eq
Natural gas in modulating boilers < 100kW	0.0725	1.1707	0.0040
Boiler and heat distribution (production and disposal)	0.0003	0.0038	0.0003
Conventional gas (natural gas in modulating boilers)			
< 100kW including boiler and heat distribution)	0.0727	1.1745	0.0044

Exemplary representation of the eco codes for heat supply. The data set "conventional gas" in LEKOECOS includes the environmental impact from the production of the boiler and the heat distribution as well as from the operation of the boiler.

supplies of renewable and non-renewable energy, formation of photooxidants, eutrophication (EP), OI3 index, disposal indicator. The calculation results are clearly represented in the form of a building ecology card. The discovery of these ecological characteristics is based on the standardised environmental accounting method (life cycle assessment). It identifies the environmental impacts of products, services or processes systematically through certain life stages, or over the entire life cycle.

LEKOS - life cycle costing

LEKOS, the life cycle cost prediction model for buildings from the Danube University Krems, was created in the research project "Life cycle costs of buildings". Since 2009, comprehensive analyses and parametric studies have been performed with LEKOS for various newly built and generally renovated residential buildings, office buildings and business centres. Life cycle cost parameters are determined, along with the formation of planning recommendations for optimised downstream costs.

The new economic-environmental life cycle model LEKOECOS

A major challenge of the LEKOECOS project was the consistent combination of different approaches. The life cycle costs include construction costs, usage costs and removal and disposal costs. The relevant approach phases are the planning and construction and operation and use phase.

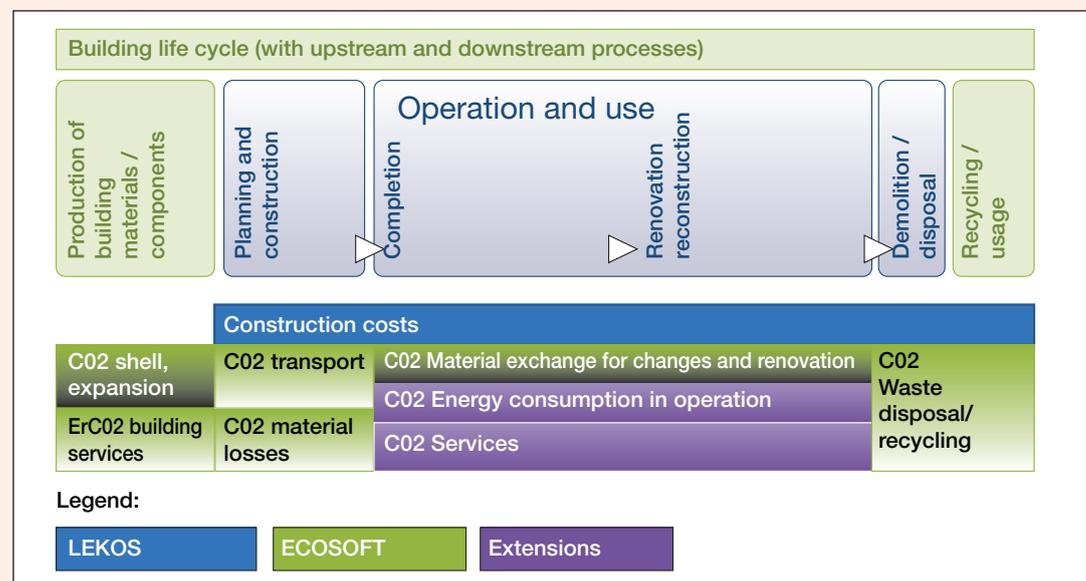
For assessing the environmental

sustainability of buildings, each phase is frequently considered prior to the planning and construction, with the production of building materials and building parts. From an environmental standpoint, processes occurring after demolition and disposal of the building materials, and those recognised when materials and components are recycled or recovered, are also interesting, in addition to other life cycle phases. We only consider the manufacture of materials and construction materials from raw material extraction to delivery at the factory gate, the so-called cradle-to-gate approach, while an extension beyond the planning, deployment and operation phase up until demolition is recognised as a cradle-to-grave analysis. Closing the ecological cycle through recovery and re-use or recycling of rubble is called cradle-to-cradle.

The concept for the LEKOECOS model

In accordance with the different perspectives of economics and ecology, the calculation models LEKOS and ECOSOFT also differ fundamentally in their data structure and the level of detail used. While the life cycle cost analysis takes place on an aggregated level "viewed through the lens of cost", ECOSOFT works at the detailed level of elements (building structures, components and home automation). An analysis of the base models showed that the life cycle cost

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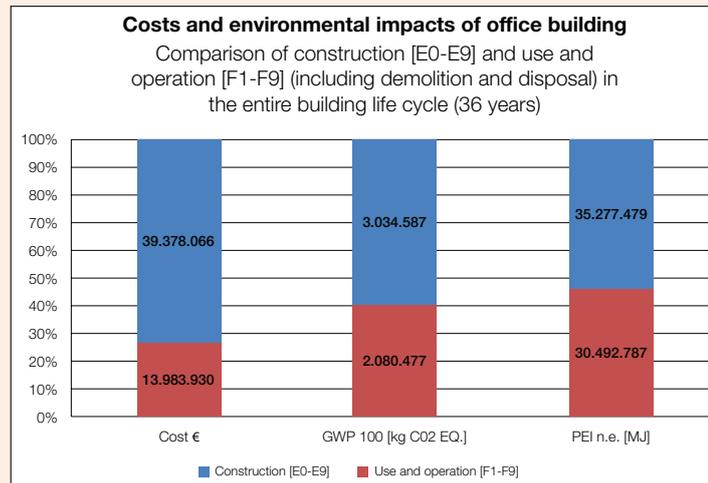
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programme LEKOS not only has a much more complex model structure than the ECOSOFT programme but also allows for a comprehensive examination of the entire building life cycle. Therefore, the decision was made to build the LEKOECS model on the existing model structure of the LEKOS life cycle cost programme and

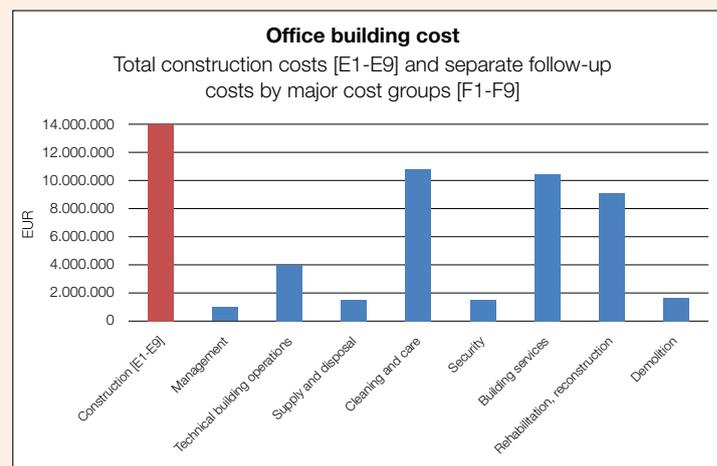
to supplement the ecological approach with the help of model parts from the ECOSOFT model.

Graphic 1 schematically represents costs and environmental impacts over the entire life cycle in the LEKOECS model. The colour marking indicates which existing parts of the base models can be adapted and used, and what model extensions are needed. While the life cycle cost model LEKOS (blue) can cover the entire building life cycle well, the ECOSOFT programme (green) is

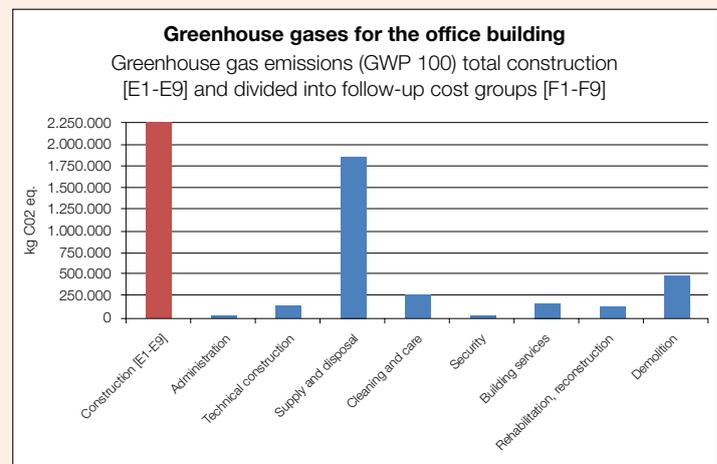


Aspern IQ office building, comparison of the costs and environmental impacts from construction [E1-E9] and use and operation [F1-F9] (including demolition and disposal) throughout the 36-year building life cycle, source: LEKOECS for calculation and creation on the basis of data made available for an office building.

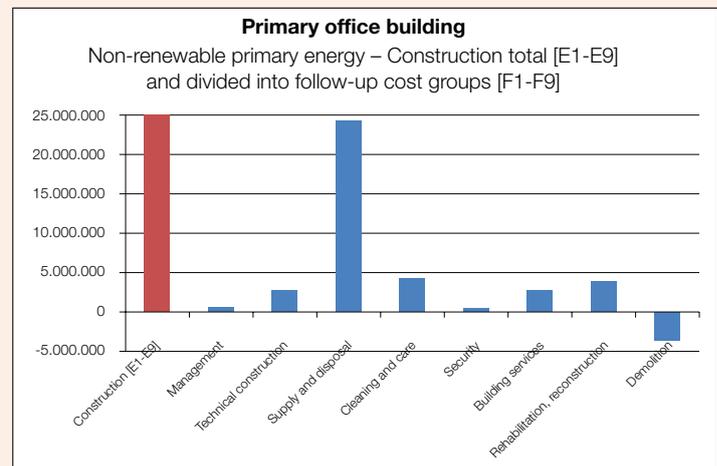
- ¹⁾ ISO 15686-5:2008 6 Buildings and constructed assets - service life planning, part 5, life cycle costing, 2008
- ²⁾ 2011 Property downstream costs, Austrian Standards Institute, 2011
- ³⁾ ÖNORM B 1801-1:2009 06 Construction Project and Property Management – Part 1:Property construction, Austrian Standards Institute, 2009
- ⁴⁾ DIN 276-1:2006-11, construction costs – Part 1:Building construction, German Institute for Standardisation, 2006
- ⁵⁾ DIN 18960:2008-02 Occupancy costs in the construction industry, DIN German Institute for Standardisation, 2008
- ⁶⁾ ÖNORM B 1801-4:2014 04 Construction Project and Property Management – Part 4:Calculation of life cycle costs, Austrian Standards Institute 2014
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- ⁹⁾ Consoli et al. 1993, cited in Geissler Susanne:Real estate assessment as an instrument for the promotion of the sustainable use of renewable resources (focus on energy) in the construction industry. Vienna: Publication series from department no. 13 - August 2007. Department of construction engineering + natural hazards, University of Natural Resources and Life Science, 2007.
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- ¹³⁾ <http://www.hausderzukunft.at/results.html/id7663>
- ¹⁴⁾ Floegl, H. (2008-2009) calculation of lifecycle costs of real estate, research project on "sustainable mass" from the Professional Association of Stone and Ceramic Industry of the Austrian Chamber of Commerce, 2009
- ¹⁵⁾ Manual for the combined economic-ecological building life cycle model [http://www.hausderzukunft.at/hdz_pdf/lekoecos_vorabauszug_handbuch.pdf] Access: on 24.11.2014
- ¹⁶⁾ Floegl, H.:Calculation of life cycle costs of real estate, research project "sustainable mass" from the Professional Association of Stone and Ceramic Industry of the Austrian Chamber of Commerce, 2008-2009.



Aspern IQ office building – total construction costs [E1-E9] and separate downstream costs according to the main cost groups [F1-F9], source: LEKOECS for calculation and creation on the basis of the available data for an office building



Aspern IQ office building greenhouse gas emissions (GWP 100) total construction [E1-E9] and separated by costs group [F1-F9], source: LEKOECS for calculation and creation on the basis of the data made available for an office building



Aspern IQ office building – non-renewable primary energy Construction total [E1-E9] divided into cost groups [F1-F9], source: LEKOECS for calculation and creation on the basis of the data made available for an office building

particularly suitable for the ecological assessment of the building materials and components used in construction, expansion and building services.

Therefore, model parts have been added that enable an ecological assessment of the life cycle stages of planning and construction, operation and use, as well as demolition and disposal or recycling.

The basic elements catalogue

The inclusion of ECOSOFT in the systematics of the cost structure had the

consequence that the outline common for LCA largely had to be lifted in parts, because the individual component layers had to be allocated to different cost items. The amalgamation was particularly difficult for the building services. A heating system ("heat supply system") has been divided into the following categories in accordance with ÖNORM B 1801-1 building technology:

E3. C Heat supply systems

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A special bond

By Sara Bean

The 10-year collaboration between ENGIE (formerly Cofely) and North East Lincolnshire Council has developed way beyond traditional FM and outsourcing partnership to embody a revolutionary set of societal and operational aims, says Sara Bean

The BIFM Societal Impact Award was devised to recognise the growing contribution made by FM beyond the workplace.

The winners of this accolade, ENGIE and North East Lincolnshire Council Partnership, illustrate how FM can reach far beyond the maintenance of buildings, not only in managing and maintaining roads and street lights – but working on a regeneration programme that benefits the local community.

The North East Lincolnshire Regeneration Partnership between North East Lincolnshire Council (NELC) and ENGIE was established in 2010 to replace a more traditional procurement service that relied on an ‘approved list’ for procurement, an approach the council deemed inefficient and inflexible.

Councillor Ray Oxby, leader of North

East Lincolnshire Council, explains: “We believed we needed a radical approach to how we delivered frontline services and felt it was important to bring in new thinking and business acumen into the delivering of services.

“We wanted to move from a client arrangement with contractors to using a strategic, transformational partner that would bring a common theme that runs all through all our services.”

Following a rigorous competitive process, ENGIE won the bid and so began a 10-year partnership with a team of 278 ENGIE employees who deliver operational frontline services to NELC, including full FM of council-owned assets, development and property-related advice. This includes the regeneration of council estate to ensure that it is modernised and fit for purpose. The value



of the council-owned assets managed within the scope of partnership is £1.12 billion pounds.

But this partnership goes well beyond traditional FM and outsourcing by incorporating a groundbreaking set of societal and operational objectives. These include: investing £0.5 billion in sustainable economic growth and regeneration; a 33 per cent reduction in the number of people killed and seriously injured in road traffic accidents; securing 4,000 jobs in the local area; creating 60,000 square metres of new office, commercial, retail and industrial space;

and delivering multi-million pound savings to the council over the term of the partnership to reinvest in frontline services for residents.

Local challenges

NELC comprises the towns of Grimsby, Cleethorpes and Immingham, covering a total area of 74.1 square miles with a population of 159,700. It has some of the highest levels of deprivation in the country and has seen the decline of its traditional fishing industry and the effects of the economic downturn, which hit just

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Economical-ecological building life cycle model

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- E3. C. 01 Heat generation systems
- E3. C. 02 Heat distribution networks
- E3. C. 03 Room heating surfaces
- E3. C.S. Other heat supply systems

Biomass boilers are, for example, assigned under E3. C. 01 Heat generation systems, while pipes and radiators are assigned to the other categories of heat distribution networks and room heating.

If you wanted to match the structure of the LEKOS costs classification, you would have to use the simple entry system on the basis of energy consumption profiles and accept a higher degree of complexity.

Because the eco figures for heat generation systems in different areas in the life cycle differ only slightly in comparison to other components such as “ceilings”, work at this level of detail is not pursued further. Instead, the average equipment ecoinvent database is calculated directly in the operating energy modules (see table).

The model

Because there is typically hardly any accurate data about the quality of the building in the early planning stages, the necessary input values generally fall into three building classes, namely “low”, “medium” and “high” building quality. These qualities are associated with various building designs and costs, which are enabled when you select a quality. This allows for the use of tools without much detailed knowledge.

The basic idea of the model for assessing the operational environmental impacts in the LEKOECOS model is definition of prefabricated energy consumption values. This makes it possible to retain the easy-to-use concept of LEKOS and at the same time use the results of detailed ecological indicators. For more details, see the manual¹⁵) and the earnings report.

Life cycle costs and environmental effects

The Aspern IQ office building is funded by the BMVIT “House of the Future” research programme for the implementation of the latest construction opportunities. A plus-energy real estate item, the building, with its 1,300 m² photovoltaic system (140 kWp) produces more energy than it consumes in the average year. At the same time, the building provides high user comfort and meets your highest demands in terms of sustainability. It was built with a reinforced concrete construction with “green concrete”, resulting in an 80 percent reduction in carbon dioxide emissions, and it is completely PVC-free.

The results

The comparison of the costs and environmental impacts with the construction with the costs and environmental impacts with use and operation with the construction costs of the office building [E0-E9], measured in EUR, kg, CO₂ eq. (GWP 100) or MJ (non-ren prim. energy), is always under 50 percent of the total cost and the total

environmental effects considered for a building life cycle of 36 years (see graphic 2).

Cleaning and care [F4] and building services [F6] and repair, and conversion [F7] account for the highest follow-up costs in the calculations valid with the office building (measured in EUR). In contrast, management [F1], security [F5], object removal, demolition [F9] result in relatively low follow-up costs (see diagram 3). During use and operation, the supply and disposal of the lowest-energy office building is clearly responsible for both the highest CO₂ emissions and the highest primary energy input (see graphic 4 and Figure 5). The environmental impacts of the main supply and disposal operations are almost equal to the environmental impacts of the construction of the building.

Conclusions

A: Building downstream costs amount to several times the construction cost.

In numerous research projects on

buildings having their life cycle looked at, it turned out that, for a life cycle of about 40 years, the follow-up costs for office buildings are three to six times¹⁶) the construction costs. The Aspern IQ office building showed a construction cost-follow-up cost ratio of about 1:3 for a 36-year life span.

B: The construction only causes part of the life cycle environmental impacts of buildings

The environmental effects from the construction of the Aspern IQ are less than 50 percent of the total life cycle environmental impacts (period of 36 years)

C: The first “sustainability validation” for a new building already in its planning stage

LEKOCOS offers an initial validation of economic and ecological sustainability objectives for new façades and building service concepts as soon as possible after they are applied in concrete projects.

Prof. Dr. Ing. Helmut Floegl studied civil engineering at the Technical University of Vienna. Since 1994 he has been a researcher, developer, consultant and lecturer in facility management.. He is Deputy Head of the Department of Building and Environment at the Danube University Krems, Chairman of the ON Committee for real estate and facility management and member of the Executive Board of the FMA. He is the pioneer of the building cost life cycle calculation in Austria.

The other winners of the best paper awards are Dr. sc. ETH Lisa Koller, Reso Partners AG, (5/2015 with her post “Request and life cycle design in planning and construction accompanying facility management” (published in the Facility Manager) and Sören Schmahl from the iffm Institut für Facility Management with his post “Savings through software-based user-initiated land management using the example of the Charité Berlin”. We will publish these in the following issue.

A special bond

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as the partnership got under way.

Marcus Asquith, deputy partnership director for ENGIE recalls: "The biggest challenge was the change of government back in 2010 and the subsequent austerity measures, as we were immediately plunged into cost savings neither party had originally envisaged.

"But it actually brought us together to look at ways of saving money with minimal impact as well as inspired us to create a 'circular' economy that invests in the area with skills and jobs that ultimately supports and encourages inward investment to raise its economic prospects."

The contract is managed strategically and operationally by a partnership board that meets quarterly and an operations board that meets monthly. The partnership board gives strategic direction as well as measuring the performance of KPIs, which are geared towards 'stronger economies, stronger communities'. Alongside this, the operations board checks on the day-to-day delivery of essential services and measures the effectiveness of the partnership in ensuring that the needs of local residents are being met.

Every local authority has a local masterplan, which is typically a strategy for the next 10 or 15 years. To help support inward investment, ENGIE has co-written the local masterplan for NELC, which is a strategy extending to 2032, with an aspiration to create 8,800 jobs and 13,000 homes with associated retail, leisure and school facilities.

Oxby says: "We've been very pleased with ENGIE's ability to help us secure external funding on the back of the austerity climate that all of the local authorities are facing as they've brought

in expertise and knowledge to help us make successful bids."

For example, following support from the partnership, Danish energy giant DONG announced plans in 2013 to invest in the Port of Grimsby. Because of help given with access to funding the company was enabled to locate its operations and maintenance hub in Grimsby. The partnership also helped with pre-application planning assistance and engagement with key external consultees such as the Environment Agency, Natural England and English Heritage.

The council's planning service has also been upgraded and, working closely with the economic development, highways, assets and architectural teams, has launched a Major Applications Planning Scheme (MAPS) which provides clear information and advice to those going through the application process.

The partnership's ability to secure substantial investment for improving local communities resulted in an award of £4.3 million by the Department of Transport for improvements to public access and transport provision in Grimsby, particularly for those commuting to and from work – one of the largest town centre developments North East Lincolnshire had seen for years.

Better planning and an efficient use of capital funding have also helped to improve the state of the area's roads and guard against further deterioration, meaning a reduction in closures for repairs and safer journeys. ENGIE is also responsible for delivering Civil Parking Enforcement (CPE), which includes off-street car parking and the development of a parking strategy that has increased levels of customer satisfaction and the reputation of the parking service.

Oxby says: "It's all about the innovation in terms of what the partnership brings to the table, and not just the taking on of services such as property, regeneration,

planning and transport.

"The partnership has also been about bringing innovations around energy measures, property rationalisation, street lighting, where we've made massive savings in energy use, and the funding of what would have been average outgoings."

These innovations included the introduction of a property rationalisation programme that led to a reduction in the number of core office buildings from more than 20 to two main hubs, reducing office accommodation by 60 per cent and running costs by over £1.1 million a year. The introduction of more opportunities for flexible working has seen the ratio of workstations to full-time employees go from 1:1 to 0.7 – with an ultimate target of 0.5.

Power play

Grimsby's municipal building has also had a £1.6 million refurbishment to create an open-plan, modern work environment that supports agile working – resulting in a 200 per cent increase in staff use. Encouraging more people to work flexibly has also shown an impact on journeys taken, helping to reduce the council's carbon emissions.

All councils are measured against their carbon use and pay a levy and tax on the amount of carbon used, so the lower the energy consumption, the lower its bills. The partnership has helped NELC to manage its energy use across its whole portfolio of assets.

For example, during 2012-13, an £8.2 million Energy Management Project was implemented that saw all the borough's 19,000 street lights upgraded using state-of-the-art LED technology.

ENGIE's Asquith says: "The lighting project took a year from beginning to end, and during that year the LED technology developed, so by the end of the project we could install the LEDs on just about every street light – so while many other

local authorities are actually cutting street lighting, NELC has avoided that and actually made savings."

In another initiative, the boilers were replaced at the municipal offices. This, along with additional improvements to the heating and electrical elements of the building, has delivered a 20 per cent financial saving with reductions in carbon emissions of 1,740 tonnes a year.

In April 2015 ENGIE introduced a 'flexible basket' strategy for energy procurement, meaning that gas and electricity can be purchased for up to three years in advance, reducing costs and improving access to green energy to reduce carbon footprint. This initiative will also see the introduction of energy conservation measures such as the installation of solar panels on council buildings.

There is also potential to make use of the energy centre at Humber Energy (owned, operated and maintained by ENGIE) to create an industrial district heating network that will not only reduce energy consumption and carbon emissions, but will also make the area more attractive to industrial investors.

Community engagement

In its regeneration partnership role, it has a high level of engagement with the local community. The housing team, in particular, works with residents in areas of most deprivation. This team works closely with local bodies, individuals and landlords to bring properties up to a better standard and help residents improve their lives by taking responsibility and pride in ownership.

"We're doing a lot of work in the background to promote the benefits of the area, for instance, the job opportunities in the growing renewables industry," says Asquith.

He adds: "We're doing a lot of work in the town centres to try and prepare those for an influx of people with more accommodation being provided. We've also got an energy board, which now meets on a monthly basis to look at how we can bring alternative energy, procurement and usage.

"There are several other areas we're looking to get our teeth into because of the confidence the council have with us, so we might have an interesting submission for the BIFM next year."

The awards judges remarked on "solid evidence of the effectiveness of the partnership" and how the service provision had moved "significantly away from standard FM and into the realm for delivering step-change social and economic outcomes for the local community".

Oxby agrees: "We don't see ENGIE as outside players, but as part of the team. It's about a different style of leadership, engagement and empowerment and about managing assets in an innovative way around the outcomes needed to improve wellbeing in the wider community."





FM in the Netherlands Brilliant orange: How the Dutch do FM

By Sara Bean

The Netherlands is having no trouble luring an influx of young people into the industry and innovations such as activity-based working and a service-led focus are boosting its profile. Sara Bean finds out why orange is the new black in FM.

The built environment appears to be going Dutch at the moment, with the British Council of Offices (BCO) 2016 Annual Conference taking place in Holland in May, following Amsterdam's hosting of the Smart Workspace Design earlier this month where The Edge, the world's greenest and smartest building, is based.

The reasons for this interest is because the Dutch are widely acknowledged as leading the way in the adoption of more productive and innovative ways of working, in particular activity-based working (ABW) and they also take a refreshing approach to facilities management.

FM is taken seriously in Holland, where it is perceived as an important and popular discipline; whether you're working within the private and public sector, as an in-house FM or as part of a services supplier.

Ron van der Weerd is the chairman

of EuroFM and programme manager of ZP7 Real Estate reconstruction at Hanze University of Applied Sciences in Groningen, and was until recently the dean of the School of Facility Management at Hanze University.

He explains: "FM is in a very advantageous position here in Holland because the profession is really mature and pretty well recognised, and that has to do with two key aspects. One is our educational system, which plays an important role, and secondly, we depend more here on a service economy than a production economy."

"We also have a lack of space in Holland, which is trying to accommodate a pretty large population of 17 million people; so you always have to be very efficient and organised and use space as best you can with the least waste, so all of

our culture is around being efficient and effective."

According to figures from the Dutch FM association, Facilities Management Netherlands (FMN), about 260,000 people are involved in the facilities business in the Netherlands with the total market including real estate worth €77.2 billion. This contains both real estate – at €39.9 billion – as well as FM services at €37.2 billion. From that, about €22 billion is outsourced, with around a 40/60 split between in-house and outsourced FM.

More education and training

Recent changes in Dutch labour laws limit employers from imposing temporary contracts to encourage the use of fixed contracts, and that regulation, along with the government's expectation that employers are responsible for the competence of their staff, means there is a strong emphasis on education and training. In fact, over the past few years the Dutch have developed quite a reputation for producing a highly qualified new generation of FM practitioners.

"Of course there are students here, but when we employ people from the Netherlands we find we're getting high-quality, engaged young professionals"

"A bachelor degree-level education has already been here for 40 years in the Netherlands", says Wil Gooskens, programme manager at NHTV Breda University of Applied Sciences. "Every year we have 1,700 people who started their education in FM

and there are at least 20,000 to 30,000 practitioners, on a comparative level 6 to the UK system."

All this educational activity doesn't necessarily mean that the average Dutch FM is very young. Like those working in FM in the UK, the median age is around 40 and at the top end of the spectrum the more senior FMs are around 60. Holland is facing an ageing population and has recently increased its retirement age to 67 to accommodate this.

But the Dutch don't have any problem attracting younger people into FM, many of whom enter the sector from the age of 18 or 19 when they're choosing their professional education.

Says Ron van der Weerd: "Something that I have noticed in my international experiences is that a lot of countries trail behind in attracting young people into FM. This requires some leadership [from the profession] to go into schools to present yourself as a very attractive profession, with the emphasis on the management aspects of facilities management."

Work placements

The Dutch are also proactive at getting work placements and organising fact-finding trips for their students, which includes trips to the UK, which is viewed as "one of the frontrunners in FM," according to George Maas, a partner at leading consultancy and project management firm Hospitality Group.

He has taken parties of student FMs to the capital as "we think of the UK as the country where FM is most well organised."

"Where the UK is well ahead of us is with innovative models, in particular PFI, which we have in our country as well – but in the UK you're onto the next generation," he says.

"However, we have chosen a different way of evolving facilities management in Holland with the belief that in the future we'll have to deal more with hospitality and almost all the corporates now organise FM into more of a hospitality function than facilities management."

"Hostmanship is designed to induce end users to come to your building and it plays a key role for Dutch FM"

"This service-led focus means that while the average age of a facilities manager in the Netherlands is still between 45 and 55, and 70 per cent of this generation at a senior level are male – when we look at the students coming through into the discipline, 60 per cent are female."

This compares to the UK picture, where in the most recent FM World Salary Survey the ratio of male/female



The Edge in Amsterdam is described at "the world's greenest and smartest building" (Credit: Horizon Photoworks, Interior Architect - Fokkema & Partners)

continues on page 7

Brilliant orange: How the Dutch do FM

continued from page 6

respondents was 66/34.

Dutch FM trends

Rather like their UK counterparts, the Dutch are also engaged in much debate on the relationship between service providers and clients and how they can work better together. Innovation is a key trend in Dutch FM, with a lot of effort going into how the market and service providers need to become more mature and offer 'added value', but the Dutch have resisted being pushed too far down the commodity route.

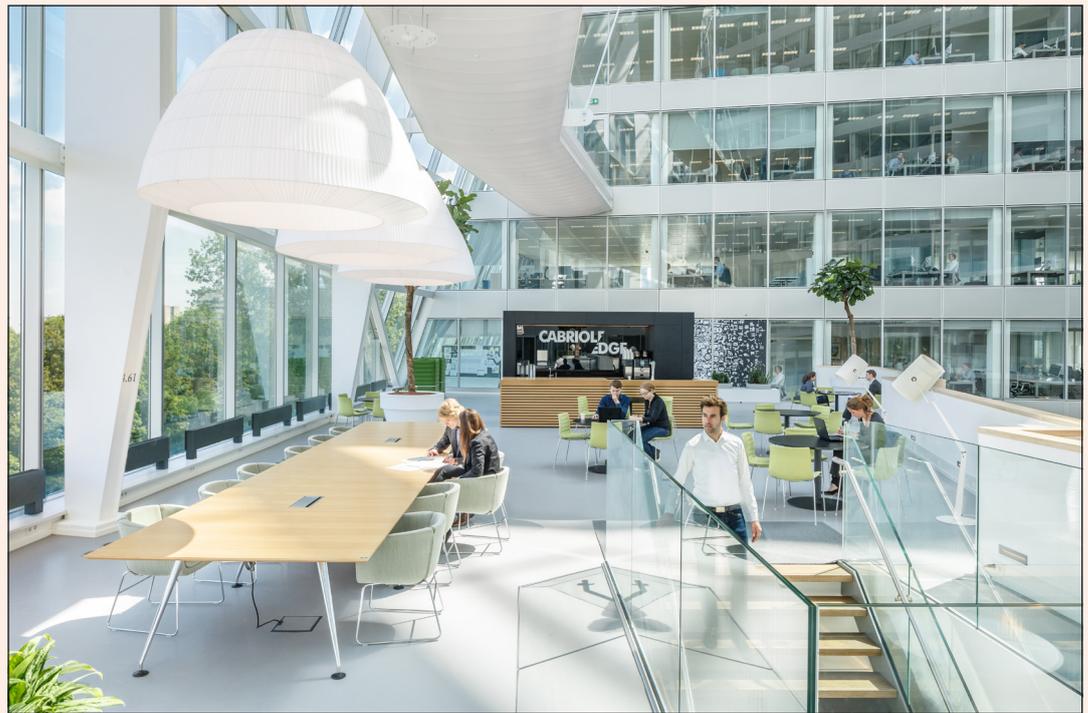
"When I speak to counterparts in the Netherlands they are surprised by how FM is approached here," says Phil Ratcliffe, managing director of Procure.

"In the UK over the last few years there's been a rise in the whole concept of the workplace – with a lot of formally FM companies rebranding as 'workplace companies', but when you ask 'how do you buy those services', procurement again drives it down to the commodity experience.

"In practice, this means that when you buy in FM here you go into a detailed analysis on costs right down to how much the engineers' mobile phones will cost."

Procure has formed a close collaboration with Delft University in the Netherlands, where the real estate and FM course is run by course leader Tanja Zuijderwijk.

Says Ratcliffe: "Our impressions are that FM does seem to be more of a discipline of choice for students in the Netherlands – of course there are students here, but when we employ people from the Netherlands we find we're getting high-quality, engaged



The Edge in Amsterdam is described as "the world's greenest and smartest building" (Credit: Horizon Photoworks, Interior Architect - Fokkema & Partners)

young professionals."

Tanja Zuijderwijk explains that the Dutch have even come up with a word that describes a way of making people welcome. "Hostmanship is designed to induce end users to come to your building and it plays a key role for Dutch FM," she explains.

"In Holland, we not only have service level agreements but experience level agreements – meaning we're not just fulfilling our client's needs but surprising them, and if you do that you've exceeded their expectations and their return is guaranteed."

As in the UK, in Holland the integration of support services is another future trend that larger

corporates are talking about, with IT, HR and FM working together within the business. As part of their coursework Zuijderwijk's students focus on ways of increasing cooperation with HR managers, and how they can work together to facilitate people.

Activity based working

The Netherlands has led the world in its adoption of activity based working (ABW) – as pioneered by Dutch firm Veldhoen, which supports workers by supplying a variety of office environments that support different activities.

David Sheehan, managing partner for Veldhoen in the UK, explains that ABW is a very forward-thinking idea that the UK has been very slow to pick up on. He first came across the idea when looking to find a partner who'd create the modern way of working he was seeking for Sainsbury's new head offices.

He believes that the UK often looks too much towards the US rather than the continent for our ways of working, and concentrates too much on property costs when they're looking at ways of working, rather than focusing on productivity and efficiency. ABW as an aid to productivity is borne out by Leesman Index research, which shows that its functionality and effectiveness score is consistently higher for workplaces that have implemented ABW. But why are the Dutch so far ahead in their thinking? According to Sheehan, it's down to that cultural difference.

"The Dutch are very practical, level-headed, pragmatic people who analyse very objectively and come up with ways of solving problems and maximising opportunities without

some of the hang-ups of the past."

"The other thing the Dutch consider is 'discretionary motivation' – what makes somebody want to do something above and beyond their normal 9 to 5? It's about connection, being treated like an adult and having power about what you want to achieve and objectives of output and input; those are all things that thrive in ABW."

"We also have a lack of space in Holland, which is trying to accommodate a pretty large population of 17 million people; so you always have to be very efficient and organised and use space as best you can"

ABW is making great inroads into the Dutch market; for instance, the top four financial institutions in Holland, ING, Rabobank, ABN Amro, and SNS Bank have all embraced it. Meanwhile, a Future of Work project at Essent has resulted in a change management programme that introduced new ways of working – approached from a people aspect, rather than estates or IT.

As the Dutch architect Ron Bakker of PLP, behind the design of the Edge, explains it: "The Edge is an early example of how things can develop across the built environment. It's not one big invention, but the coming together of lots of little things and it reflects the unique working culture that we have here in the Netherlands."

For more information see:

www.fmn.nl/

www.eurofm.org/

An ovation for innovation

Below are some more examples of best practice by people and firms working within the Dutch FM sector.

Lisa Hut won the FMN Bachelor of the Year award in 2012 for her study of the physical environment of a 3rd workplace, and has gone on to join Measuremen, based in Amsterdam, which collects data on the actual use of the workplace, the work activities and employee experience. This data helps organisations to create the ideal working environment for every employee.

Ronald Vos, who won the EuroFM bachelor award for his graduation internship has been working to improve the Cleaning Cost Calculator used by Eurest Services. This calculates the required cleaning hours of the various office locations throughout the Netherlands. Owing to multiple office design changes and the lack of a clear data management plan, the data has become outdated, resulting in inaccurate budget and cost monitoring of the cleaning process.

Vos worked on identifying flaws, restoring cleaning calculation data and guaranteeing a well-operating cost calculation system.

Martin Vos, a PhD student with a BA in FM, is currently working at the consultancy department of Netherlands Railways (NS) and has been involved in experiments with scents and ambient lighting to find out which settings enhance and improve customer satisfaction levels.

www.fmn.nl/

www.eurofm.org/

Optimizing the building envelope

By Harry Yeatman

Constructing a new facility based simply on how many square feet the operation needs? Those days are long gone. Today, successful facility development and management involves deftly understanding the importance of the building envelope, energy efficiency and local energy codes. It's a complex equation many businesses view as important as well as confusing.

Energy management is now no longer a "nice-to-have" but rather a "must-have" to be competitive in the marketplace. Consider that 91 percent of companies invest in energy management programs and nine out of 10 businesses indicate they have energy management goals in place.¹ Given that more than a third of those companies cite competitive advantage as a primary driver for their energy management programs, it's surprising how many clients try to save money on the up-front costs of a building.¹

The case against up-front cost savings

Often, construction trades win business by providing what seems to be the lowest cost during the bid stage. In many instances, decision makers have finite budgets that drive the selection of these lowest-cost proposals.

What decision makers might not realize, however, is that savings up front can easily come back to bite the budget down the road. In fact, a facility's construction budget accounts for only 10 percent of its total lifetime costs. Operation accounts for the other 90 percent.² In these cases, the up-front savings on materials end up burdening owners throughout the life of the building. Lower-quality products create energy inefficiencies followed by maintenance and complete replacement sooner than higher-quality products.

It's easy to see that saving money on just 10 percent of costs is a misguided approach.

Optimizing the building envelope

Once companies understand the importance of building performance over the life of ownership, the next step is understanding what building decisions make the biggest impact on energy performance. That discussion starts with the building envelope.

So what is the building envelope?

The building envelope includes all of the exterior components of a building, such as walls, roofing, foundations, windows and doors. It includes all components that make up the shell or skin of the building. Any living space equipped with heat or air conditioning would be included and impact the rest of the building, specifically regarding climate, ventilation and energy consumption within the structure.

The building envelope covers four basic functions. These include: adding structural support, controlling moisture and humidity, regulating temperature and controlling air pressure changes. By serving these different functions, the

envelope also affects ventilation and energy use within the building. Of note, space heating, cooling and ventilation account for the largest portion of end-use energy consumption in commercial buildings.³

Specifically, 42 percent of the energy consumed by nonresidential buildings in the United States is lost through the building envelope, according to the U.S. Department of Energy. This demonstrates the need to focus on the building envelope when developing an energy management strategy. The challenge is to build an envelope that is airtight and well-insulated so the energy that comes into the building stays within the envelope, and any inclement weather outside has little impact on the comfort inside.

The building envelope significantly impacts a company's energy use and maintenance requirements. It should be a top concern when looking to reduce total cost of ownership and future operating expenditures. Making the right material decisions for the building envelope is vital to energy management strategy.

The International Energy Agency's Technology Roadmap for Energy-efficient Building Envelopes states that, "The quality and energy efficiency of building envelopes are the most important factors that affect the energy consumed by heating and cooling equipment."⁴

Addressing energy management in the planning stage

The building envelope is a great place to start an energy management strategy. What other factors affect the opportunity for envelope optimization? Building owners and facility managers should consider many factors when making sustainable decisions:

- **Product lifetimes:** Building material product lifetimes are an important aspect to building envelope decisions. Many product material life expectancies are determined through research and testing based on regular recommended maintenance and conditions of normal wear and tear, and not extreme weather conditions, neglect, overuse or abuse. They should be considered guidelines, not guarantees or warranties. That said, it is important to consider the level of product testing that various materials undergo, as well as the anticipated weather conditions in the building location.
- **Maintenance requirements:** Infra-

structure sustainability has a major impact on future maintenance budget requirements. In fact, a Metal Construction Association study finds that by simply opting for a Galvalume-coated metal standing-seam roof system, businesses can save more than 90 percent on maintenance because this choice offers an average 60-year lifespan. Other options with shorter lifespans will require multiple reroofs in that same 60-year time period.

- **Financial incentives for choosing energy-efficient building designs:** Financial incentives can help energy-efficiency projects overcome cost barriers. These include grants and rebates, tax incentives, government risk mitigation guarantees, revolving loan funds, tax-lien financing and policies that enable energy performance contracting. Check with the local municipality to verify whether your building decisions can earn rebates or incentives.
- **Local energy code requirements:** Buildings account for approximately 41 percent of all energy consumption and 72 percent of electricity use in the United States, according to the U.S. Department of Energy. Energy codes and standards set minimum efficiency requirements for new and renovated buildings, ensuring reductions in energy use and emissions over the life of a building. Efficient building design presents an opportunity for building owners to reduce environmental impact and achieve energy expense savings.
- **Adaptable design:** Design your building for change and growth. In some cases, the intended purpose of a facility changes over time. When materials, context, occupants and technology change, buildings can be designed in a way that flexes with them. Create an architecture that stands the test of time, considering how it will weather, change and grow.
- **Retrofit:** For facility managers looking to improve the performance of existing buildings, a retrofit is a great option. Federal, state and local standards have led to an upsurge in energy efficiency retrofits for existing structures. Before investing in major capital improvements to heating and cooling systems, however, consider making simple, less-costly upgrades to the building enclosure. A sound exterior envelope acts as a thermal shield, reducing demand on HVAC equipment, improving indoor comfort and extending the lifespan of building components.

Energy modeling

To ensure your building envelope decisions prove beneficial, incorporate energy modeling into your process. An estimated 91 percent of companies invest in energy management programs, with an average investment of 12 percent of the total capital budget, regardless of company size.¹

Energy modeling is essential for defining which parts of a building envelope are responsible for maximum energy consumption. It is important to involve this process at an early stage because the energy performance of a building is only as strong as its weakest

link. Energy analysis and simulations help you understand the building performance and make informed decisions before the building design progresses to the construction phase.

For example, if the building envelope allows heat loss, address the problem through early design optimization. Resolving the issue later in the build process, or once the building is constructed, becomes more expensive and time-intensive.

Long-term focus

Today, 61 percent of companies reported a high degree of effort and resources allocated to energy management programs, and more than one-third of those companies cite competitive advantage as a primary driver for their energy management programs.¹ Focusing on the total cost of operating your building is a smart way to approach your construction budget. Smart building envelope decisions will ensure the initial expenditure will pay off in the long run.

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Since that time, he has held positions of area manager in the southwest region, national insulation manager and southeast regional sales manager in Laurinburg, North Carolina, USA. He obtained his Bachelor of Science in building science from Auburn University in 1983.



NORWAY

What do we know about cleaning in local authorities?



By **Nora Johanne Klungseth**, PhD and assistant professor, Centre for Real Estate and Facilities Management, Norwegian university of Science and technology (NTNU).

Do you consider exposure to competition as a necessity for increased outsourcing? Findings suggest it may not be as influential as often expressed. This article represents a brief summary of a PhD dissertation having a 200-year perspective on the organisation and practice of cleaning in local authorities. The findings include indications that local authorities, irrespective of being exposed to voluntary or compulsory exposure to competition, have similar preferences. The chief conclusion of the dissertation was that cleaning services in local authorities, both in Norway and in the United Kingdom, are labour-intensive, manual services which are predominantly organised in-house.

The existing knowledge base on cleaning is predominantly old and relatively limited. The doctoral dissertation "Cleaning services in Local Authorities" does in part correct this, but considering that cleaning services represent one of the most cost- and labour-intensive services in facility management, it is important and right to continue researching cleaning - both nationally and internationally.

The PhD dissertation examined cleaning services' organisation and practice in local authorities since the 1800's until the present. The focus was on the Norwegian local authorities' second tier, the municipalities, and included knowledge from times prior to the formal establishment of local authorities in Norway. Additionally, the research included empirical experiences from

the United Kingdom (UK), as well as knowledge from international research.

Purpose, financing and research design The research was structured according to a threefold strategy and consisted of a thorough literature study, a national survey and two case studies. The dissertation was a response to the need for new knowledge on public facility management (FM) in Norway, and aimed to describe and explore cleaning in order to provide new knowledge which may contribute to develop and improve facility management in local authorities. The research was part of a larger research project at NTNU's Centre for Real Estate and Facilities Management focusing on public facility management. This research project was funded by the Norwegian Ministry of Local Government and Regional Development (KRD).

Historical insight

The work began with a thorough review of the available research on cleaning in a Norwegian context. The review shows the evolution of cleaning as a public service from the time before there was any public sector or public buildings in Norway, until today. The research Norway has conducted on cleaning since the 1800s seems to have followed the general development in research, policy and management theories. Before Norwegian local authorities had any buildings, cleaning was considered a responsibility of the housewives, but as local authorities began to construct buildings, cleaning slowly evolved into a profession. In the 1960's technical departments were established in the municipalities and since the 1980's and 1990's, cleaning usually became included in these departments. That meant that cleaning slowly moved away from (mainly) being the responsibility of principals and managers of nursing homes to being the responsibility of the municipalities' facility management departments. Cleaning also eventually became both daytime work and full-time work. That meant that it was possible for cleaners to have a "normal" life, being at home when everyone else was at home and to live on one's own, without the necessity to rely on a spouse having a decent income for two or more. What's more, cleaning acquired educational opportunities, as a certificate of apprenticeship, and official standards which could describe cleaning quality. Gradually, public competitive tendering, and questions of how municipalities could become competitive, became part of the agenda.

Municipalities prefer centralised departments

The second step of the research was the dispatch of a national survey, where all Norwegian municipalities were asked about their use of organisational models for cleaning and facility management. This means, whether they used a department model, inter-municipal cooperation, a public limited company or bought services from the private sector. They were also asked what changes they had planned for their organisation.

The result shows that the municipalities prefer a fully centralised department model and that their future organisational model in most cases probably is going to be public. This, however, can be supplemented by the purchase of cleaning services from private providers. Generally, private providers are rarely used in Norway, and when they are used, they are used more often by municipalities' facility management organisation than their cleaning organisation.

Norwegian municipalities' plans for changes in organisational models indicate a movement towards more decentralised and market-inspired models in the future. The survey also shows that changes in organisational models can as much be

linked to tactical-operational activities as to strategic choices. That is, when Norwegian municipalities report that they are planning changes in their organisation, this does not necessarily display a desire to switch from a department model to a municipal enterprise. A desire for change in their own organisation may be a desire to hire a cleaning manager or establishing cleaning teams.

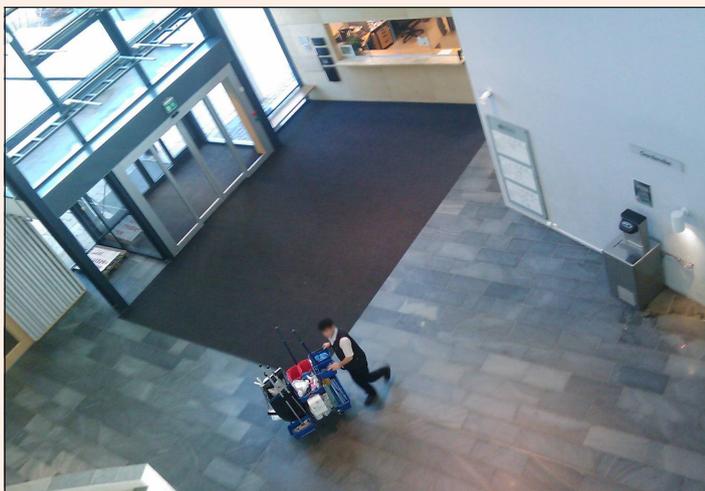
What it is like inside local authorities

The last step of the research included two descriptive case studies. These studies are considered as examples of how cleaning can be organised and practiced, and provides insight into how the cleaning is actually managed and practiced in local authorities. The first case comes from Norway, which is known for its focus on the public sector. The second case has come from the UK, who is ranked highest among OECD countries in terms of public spending on services by private providers.

Both of these local authorities did most of their cleaning themselves. The Norwegian case study did a 100% of their cleaning themselves, while the UK-case did 75% by their own. This way, the case studies show that there are differences between local authorities. These differences can be traced back to the fact that the cases are from two different organisations, while it may also be the result of cultural differences. For example, in Norway it is voluntary to participate in public procurement processes, while the local authorities in the UK are obliged to expose parts of their service provision to competition. However, this difference does not affect the main choices in terms of an organisational model. Both countries seem to prefer to retain their cleaning services in-house. This difference in relation to voluntary or compulsory competition, however, appears to affect what is happening inside organisations to some extent.

The Norwegian case study had less of a strategic focus, but had instead a much greater focus on the practical aspects, such as more use of up-to-date technology, focusing on educating cleaners and collaborating with each individual building user. In the Norwegian case study, the service supervisors were responsible for 25 to 30 cleaners and had closer contact with its cleaners than in the UK case. The case local authority from the UK had a clear strategic focus and was less concerned with the practical details. For example, the actual "cleaning technique" from the UK could resemble what is described in Norwegian research from the 1980's. Another difference was service supervisors' responsibilities. In UK, one service supervisor could be responsible for 150 cleaners and aim to see each cleaner once every three months.

Want to know more? Then, download Nora Johanne Klungseth's dissertation here: <http://hdl.handle.net/11250/2364934>



Chairperson's report Chairman's report in preparation of the EFMC in Milan, June 7-9 2016

**Prof. Ron van der Weerd
Chairman**



There are busy and challenging times ahead for the EuroFM network and community.

As also mentioned during the general

members meeting in Stuttgart, the upcoming EFMC will be the last EFMC in the period of five years in which we have been collaborating with Informa as our Professional Congress Organizer. Again I would like to thank them for all the efforts they have contributed over these years to make the EFMC to a success. The board of EuroFM has now finalized the process for evaluation and thinking about the future of the EFMC and the ways to organize it. After Milan, the EFMC 2017 will take place in Madrid, and CIFMERS Global will be the EFMC professional congress organizer. CIFMERS is a globally active company that is specialized and well experienced in the organization of FM events. We are hoping for a long-lasting and successful collaboration. One of the very strong aspects of CIFMERS global is their passion for FM and their unique way of helping and supporting countries all over the world to generate awareness about FM, provide workshops and training sessions on FM topics and standards, and set up national FM associations.

They have also done this in many South (Latin) American countries and this year they are organizing the first LATAM FM conference in Bogotá, Columbia. A conference which can easily be compared with the EFMC in Europe. Hence you see the different languages, countries, cultures, habits, traditions and stages of maturity of FM. But at the same time these countries share a lot of the same challenges in developing FM as a profession. We have agreed that EuroFM will support them wherever we can. Since I will be spending some private time in South America at the end of May I will also

visit their conference representing EuroFM.

I believe that we can learn a lot from each other and build further on a solid bridge between Europe and Latin America (with Spain and Portugal as an historical and natural liaison), and that we can all benefit from that.

In the meantime we are also busy with talks with several of our members in the organization of the EFMC 2018, 2019 or 2020 in their capitals. Don't hesitate to contact me or us if, in the near future, you are also interested in this.

But about June the 7th until the 9th:

Milan will be Europe's FM capital for three days: EFMC 2016 – FM enhancing people and business! This year, the event concept has been re-designed, so that the EFMC 2016 will be more topic-oriented, local, interactive, progressive, and community-driven than ever before. To allow for discussion of all-encompassing insights within the topics, the event features two focused conference tracks which join business and research perspectives. Also, a digital concept featuring live connectivity, social media engagement, and a brand new EFMC app has been included, and the IFMA Italia FM Day has been integrated into the EFMC.

Almost 60 FM professionals from Europe and abroad will share their expertise at the EFMC 2016. The conference motto illustrates two keywords of the FM future: focussing on business models, strategies and specialization on the one hand, and caring about people working for and with FM organizations on the other. In the two parallel conference tracks on the 8th and the 9th of June (Wednesday and Thursday), the main topics will be service excellence, managing and supporting the organization and people, and change management with a focus on people and specialization in sectors, disruption and change management,

value co-creation, connectivity and digitalisation, and transition to sustainable buildings and cities as part of the existing business focus. On Wednesday, Peter Ankerstjerne, CMO at ISS, will deliver a keynote speech about "Disruptive times: Service excellence in a digital world". On Thursday, Simon Svegaard, Business Analytics Manager at ISS, and Morten Kamp Andersen, Partner at Proacteur, will hold a seminar about "Service management 3.0 – The link between employee engagement and customer experience within FM".

On the 7th of June (Tuesday), study tours will take the participants to Edison headquarters and Galleria Campari in order to allow them to peek behind the scenes of historic and modern buildings in Milan. On the 8th of June, the EFMC attendees are invited to join the Evening Network Event at Gattopardo Cafè Milano, a former church which is now a famous location for exclusive events.

Furthermore, the EFMC 2016 will also hold the annual European FM Awards Ceremony during the Evening Network Event. This will include crowning the winners of FM researcher of the year, Partner Across Borders Award (sponsored by eFM and FSI), the ECS EuroFM Student Internship Award, Bachelor Student Poster Competition (sponsored by TOPdesk) and the Master Student Poster Competition (supported by the Condeco Innovation Lab).

And then there was the news of the strategic collaboration between IFMA and RICS even though, in the past, their relationship was relatively cool and distant.

Again I would like to emphasize that we, EuroFM, do try to compete with organizations like IFMA, RICS or for instance BIFM. We are a network association which brings stakeholders within FM together and facilitates them in whatever they want to set up or achieve.

So, we are very happy with this development. If members of EuroFM

(10 IFMA sections are members of EuroFM, like RICS is) are finding each other in this way we can only congratulate them and offer them our support. As always we hope that we can join forces even more in such matters as FM certification, FM standards and FM events.

At the end of August we will have EuroFM Summer school hosted by Laurea University in Helsinki, where students from all over Europe (and the world) will work together on service design in FM.

In September we will be in Madrid for our fall members meeting, where all visiting EuroFM members will have free access to the CIFMers conference. Read all about it on the EuroFM website.

In June at the general members meeting in Milan we will choose a new chairperson of the Practice Network Group and we will vote for a change in our constitution (see the members' messages and our website) and in Madrid we will have elections for the chairperson and treasurer / secretary position. They have reached the end of their term and are therefore not re-eligible.

The rest of the board members are re-eligible.

Also, right here, as chairperson, I urgently call for members to step forward and register themselves as candidates for the positions of chairperson and treasurer, since they are at the end of their term. But of course members can also register themselves for other board positions. There will be elections on every board position.

Shortly after our members meeting in Madrid IFMA will organize its WWP 2016 in San Diego California from October 5th until 7th.

Let us all meet and perform on our best in Milan.

I hope to see you there!

Ron van der Weerd, Chairman



EuroFM Reports

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Practice Network Group

Karin Schaad, Chair



As chairperson of the Practice network group, I am proud to say that we have achieved some minor victories in the last few months. The associations section of

our website is now online, with the presentation of a couple of associations. More are welcome at any time, so please send in your association's input to me or contact me if you have any questions in this matter.

Also, we have asked some of our most faithful attendees to serve as a pilot for the practice section of the "who is who" we started during the members meeting in Stuttgart in February. This is coming along nicely and we should be able to present the first results in Milan.

I am also very much looking forward to the upcoming World FM Day, the date of which is set for 13th July. Those of you who will be attending the EFMC will be able to get further information there as to what you might want to plan in your associations or organizations. I will keep everyone informed as I get more information myself. If you want

more details sooner, you are of course welcome to visit the Global FM website at your convenience.

As our Chairperson has described in detail, we are very much looking forward to our next big event, the EFMC, which will take place in Milan this coming 8-9. June.

Once again we have done our best to put together an attractive and relevant program. This time around, in an attempt to bridge the gaps between research and practice, we have clustered the presentations into topics rather than planning separate business and research tracks. The idea is to fire up the dialogue between practitioners and research players in order to generate further research questions as well as new findings.

It has been a bit of a struggle ensuring the presence of practitioners at the

conference. Today's Facility Managers face a growing workload and find it increasingly difficult to make time to attend to meetings outside of their workplace, let alone find the time and energy to share their experience with their fellow practitioners. What we are all not taking into account is that sharing success stories brings us all forward as it furthers the profession of FM as a whole and might save one or the other of us a lot of time and effort in the mid / long term. The idea is that you share what you have been successful with and take home with you ideas about how improvements could be worked into what you are doing at your workplace. Doing this will be beneficial to both yourself and your employer or client.

In any case, we are very much looking forward to seeing you in Milan soon!

Education Network Group

Pekka Matvejeff, Chair



European FM Educators in Milan

The Education Network Group in EuroFM is a network of universities offering FM Education (Bachelor and Masters level)

in Europe. The role of the ENG Group within EuroFM is to facilitate an active education network in Europe which reflects an integrated approach to FM education, research and practice; to assist educational institutions in drafting their FM curricula and to set standards of FM education in Europe; to encourage and facilitate student exchange between EuroFM Member universities; to encourage and facilitate an active knowledge sharing and staff exchange culture amongst the EuroFM member Universities;

and to enhance internships with the FM industry and other FM related organizations

The added value of participating in this Network Group has a variety of forms: Winter and Summer Schools in different European locations for students studying in EuroFM universities; competitions for students as part of the EFMC; a vast offer of student exchange opportunities all over the world; excellent opportunities for staff exchange and sharing knowledge, supported by EU funds; development projects across the borders and so on. At the moment, utilization of developments in digital environments creates endless opportunities for collaboration.

In Milan, we once again offer platforms for students and researchers on which to present their accomplishments to an international audience. Typically, EuroFM universities are actors that bring education, research and business together. Our academic staff expertise, and fresh and open-minded student groups, along with a variety of pedagogical approaches, create broad and innovative perspectives at the level of the university-business life-interface.

Looking forward to seeing you all in Milan!

Research Network Group

Susanne Balslev Nielsen, Chair



Research in FM practices

The research network group in EuroFM is a network of people who share an interest in research in FM for the benefit of users, societies and

the FM profession.

More than 50 researchers will share their results at EFMC2016 in the format of 22 conference papers. Typically the results are documentation of how FM is conducted today and suggestions on how to improve their effects, either by improving quality or reducing costs. Just like at the best food markets, there will be research of various kinds and flavors. I am certain that

somebody will miss some kind of research, as the world of research is so rich and the need for knowledge can be so specific, but I am proud and honored to present this 15th research symposium, which in my view is relevant, varied and inspiring.

This year the practice and research sessions are mixed, and not parallel sessions. This is a test to find out if this enables a stronger dialogue across EuroFM networks. In the board and in the program committee, we hope this will be the case, as this is our intention. For those unable to attend EFMC2016, the conference papers will be available for members at the EuroFM knowledge portal, and in the proceedings.

Research is a discipline of answering questions, and any good answer needs a good question. I wish for fruitful dialogues at EFMC (and beyond), to explore collectively the practical relevance of research in FM and to stimulate many good questions which may inspire the next generation of EFMC research papers.

See you in EFMC in Milan, or at the members meeting on 28-30 September in Madrid!



