AEB The Association of European Businesses

RUSSIA AND EUROPE

–

DIALOGUE ON SUSTAINABLITY

Quality Information | Effective Lobbying | Valuable Networking

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Victor Verma,

General Manager, Caverion Elmek LLC, AEB Real Estate Committee, Project Management & Ancillary Services Working Group Chairman

27 November 2013

The Association of European Businesses AEB

Frank Schauff,
AEB Chief Executive Officer

Opening remarks

27 November 2013

Christophe Vicic,

COO, Jones Lang LaSalle, AEB Real Estate Committee Chairman

Opening remarks

27 November 2013

Rashid Ismailov,
Director,
Green Standard Center, RF Ministry of Natural Resources and Environment

About sustainable building in Russia: challenges and solutions

27 November 2013

The Association of European Businesses AEB

Olga Chaykovskaya,
Associate, BEITEN BURKHARDT

Governmental support in promoting green initiatives in real estate outside Russia

27 November 2013

Governmental regulation of green initiatives

RUSSIA AND EUROPE – DIALOGUE ON SUSTAINABLITY

Moscow, November 27, 2013

Olga Chaykovskaya

Content

- Types and ways for regulation
- Green initiatives' regulation abroad
- Contact information

Types and ways for regulation

Types of regulation

Type of regulation

Positive

- ✓ Tax credit and\or abatement
- ✓ Grants and\or loans
- ✓ Reduction of construction permit fees (Florida, USA)

Non-monetary

- ✓ Priority construction permit issuance (California, USA)

Negative

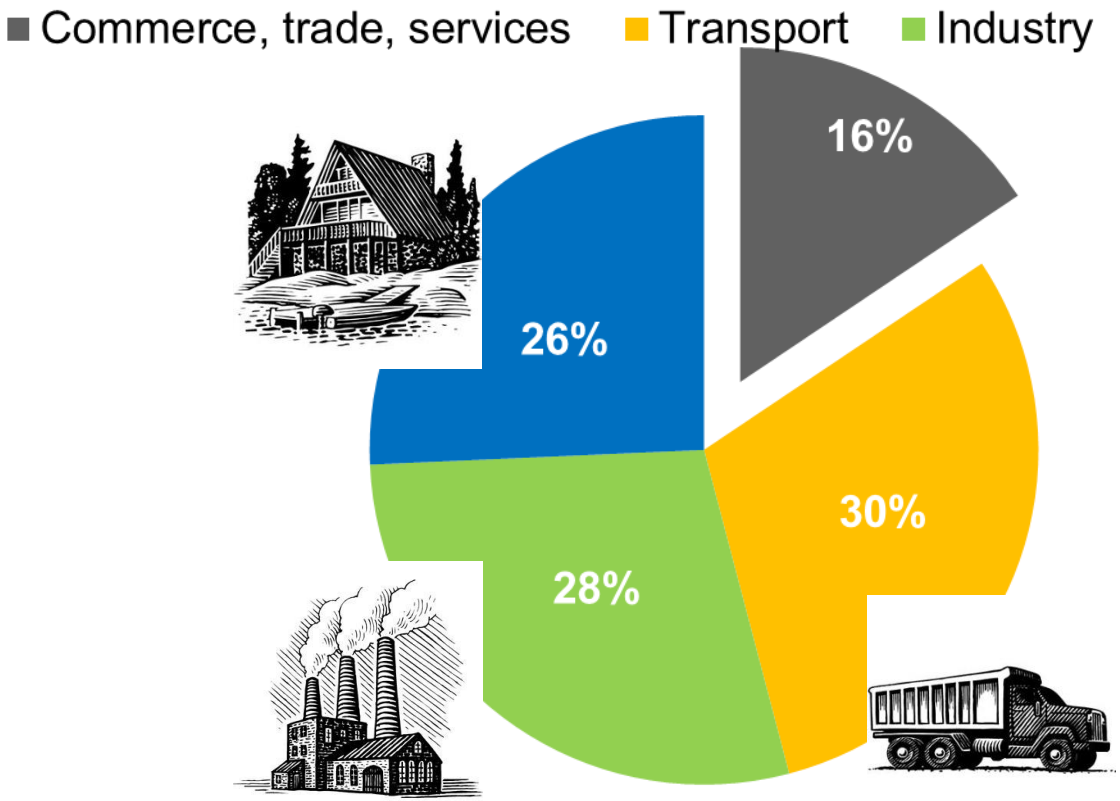
Monetary

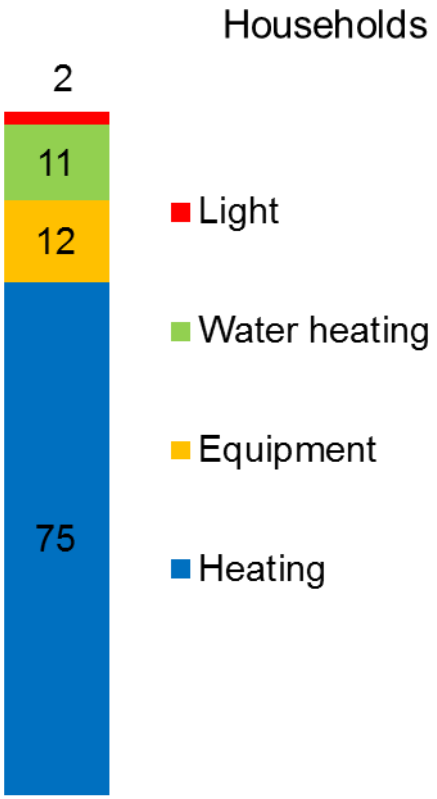
- ✓ Additional fees for excess resources (UK)
- ✓ Fines for non-obtaining “green” documents (Germany)

Non-monetary

- ✓ Construction prohibition (Dallas, USA)

Distribution of final energy consumption in Germany between various consumption sectors





Source: Federal Ministry of the Economics and Technology (BMWi)

Source: Federal Statistic Energy (BStatA)

Green initiatives' regulation abroad

Positive monetary measures (taxation)

Place	Incentives	Source
Howard County, Maryland, USA	• Any new construction receives a 5-year **property tax credit** from 25% to 75% (depending on the LEED grade) • Any existing building receives a 3-year **property tax credit** from 10% to 50% (depending on the LEED grade)	Council Bill 49-2007
Ohio City of Cincinnati, USA	• Residential construction: 100% **tax abatement** for 15 years • Residential renovations: 100% **tax abatement** for 10 years • Commercial construction: effective 75% **tax abatement** for 8-15 years • Commercial renovations: effective 75% **tax abatement** for 8-12 years	City Ordinance 502-2012, City Ordinance 446-2007, City Ordinance 182-2007
United Kingdom	• Reduced **VAT** for energy-saving materials • **Stamp duty relief** for zero carbon homes	Energy Bill
France	• Accelerated **depreciation regime** over a 12-month period • **Tax property reduction** (up to 100%) during minimum 5 years • **Personal income tax reduction** (up to 15% of all costs related to efficiency increase but no more than 8 000 Euro)	French Tax Code

Positive monetary measures (taxation in Netherlands)

The environmental investment deduction (MIA)

Profit tax deduction up to 36% of the investment costs for an environmentally friendly investment

Environmentally friendly investment are listed in the Environmental List (currently include more than 350 positions)

The taxpayer may submit an application to include its product into the Environmental List in order to apply MIA\Vamil

Profit tax benefits

Vamil

The taxpayer may choose the level of depreciation at random

The energy investment relief (EIA)

Profit tax deduction equal to 41,5% of the energy-efficient investment

Energy-efficient investments are listed in the Energy List (updated one per year)

Positive monetary measures (others)

Place	Incentives	Source
Germany	• Broad **range of subsidies**, including the Climate and Energy Fund (up to 2.5 million euro in 2013-2018). The Climate and Energy Fund is financed through payments of nuclear power plant operators, additional payments for carbon emissions, nuclear fuel tax • **Loans at 1%-interest rate** from state-owned KfW bank for modernizing buildings and reducing carbon emissions	Directive on the Energy Performance of Buildings, Additional Energy Saving Regulations
City of Minneapolis, USA	Up to 100% **credit (reduction) in the storm water utility fee** for management tools/practices that address storm water quantity	Minneapolis Code of Ordinances
Gainesville, Florida, USA	**50% reduction in the cost of construction permit fees** for private contractors who use LEED	Gainesville Green Building Program, 2002
El Paso, Texas, USA	**Grants** are awarded at increasing intervals determined on level of LEED certification. Maximum grant allowance is $200,000 for LEED Platinum **for new construction**	Ordinance on Sustainable Development, 2008
Sonoma County, California, USA	**The payment for tools installed is made from the saved fees** (“pay as you save” system)	Sonoma County Energy Independence Program (SCEIP), 2011

Positive non-monetary measures

Place	Incentives	Source
San Francisco, California, USA	**Priority construction and\or commissioning permit review** for all new and renovated buildings that achieve a LEED Gold certification	Green Priority Permitting Program
Oakland, California, USA	**Free technical assistance** provided by Oakland Recycles for businesses that are interested in becoming certified green businesses	Civic Green Building Ordinance, 2005, Green Building Guidelines Resolution, 2006
Gainesville, Florida, USA	**Fast-track building permit incentive** for private contractors who use LEED	City of Gainesville Code of Ordinances, Gainesville Green Building Program, 2002
Netherlands	• **Long-term agreements** between the state and more than 1000 companies (PPP instrument) • For the participants of these agreements **a simplified procedure of ecological expertis**e can be applied • A constant monitor of results achieved and free of charge improvement recommendations • **Sustainable procurement:** all public authorities execute purchase of only sustainable goods and services	Environmental Law

Evolution of long-term agreements in the Netherlands

1992 – 2000

Basic efficiency

1. Reduce of energy consumption
2. Increase of buildings' efficiency
3. Energy efficient equipment

2001 – 2012

Life Cycle Efficiency

1. Energy management
2. Sustainable energy
3. Recycling of industrial waste
4. Sustainable design of products

2009 – 2020

"Road maps" and long term planning

Negative monetary measures

Place	Incentives	Source
The United Kingdom	• **A penalty of up to 10% of the energy company's global turnover** in the case of non compliance with Carbon Emissions Reduction Target (CERT), • **A penalty of up to 10% of the energy company's global turnover** in the case of non compliance with Community Energy Savings Program (CESP),	Energy Bill
Germany	In case of **sell or lease the property without an energy passport a fine up to 14 000 Euro** will be imposed (starting from 2014)	Law on Energy Saving, 2009

Negative non-monetary measures

Place	Incentives	Source
City of Dallas, Texas, USA	All new projects must either be certifiable under the Dallas Green Construction Code or be LEED certifiable or be Green Built Texas certifiable. **No other construction is possible**	Dallas Green Construction Code
El Paso, Texas, USA	**No (re)construction is permitted** on the state owned building unless LEED standards are met	Ordinance Adopting Sustainable Development Design Standards, 2008
Germany	• Minimum and mandatory standards for all new residential and almost all new non-residential buildings • Starting from 2014 **all transactions with real estate property must be accompanied with an energy passport** of the property • Energy efficiency of the property must be clearly indicated **in the text of transactional documents**	Directive 2010/31/EU, Law on Energy Saving, 2009

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Legal advice in the fields of

Real estate law, Real estate investments,
Construction
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Professional experience

University Higher School of Economics, Faculty of Law, 2008;

PriceWaterhouseCoopers, 2007-2008;

Baker&McKenzie, 2008-2009;

MGAP, 2009-2010;

BEITEN BURKHARDT, since 2010

Languages Russian, English, German

Thank you very much for your attention.

Ksenia Lukyashchenko,
Head of Ecocertification Department,
EcoStandard group

Russian market overview on commonly applied green standards

27 November 2013

The Association of European Businesses AEB

Ksenia Agapova,
Associate Director, Jones Lang LaSalle

Characteristics of green standards in Russia

27 November 2013

JONES LANG LASALLE®

Real value in a changing world

Green standards in Russia *opportunities* and features of implementation

Association of European Business Open Event

Ksenia Agapova,
Associate Director
November 27, 2013

Jones Lang LaSalle sustainability achievements globally

In 2010 - 2013 JLL

- Documented over **$128 million in energy savings** for clients
- Provided **20,000 facilities** with specialized **energy services**
- Completed over **130 LEED®** projects totalling more than 50 million square feet
- Installed or developed **2,000 KW of solar systems**, and advised on biomass and wind energy
- Had **more than 1000 LEED® Accredited Professionals** across our global business
- Benchmarked the sustainability performance of 1,100 properties across all of our syndicated services
- Documented over 150 initiatives that had been implemented to reduce energy use and GHG emissions in our own occupied space.
- Certified **8 projects in Russia and CIS**, the first **LEED Gold** certification in Ukraine

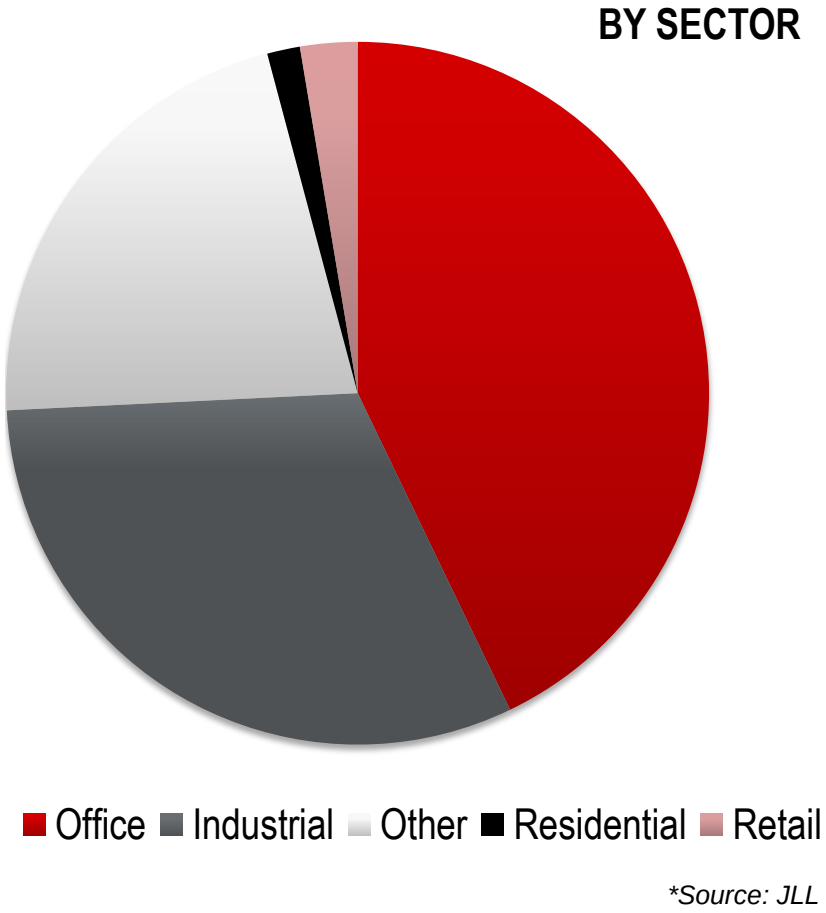
Green building in Russia

The first 28 projects (14 BREEAM, 7 LEED, 1 DGNB and 6 BREEAM In-Use) certified in 2010 – 2013, totaling in **640 000 sqm of green commercial area.**

By the end of 2015 it is expected that **«green» office and industrial stock** to grow up to **1 500 000 sqm**.

Developers and investors go green – Hines, O1 Properties, AIG Lincoln, Radius group, NCC, Sponda, Ghelamco CRE Awards 2013 – 2 award winners – BREEAM certified buildings

Skolkovo, Sochi 2014, FIFA 2018 committed to achieve LEED \ BREEAM, 1 732 000 sqm – «green» space by 2015*



*Source: JLL

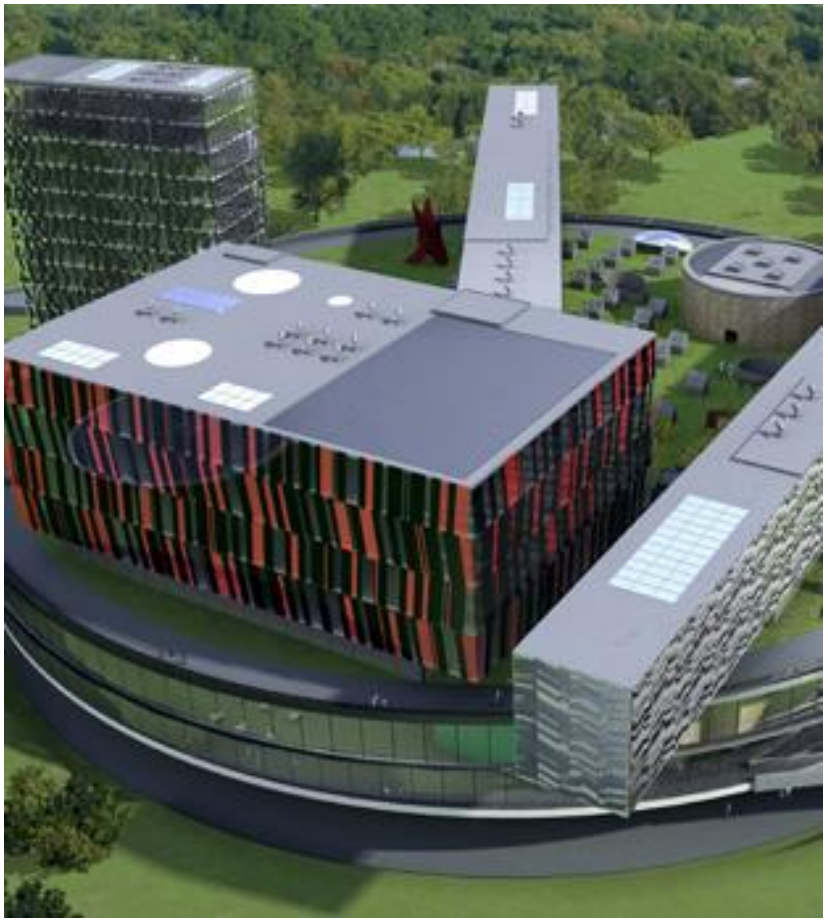
Green building in Russia

SKOLKOVO
Committed to achieve LEED \ BREEAM, 732 000 sqm – office + campus space by 2015

SOCHI 2014
13 projects to be certified, BREEAM Good (target), at the moment 2 projects had passed DS assessment

FIFA 2018
10 stadiums to be certified to LEED \ BREEAM (requirement of the FIFA). 1 stadium registered, total – **1 000 000 sqm of certified venues by 2018**!

Residential
The only residential building in Russia certified to BREEAM is located in Saint Petersburg



Green building in Russia - stock

Building	Certified to	Rating	Region	Rentable area (sqm)
IP South Gate, phase 1	BREEAM	Very Good (56.56%)	Domodedovo	75 000
IP South Gate, phase 2	BREEAM	Pass (36%)	Domodedovo	53 000
IP South Gate, phase 3	BREEAM	Very Good (58.36%)	Domodedovo	21 172
Podmoskovnaya Depot	BREEAM	Good (47.87%)	Moscow	16 350
Dmitrov Logistic Park, building B	BREEAM	Good	Dmitrov	69 521
SKF Factory	LEED	Gold	Tver	24 700
Hamilton	LEED	Silver	Kimri	4 600
TOTAL				**264 343**

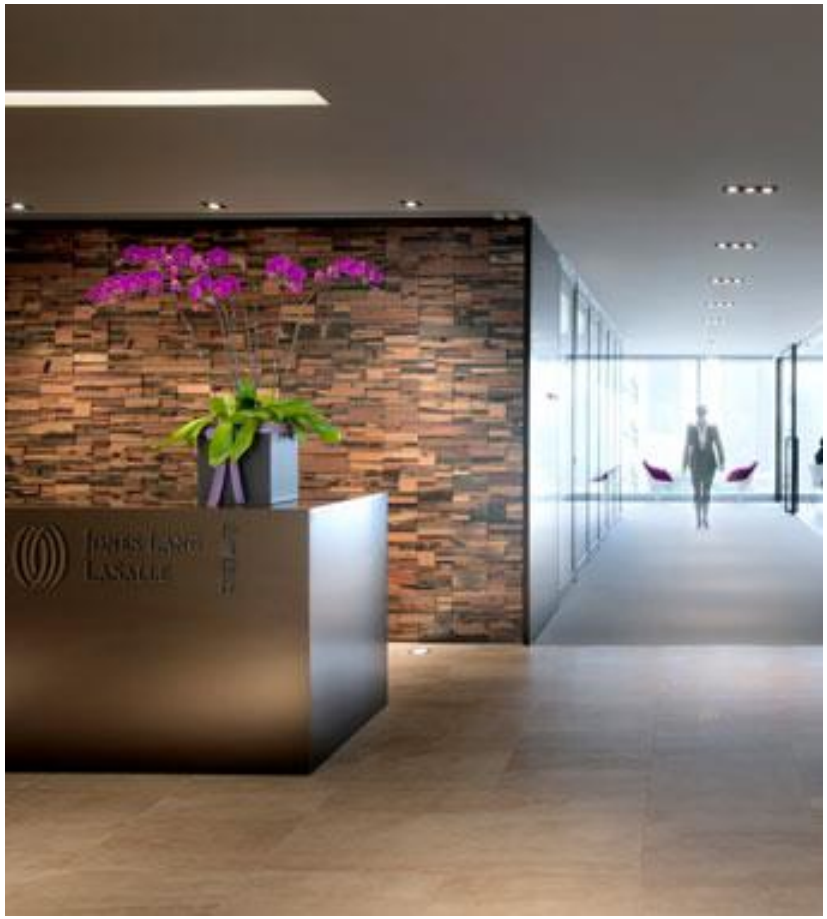
White Square	BREEAM In-Use	Good (51%) – Very Good (59%)	66 164
Olympia Park	BREEAM	Pass (33%)	45 943
Ducat Place III	BREEAM	Very Good (56%)	31 000
Lighthouse	BREEAM (Int)	Pass (34%)	22 520
SIEMENS office	LEED CI	Gold	19 400
Ducat Place II	BREEAM In-Use	Good (41%)	13 172
Japan House	BREEAM In-Use	Good (41%)	9 000
Deutsche Bank office	LEED CI	Gold	7 877
Jones Lang LaSalle office	LEED / BREEAM	Gold \ Good (49%)	2 831
Sadovaya Plaza	BREEAM In-Use	Good (45%)	12 200
Romanov Dvor I and II	BREEAM In-Use	Very Good (62-63%)	46 500
Megamade	BREEAM In-Use	Pass (35%)	9 500
Arcus III	BREEAM	Very Good (57.36%)	43 000
Leninsky, 119	DGNB	Gold	15 400
TOTAL		**355 507**	

BREEAM

- BREEAM was developed in 1990 by BRE Global (Building Research Establishment)
- The first property environmental standard
- 200 000 buildings certified and 800 000 registered for certification
- Mandatory for domestic and municipal buildings in the UK
- The first INTERNATIONAL green building standard, adopted to Netherlands, Gulf, Sweden, Germany
- ICSC and a number of financial institutions committed to BREEAM

LEED

- LEED was launched in 2000 by USGBC (United States Green Building Standards)
- 16 168 108 certified commercial floor space
- Mandatory for municipal buildings in several states (California)
- National versions in India and Italy
- A number of financial institutions committed to LEED (US based)



BREEAM vs LEED

Comparison

- More than 20 700 results on BREEAM vs LEED request
- LEED is a market leader
- BREEAM developed the first international standard
- Difference comes from origin – British and American standards
- There are buildings certified to LEED in the UK and to BREEAM in the USA

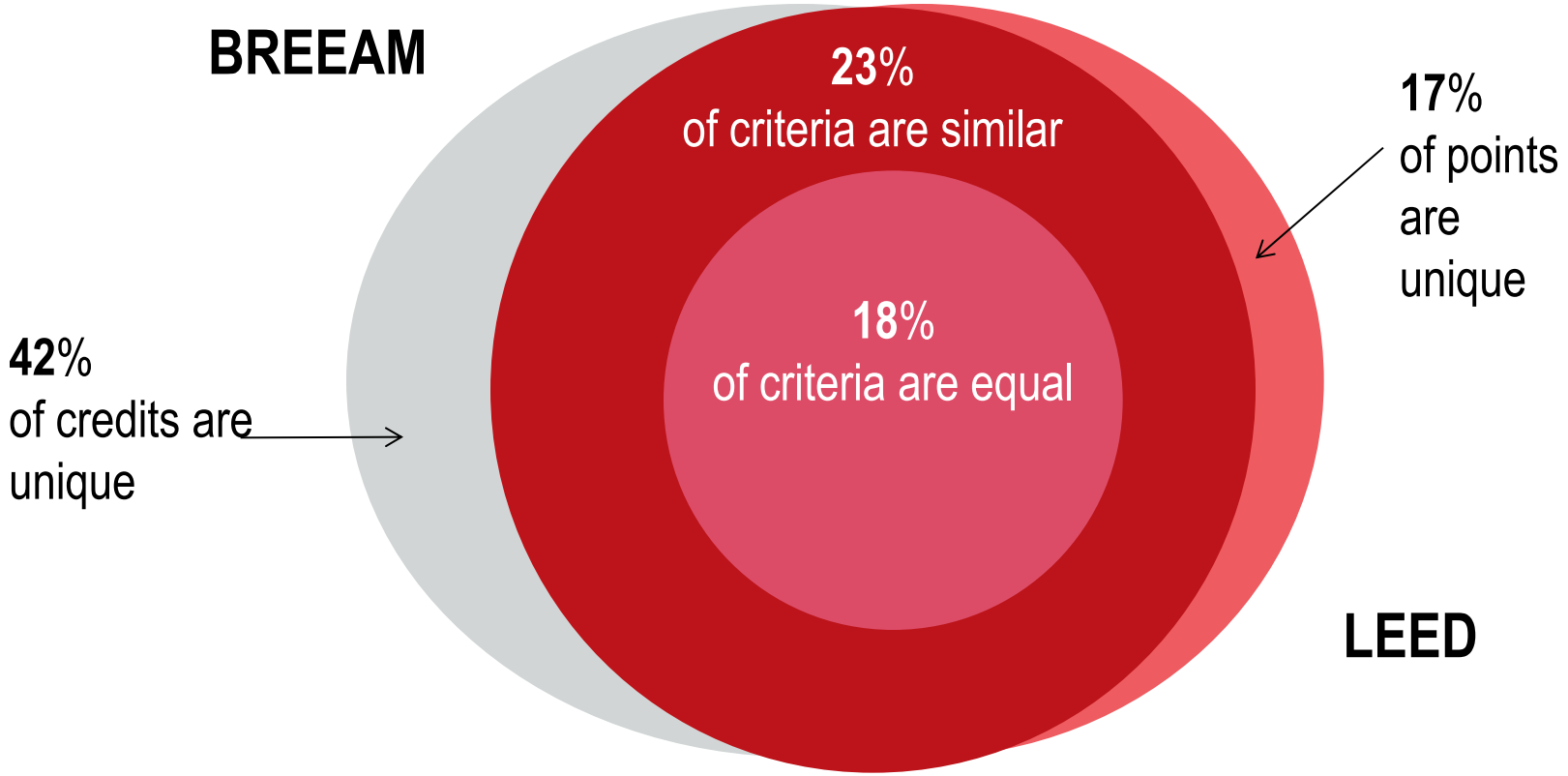
BREEAM vs LEED

Comparison

	LEED	BREEAM
Categories	Sustainable sites	Land use and ecology
	Energy and atmosphere	Energy efficiency
		Transport
		Pollution
	Water efficiency	Water
	Materials and resources	Materials
		Waste
	Indoor Environmental Quality	Health and wellbeing
		Management
	Innovation and Design	Innovation

BREEAM and LEED Technical compliance

BREEAM Europe Commercial vs LEED CI



100% all criteria – LEED Gold + BREEAM Very Good

BREEAM vs LEED

Comparison

	LEED	BREEAM
Number of buildings	16 168 106 sqm	116 000 certified, 714 000 registered
Governing body	USGBC, industry association	BRE Global, research institute
Reference standards	USA ASHRAE	National and EU
International version	no	yes
Units	USA	International (SI)
Ratings	Pass (40), Silver (50), Gold (60), Platinum (75)	Pass (30), Good (45), Very Good (55), Excellent (70), Outstanding (85)
Assessor responsibility	No formal responsibility, project management	Report writing, communicate with BRE Global
Energy Calculations	USD	Carbon Dioxide

BREEAM

Mandatory requirements

	Pass	Good	Very Good	Excellent	Outstanding
Man 1 Commissioning				1	2
Man 3 Construction site impacts				1	2
Man 4 Green building user guide		+	+	+	+
Hea 4 High frequency lighting	+	+	+	+	+
Ene 1 Energy efficiency				6	10
Ene 2 Sub-metering of energy use			+	+	+
Ene 5 Low or zero carbon technologies				+	+
Wat 1 Water consumption			+	+	2
Wat 2 Water meter				+	+
Wst 3 Recyclable waste storage				+	+
LE 4 Mitigating ecological impact				2	2

LEED

Prerequisites

WEp1 Water use reduction – 20%	Careful attention to fixture selection and flow rates can help projects achieve 20% or greater interior water savings at minimal cost and without compromising comfort.
EAp1 Fundamental commissioning of energy use systems	For projects less than 50,000 ft2, the CxA may be involved in the project as an associate of the contractor, construction manager, architect, or engineer and may have other project responsibilities.
EAp2 Minimum energy performance	The prerequisite demands that teams comply with a number of prescriptive measures, along with requirements for lighting power density reductions and meeting performance thresholds for equipment efficiency based on the ASHRAE 90.1-2007 standard. The LEED-CI project scope includes only the systems being installed within the scope and budget of the interior fit-out of the project. Base building systems that are not part of the leasable area occupied by the interior space are not addressed here.
EAp3 Fundamental refrigerant management	Zero use of chlorofluorocarbon (CFC)-based refrigerants in tenant heating, ventilating, air conditioning and refrigeration (HVAC&R) systems used within the LEED project scope of work

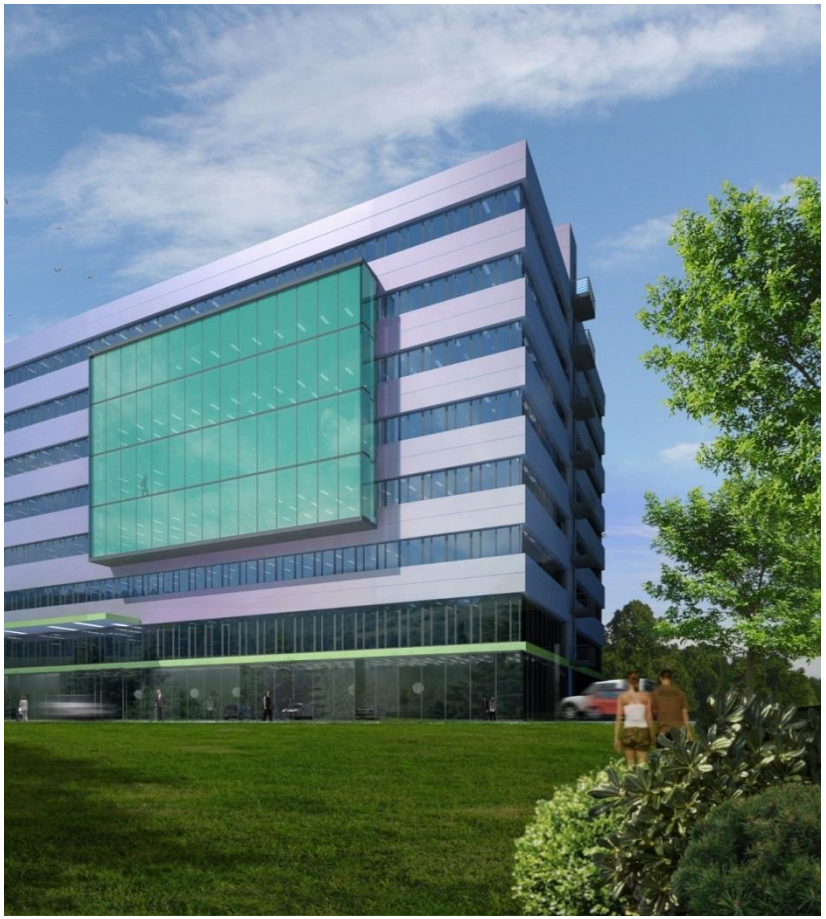
LEED

Prerequisites

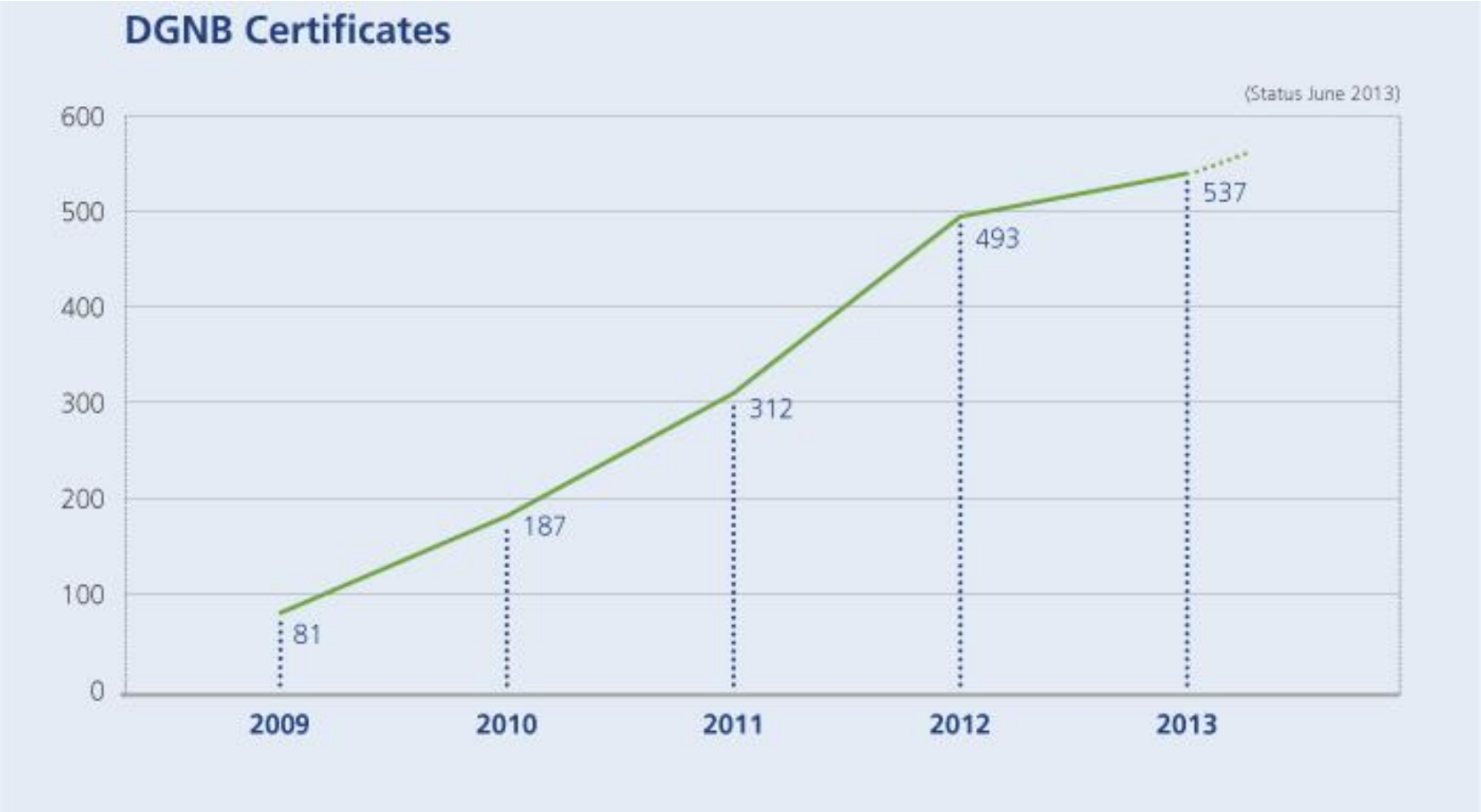
MRp1 Storage and collection of recyclables	This prerequisite is very easy to meet. You only need to provide one space to store recycling. You are not even required to have a specific square footage, although the LEED Reference Guide does provide recommended square footage based on building size (see table below). To size this space properly, also consider the building's needs and recommendations from your recycling hauler.
IEQp1 Minimum indoor air performance	Meet the minimum requirements of Section 4 through 7 of ASHRAE Standard 62.1-2007, Ventilation for Acceptable Indoor Air Quality (with errata but without addenda). Project teams wishing to use ASHRAE approved addenda for the purposes of this prerequisite may do so at their discretion. Addenda must be applied consistently across all LEED credits.
IEQp2 **Environmental Tobacco Smoke (ETS) Control**	Locate tenant space in a building that prohibits smoking by all occupants and users, within 25 feet of entries, outdoor air intakes and operable windows.

DGNB

- **Developed in 2008 by DGNB, 150 buildings certified (pre-certification - 200)**
- At present, the DGNB System can be used to certify some **15 different schemes in Germany and internationally**. This extensive range includes existing and new office, administrative, commercial, residential and mixed-use buildings, both new and in-use
- The DGNB System covers all of the key aspects of sustainable building: **environmental, economic, sociocultural and functional aspects**, technology, processes and site. **The first four quality sections have equal weight in the assessment**.



DGNB


DGNB Certificates
(Status June 2013)
600
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81
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493
537
2009
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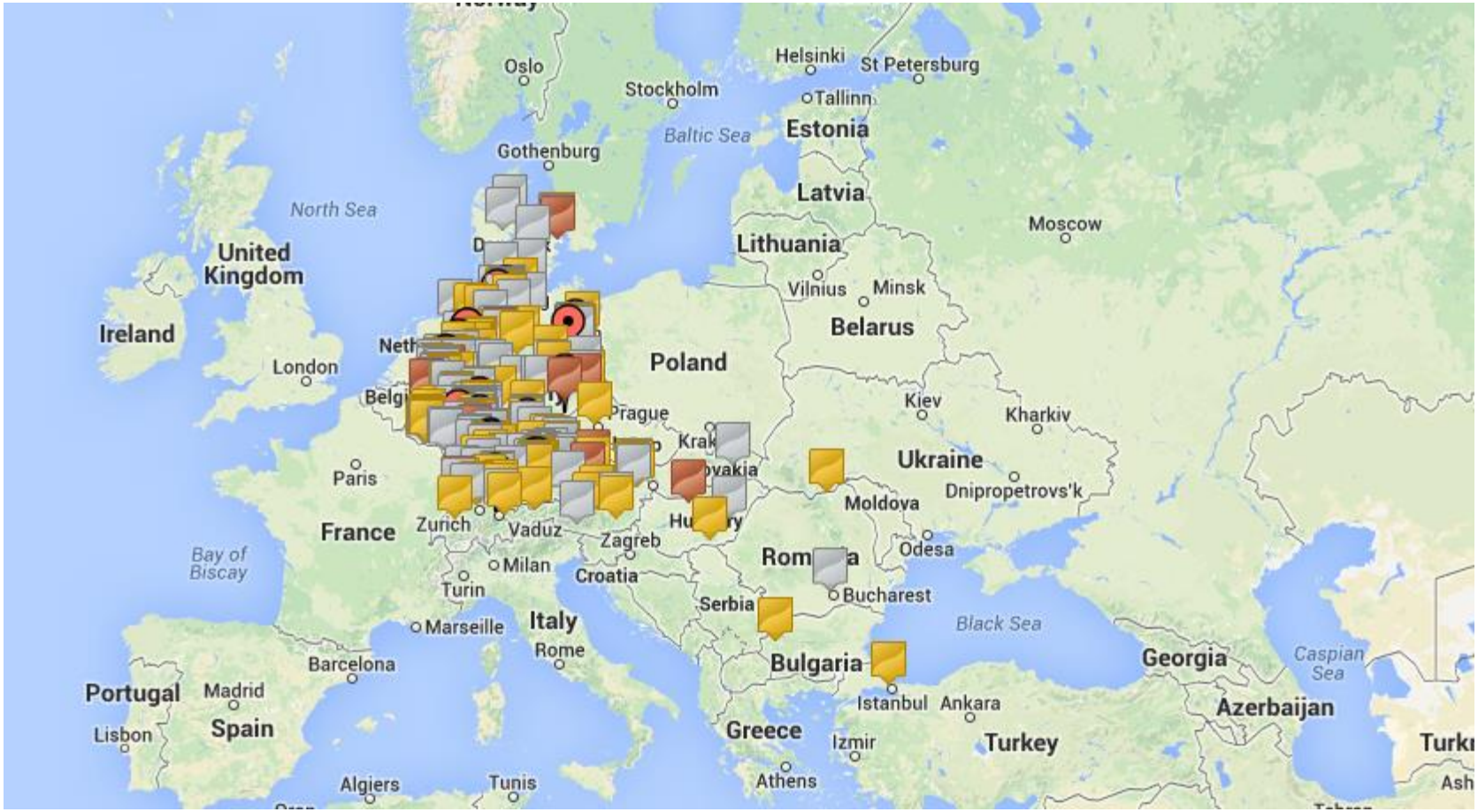
2011
2012
2013

DGNB


Oslo
Stockholm
Helsinki
St Petersburg
Tallinn
Estonia
Baltic Sea
Gothenburg
Latvia
North Sea
Moscow
United Kingdom
Lithuania
Vilnius
Minsk
Belarus
Ireland
London
Poland
Prague
Kiev
Kharkiv
Paris
Ukraine
Moldova
Dnipropetrovs'k
France
Zurich
Vaduz
Zagreb
Odesa
Bay of Biscay
Milan
Croatia
Turin
Bucharest
Serbia
Marseille
Italy
Black Sea
Rome
Barcelona
Bulgaria
Georgia
Caspian Sea
Portugal
Madrid
Istanbul
Ankara
Azerbaijan
Lisbon
Spain
Greece
Izmir
Turkey
Algiers
Tunis
Athens

RUSSIAN GREEN STANDARD

- **Main technical manual was approved in February 2010**
- **Governed by T3 Zelenie Standarty, membership based, supported by Ministry of Natural resources**
- **Voluntary based standard**

Following types of assets can be certified:

- Building
- Lang plots
- Non-completed construction
- Non-habitable structures
- Part of building

RUSSIA GREEN STANDARD

- 40-49% Certified
- 50-59% Silver
- 60-79% Gold
- ➢ 80% Platinum

Pilot stage

March 2013 National stnadard developed GOST R 54694-2012 "Оценка соответствия. Экологические требования к объектам недвижимости“ – as basis to create common understanding of building environmental quality

- Technical manual – 48 pages
- No background


ЗЕЛЕНЫЕ СТАНДАРТЫ
ЦЕНТР ЭКОЛОГИЧЕСКОЙ СЕРТИФИКАЦИИ

СЕРТИФИКАТ СООТВЕТСТВИЯ

СИСТЕМА ДОБРОВОЛЬНОЙ СЕРТИФИКАЦИИ ОБЪЕКТОВ НЕДВИЖИМОСТИ - «ЗЕЛЕНЫЕ СТАНДАРТЫ» № РОСС RU. И 630.04 АА00
Срок действия с _____ по _____

ОРГАН ПО СЕРТИФИКАЦИИ

ОБЪЕКТ НЕДВИЖИМОСТИ

РАСПОЛОЖЕННЫЙ ПО АДРЕСУ

СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ СИСТЕМЫ ДОБРОВОЛЬНОЙ СЕРТИФИКАЦИИ ОБЪЕКТОВ НЕДВИЖИМОСТИ - «ЗЕЛЕНЫЕ СТАНДАРТЫ»

Сертификат выдан _____
Юридический адрес _____
ОГРН, ИНН _____
На основании _____
Руководитель органа _____ _____
Подпись инициалы, фамилия

Эксперт _____ _____
Подпись инициалы, фамилия

Сертификат соответствия зарегестрирован в едином реестре сертификатов Соответствия Системы за № _____, *дата регистрации*
Директор НП «Центр экологической сертификации – Зеленые стандарты»
_____ _____
Подпись инициалы, фамилия

Green building in Russia

Obstacles

Recycling	→	No value of waste, no facilities
Alternative energy	→	Centralized electricity \ heat production - no opportunity to sell electricity to grid
Energy efficient buildings	→	Energy price too low, no incentives
Waste water treatment	→	No incentives, regulations not there
Materials	→	LCA not incentivized, no regulations re ecological management in production No regulations re VOC
Water	→	Water prices too low
People factor - mentality	→	The easiest one, market transformation

Green standards

Additional costs

Where is baseline? Energy efficient lighting included or not? Quality HVAC included or not?

Certification specific add-ons:

1. Cycle racks
2. Metering equipment
3. Leakage detection systems
4. Sanitary supply shut off
5. Water efficient fixtures
6. Acoustic requirements?
7. Additional HVAC costs (demand-controlled, filters)

8. **Additional effort – designers and engineers, contractors, consulting (alternative energy report, green building user guide, transport plan), noise measurements, commissioning**

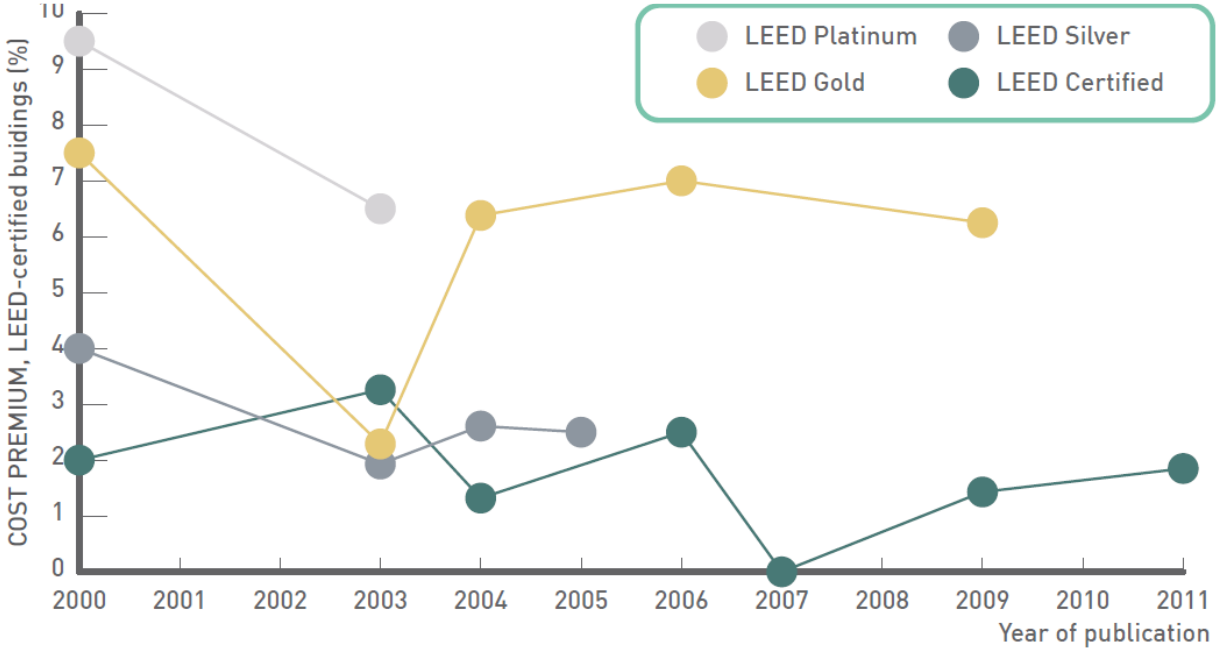
Green buildings – costs

- **Added costs are perceived more than they really are**

Actual costs
0.4% to 12.5% - actual costs based on various studies*

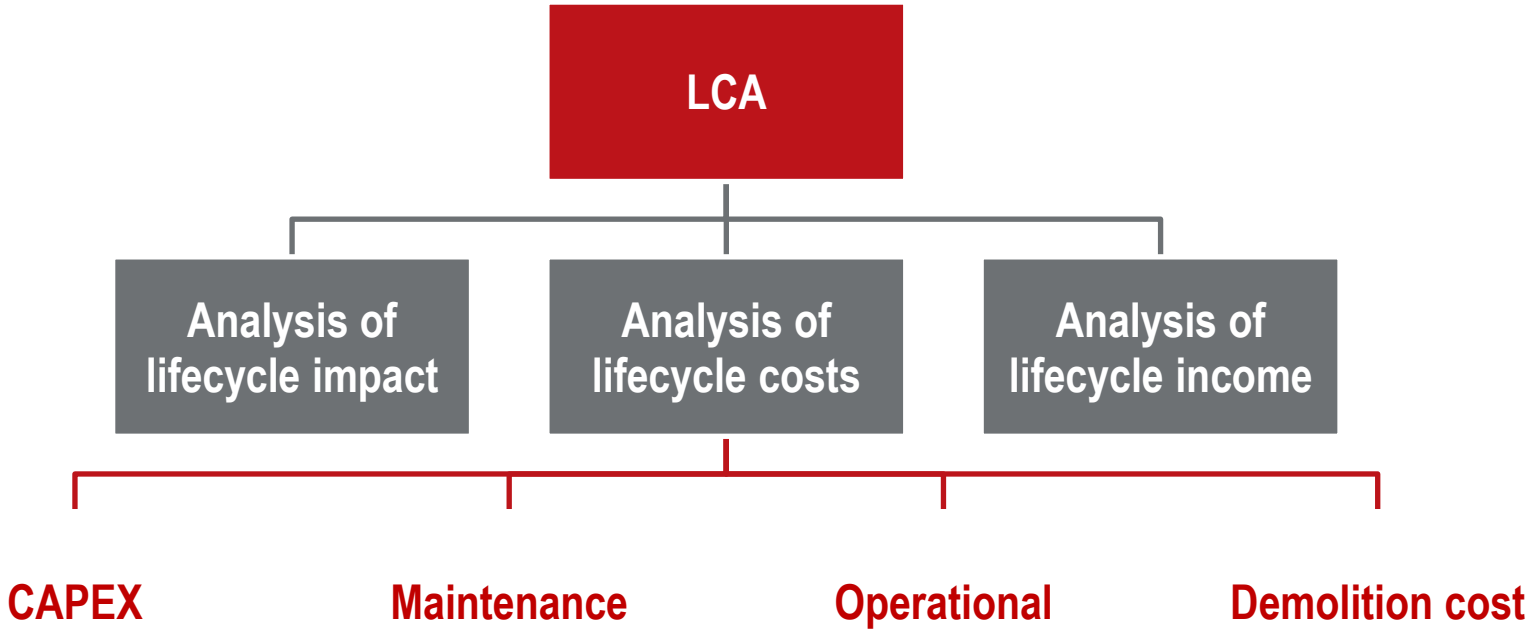
Perceived costs
0.9% to 29% - based on design stage estimates and surveys*

- **Green building cost premium decreases over time****
(new technologies become available)

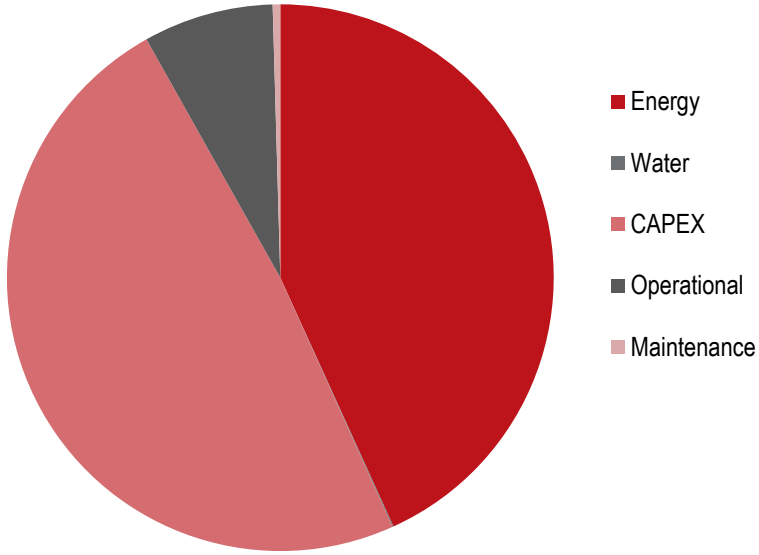


* Source: WGBC, Business Case for Green Building report, 2013
** Source: USGBC – various sources, Business Case for Green Building report, 2013

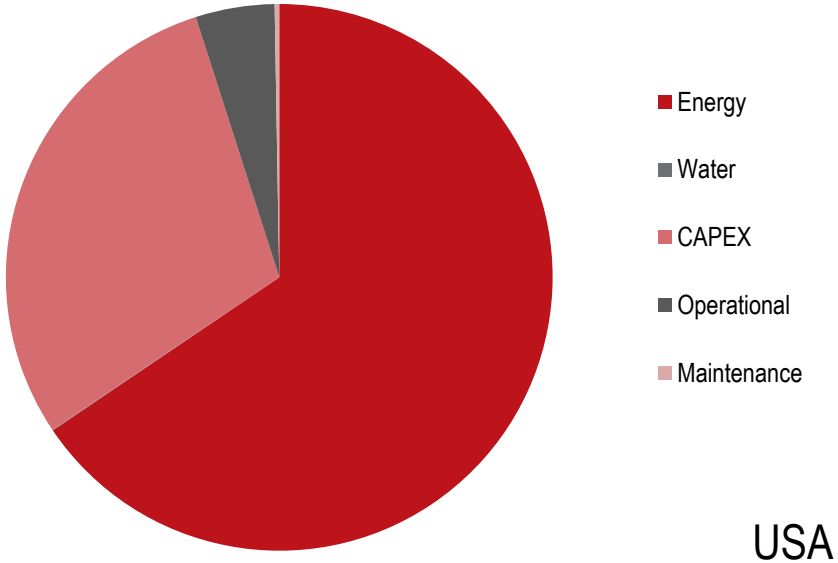
Green buildings – procurement



Green buildings – procurement



RUSSIA



USA

Case study – JLL Moscow office

In 2012 JLL had moved to a new office

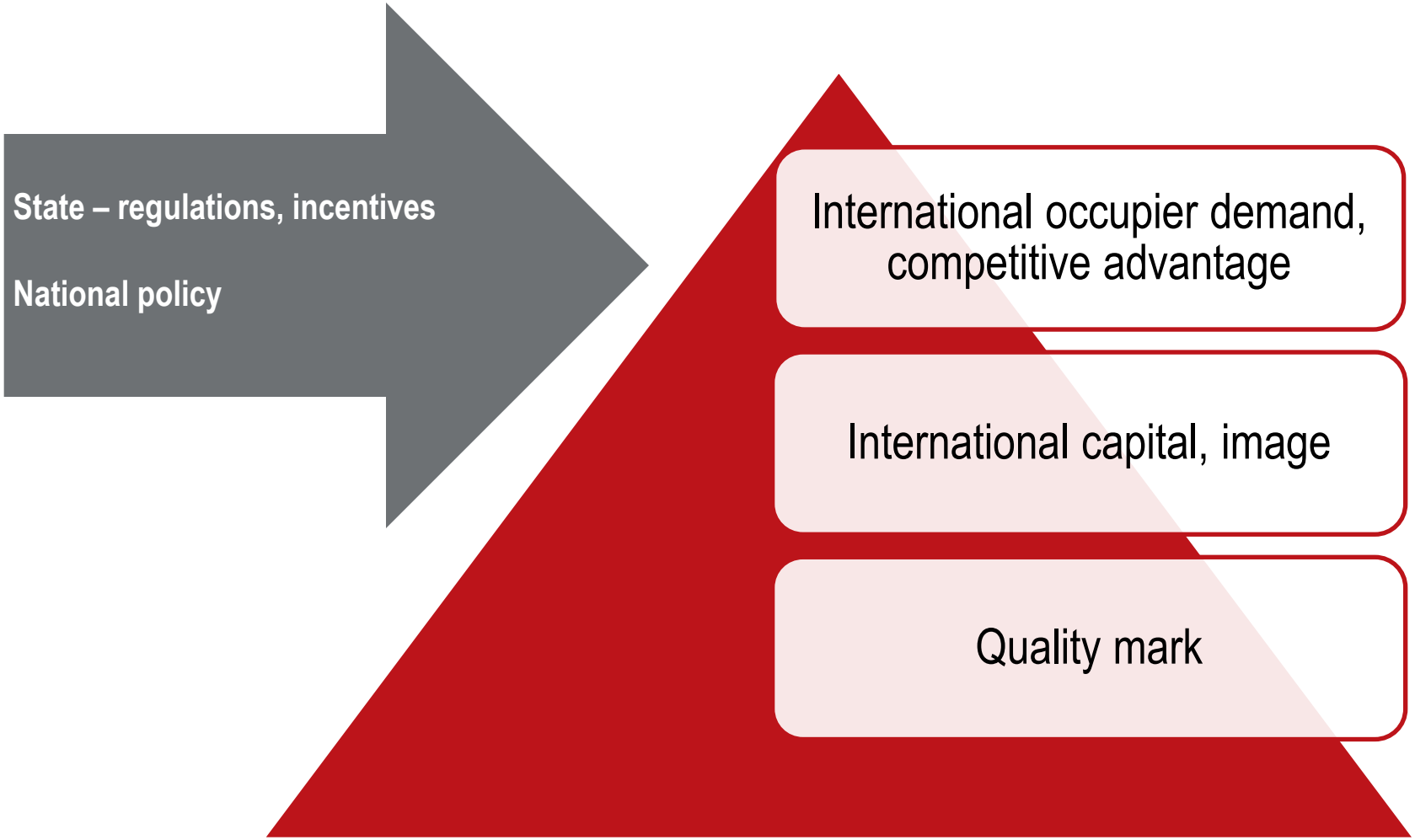
Certification level – **BREEAM Good and LEED Gold**

Motives – global commitment, image, innovation, business development, employee motivation and engagement

Energy efficiency*	Annual cost savings (USD)*	Payback (years)	Additional construction costs*
43%	24 125	5.68	4.8%

** Based on actual consumption and paid bills*

Green building in Russia



Green building in Russia

We believe implementing quality development practices and increasing transparency as regards to defining class A+ for the Russian market will serve to improve our marketplace.

The BREEAM certification **process inspires our organization to continuously improve our real estate** as we demonstrate value and sustainability our customers. Our investors and customers understand and value the commercial benefits that sustainability can bring in terms of **acting responsibly within the community, achieving lower costs of operations, anticipating future increased regulations and energy prices, facilitation of increased staff productivity and overall satisfaction amongst stakeholders**. In addition, our commitment to BREEAM is aligned to the corporate sustainable purchasing policies of our multinational companies who required modern facilities to support their business operations in emerging markets."

SOUTH GATE INDUSTRIAL PARK

breeam — The Code for Sustainable Buildings

This is to certify that

South Gate Industrial Park, 2d phase,
Building 6 (blocks EFGH),
Belye Stolby microdistrict,
Domodedovo district,
Moscow region 142050, Russia

has achieved a score of 56.07%, and a BREEAM rating of

VERY GOOD

Pass — Outstanding

This Post Construction assessment was carried out under the 2009 version of BREEAM Europe Commercial: Industrial

Signed on behalf of BRE Global Ltd — 4th January 2013 (Date)

Ksenia Agapova (Licensed Assessor) — Individual Entrepreneur Agapova Ksenia Aleksandrovna (On behalf of)

Skladi 104, LLC (Client) — Skladi 104, LLC; Radius GROUP (Developer)

MegaStroy, LLC (Main Contractor) — SAN LTD LLC (Architecture and Design)

Jones Lang LaSalle (Sustainability Consultant) — FM Kraft, LLC (Facility Management Company)

Certificate Reference: BREEAM-0046-0444

breglobal

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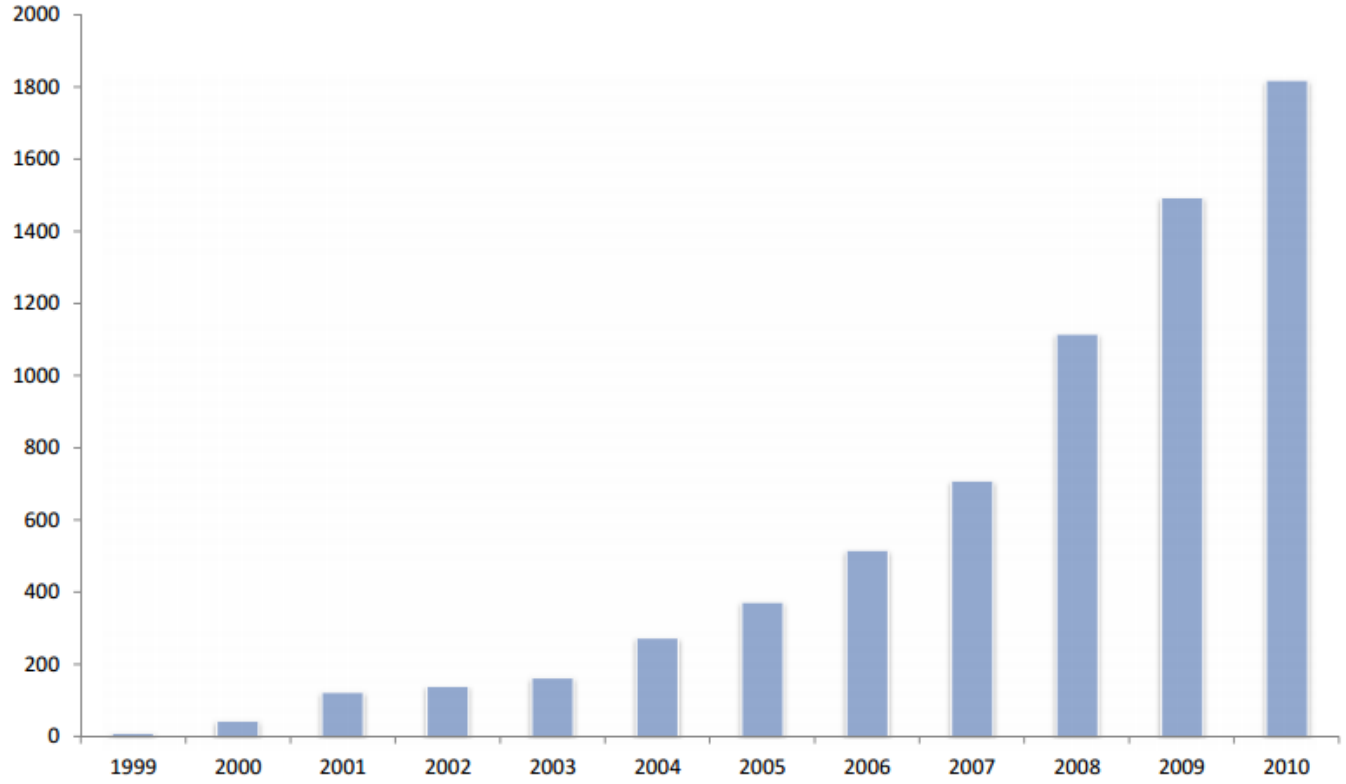
www.breeam.org

Additional perspective – sustainable business

CSR reporting growth 2000-2010 – number of reports Worldwide*



Year	Growth
2010	↑ 22%
2009	↑ 34%
2008	↑ 58%
2007	↑ 37%
2006	↑ 38%
2005	↑ 36%
2004	↑ 65%
2003	↑ 20%
2002	↑ 14%
2001	↑ 177%
2000	↑ 300%
1999	base year

**Source: Data extracted from the GRI Reports List on 2 March 2011*

Mandatory CO2 reporting

Integrated reporting

UK

- According to the Climate Change Act 2008 government had to implements ***mandatory CO2 reporting by*** 2012
- Achieve UK CO2 reduction 50% (baseline 1990) targets by 2025:, CO2 reporting = **4 million tonnes CO2**

USA

- Guidance on assessment of Climate Change risks issued by Committee of National Security. The Guide prescribes to companies to report Greenhouse gases
- Dow Jones Sustainability index

Contact

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Associate Director

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International Real Estate Consultants

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Thank you!

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The Association of European Businesses AEB

Victor Verma,

General Manager, Caverion Elmek LLC, AEB Real Estate Committee, Project Management & Ancillary Services Working Group Chairman

Summary of questionnaire

27 November 2013

Caverion

Over 100 Years of Experience

Design, Installation & Technical Maintenance of Building Systems

Facility Management

cevenue in 2012

2.8
EUR billion

STRONG

market position in many Europian countries.

13
countries,
head office
in Finland.

250
locations close
to customers.

≈18,000
employees.

ServiFlex

≈38,000
shareholders. Trading in
stock exchange NASDAQ
OMX Helsinki Oy .

55%
Service and maintenance
of total revenue.

Arrowhead technology for demanding properties
Own products and R&D are among our strenghts

Special technological competence

- **Clean rooms**
- **Cooling**
- **Extinguishing and sprinkler solutions**
- **Security and AV systems**
- **Energy efficiency**

R&D center in Aachen, Germany

- Specialises in the research and development of advanced products related to ventilation, cooling and heating
- Test stations to simulate functioning of building systems in demanding properties, such as surgeries, laboratories, TV studios and large exhibition and sport halls

Own products and brands

- KRANTZ KOMPONENTEN (air distribution, cooling and heating, clean room systems)


Aachen, Germany

Caverion in Russia

- Design & installation of building systems
- Focus on Service and Technical Maintenance
- Facility Management
- Over 2 500 000 sq.m. in Technical Management
- Over 1 200 objects
- More than 900 employees
- More than 65 cities of Russia
- 50 service cars
- ISO 9001:2001 quality certificate

Answers to the Questionnaire – short summary

1 Which factors are, in your opinion, the most important for a sustainable Green building?

- *First of all, what does 'Green Building' actually mean? Is this different from 'sustainable building' or 'green construction'?*
- *Half of the respondents: Environmental protection and Social responsibility go first.*
- *Another half: design and construction solutions are absolutely critical but remain blurred.*
- *Role of the Government is vital and should be compulsory somehow.*

2 Which factors are, in your opinion, the most important for a sustainable Green building?

- *Energy and resources in the RF continue to seem cheap. Investors traditionally have short term vision.*
- *Services of Green Building design and construction remain restricted. Lack of the professionals.*
- *Technical regulation in the RF should help promotion of the Green Construction.*

3 What do you think will help to promote the introduction of Green technologies in Russia?

- *Technical regulation in the RF is outdated and archaic. Russia should move toward Internationally recognized norms.*
- *Broad enlightenment is vital.*
- *On the other hand, the RF will be always different in terms of access to resources. Green Building should be adapted toward it.*
- *Economic stimuli for business could be helpful.*

4 How can your business benefit from implementation of Green technologies?

- *Economic effect is obvious: attraction of big size customers, rise of sales and profits, growth in personnel health and productivity.*
- *Public awareness about green companies is welcomed by the customers and public.*

Answers to the Questionnaire – short summary

5 Would you move into a new building, which has no Green Certificate / Rating?

- *Quality and comfort have prime value. Air is much better in good building. 'Buying of Mercedes is worth its money'.*
- *No, Green Certificate is vital for me.*

6 Which commercial benefits of Green technologies do you recognize?

- *Economic benefits are obvious: 'these companies are inclined to domination'. Economy in expenses on utility services in short term and protection of resources – in longer term. Productivity is up as well.*
- *Nonmonetary benefits are also obvious.*
- *These buildings are substantially more comfortable. The difference is obvious.*

7 Should Green Certification / Rating become a legal requirement in Russia for new construction?

- *Green Certification should not be fully compulsory, but should be legal in the RF. It should be valued by institutes of Law.*
- *Some part of Green Building regulation could become mandatory.*
- *Economic stimuli for business could be helpful.*

8 What positive European experience do you think can be applied in Russia?

- *European experience in city ecology protection, renovation of apartment sector, Energy Performance Building Directive, checks of buildings, construction control, energy modelling.*
- *Active public glorification of companies, which care about ecology protection, better working and living conditions.*


Working for
better buildings

Anssi Lehmonen,

Key Account Manager, Ruukki Construction

27 November 2013

Ruukki in sustainable construction

Anssi Lehmonen, Director of OOO RUUKKI RUS

25.11.2013 AEB

Energy-efficient steel solutions for better LIVING. WORKING. MOVING.

Ruukki in brief

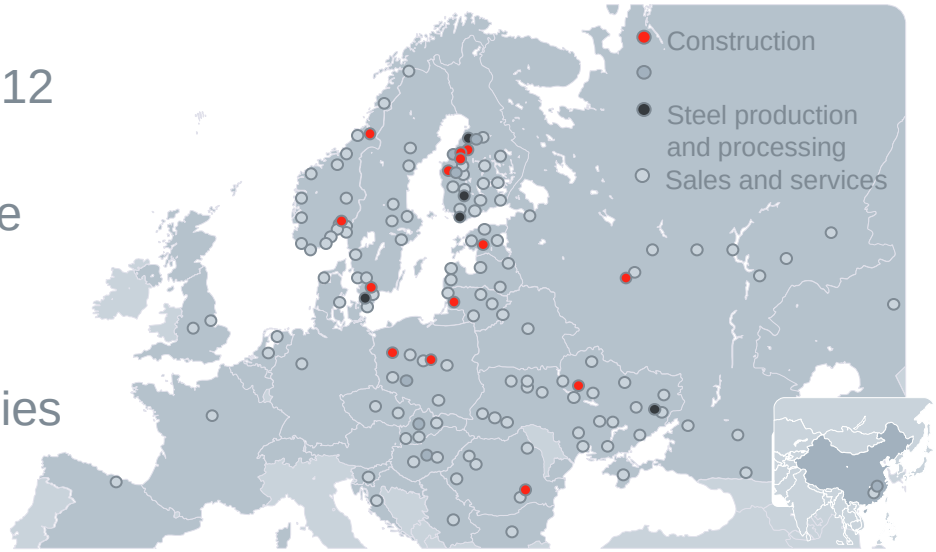
Ruukki Building Products
Net sales ~ 478 m€*

Ruukki Building Systems
Net sales~262 m€*

Ruukki Metals
Net sales 1 787 m€*

*) 2012

- Net sales of €2.8 billion in 2012
- Strong presence in Nordic countries and Eastern Europe
- Growth focus in emerging markets
- Personnel 9,000 in 30 countries



Ruukki building system Russia

- Design and production of complete buildings, frames, sandwich panels and façades
- Biggest frame producer in Russia
- Strong finnish owner*
- Production in Obninsk and Balabanovo (Kaluga region)
- Headcount ~1 600 employees
- 11 regional offices in the Russian Federation and CIS

*= 100% owned by Rautaruukki Oyj(Share quoted on NASDAQ OMX Helsinki), main share owner finnish governnment(~40%)

Ruukki energy efficiency and green buildings

- **Fast, simple construction**. No time wasted on waiting
  - **The structures** are assembled by bolts with no additional welding this allows to decrease power consumption and labor costs
- **Modifiable layouts and long spans** make it possible to customize the building according to your needs. Steel allows more flexibility than e.g. concrete through out the building's lifespan
- **Our sandwich Panels** have high energy-saving features (meet EN-standards), this reduce energy costs during the building's lifespan, increasing the value of your investment
- **High occupancy rate** – shopping center premises easily modifiable according to need: interior walls can be moved and floors can be combined
- **Easy to make change**s in mechanical and electrical solutions at the design stage and to update M&E systems during construction and when a building is in use
- **Energy efficiency and recyclable** – Steel is a fully recyclable material and 75% of our Energy panels is made from recyclable materials

Ruukki® energy panel - customer benefits

Savings in building life cycle

- Cost optimized envelope structure (construction phase)
- Up to 35% savings in heating bills (use phase)

Lower CO_2 emissions from heating

- Up to 35% lower emissions
- Life time emission cut by thousands of tons

Higher LEED and BREEAM credits

- Extra BREEAM credits from better air tightness
- Extra LEED credits from high recycled material content (LIFE)

Ruukki® energy panel – savings in heating

Saving calculations are based on a reference building:

Typical store

- Floor area: 8 400m^2
- Envelope area (wall, roof, floor): 20 000m^2
- Window area: 10% of external wall area
- Building volume: 67 000m^3
- Heat recovery ratio (ventilation): 0.55

U-values for envelope:

- Finland: wall 0.17; roof 0.09; floor 0.16; windows & doors 1.0 W/m^{2}K
- Sweden: 0.24; roof 0.19; floor 0.16; windows 1.2; doors 1.5 W/m^{2}K
- Norway: 0.17; roof 0.19; floor 0.16; windows 1.2; doors 1.5 W/m^{2}K

Heating system:

- Finland: Air heating, district heating
- Sweden: Air heating, district heating
- Norway: Air heating, electric heating

Energy prices:

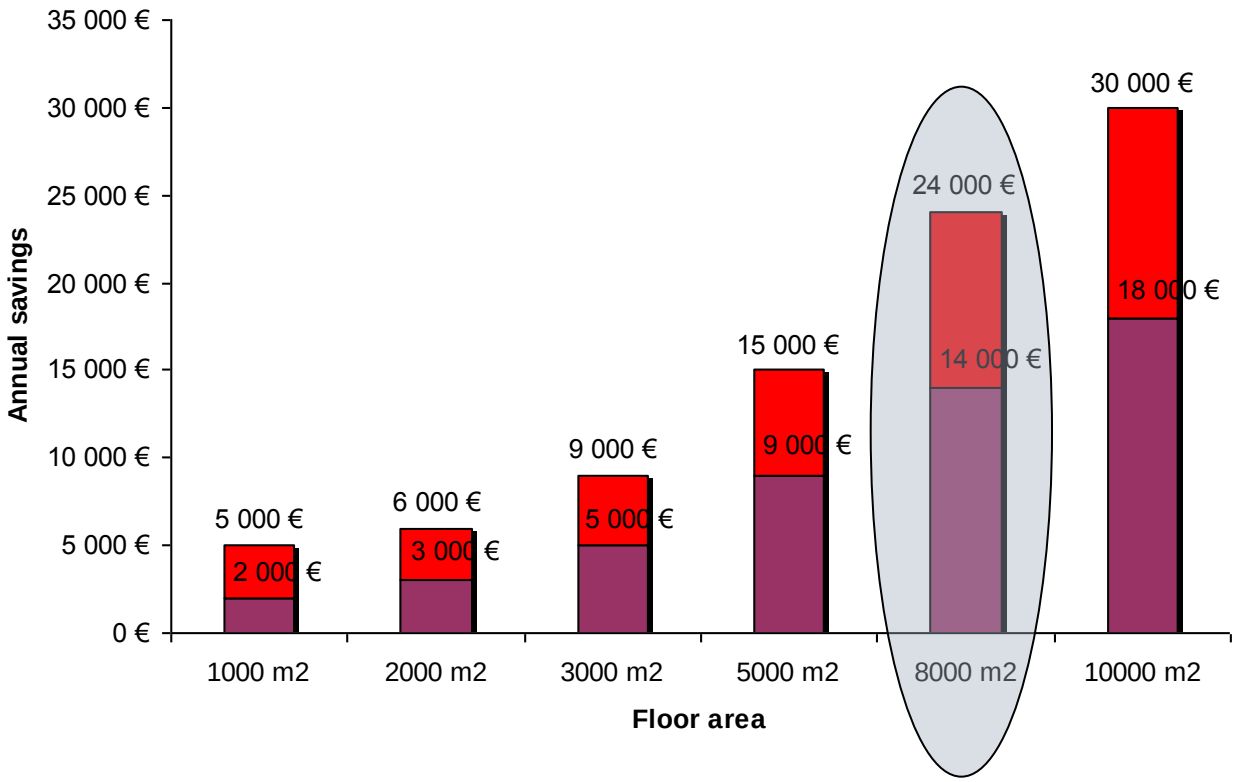
- Finland: District heating: 2.15 RUB/kWh; Electricity: 4.73 RUB/kWh
- Sweden: District heating: 3.44 RUB/kWh; Electricity: 4.73 RUB/kWh
- Norway: Electric heating: 4.73 EUR/kWh; Electricity: 4.73 RUB/kWh

Nominal emissions,

- Finland: 0.218 & 0.185kg/kWh (heating & electricity)
- Sweden: 0.114 kg/kWh
- Norway: 0.191 kg/kWh

Ruukki® energy panel – savings (EUR)

Annual savings in heating bills (EUR):

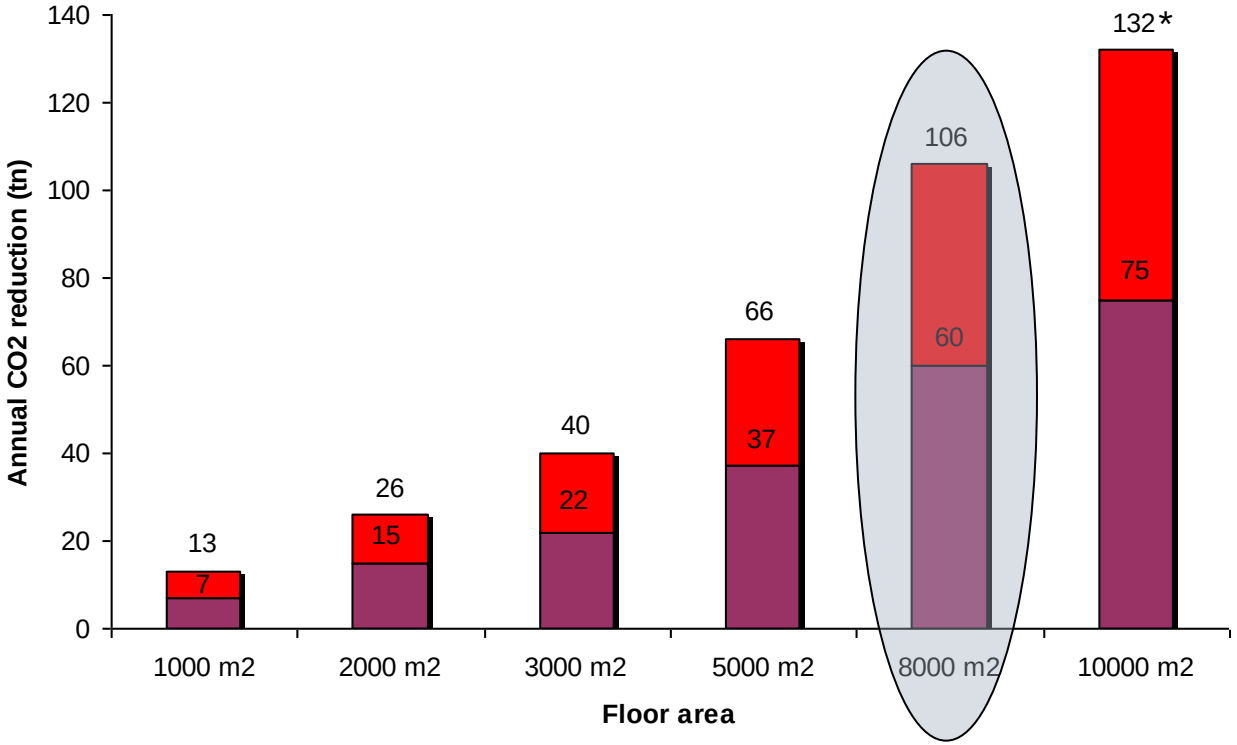


Savings compared to Finnish building regs 2010: n_{50}=2 1/h (reference value)

Savings compared to Finnish building regs 2012: q_{50}=4 m^3/h, m^2 (minimum requirement)

Ruukki® energy panel – savings (CO_2)

Annual CO_2 emission reductions (tn):



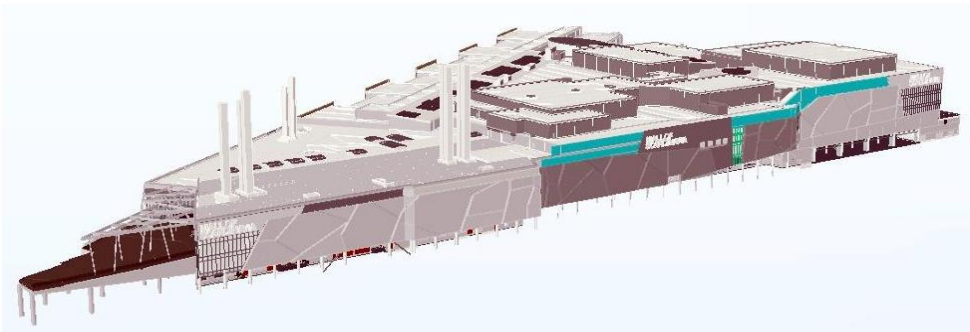
*) **Equals emissions of BMW 520dA when driven 27 times around the world (123g/km)**

Savings compared to Finnish building regs 2010: n_{50}=2 1/h (reference value)

Savings compared to Finnish building regs 2012: q_{50}=4 $m^3/h, m^2$ (minimum requirement)

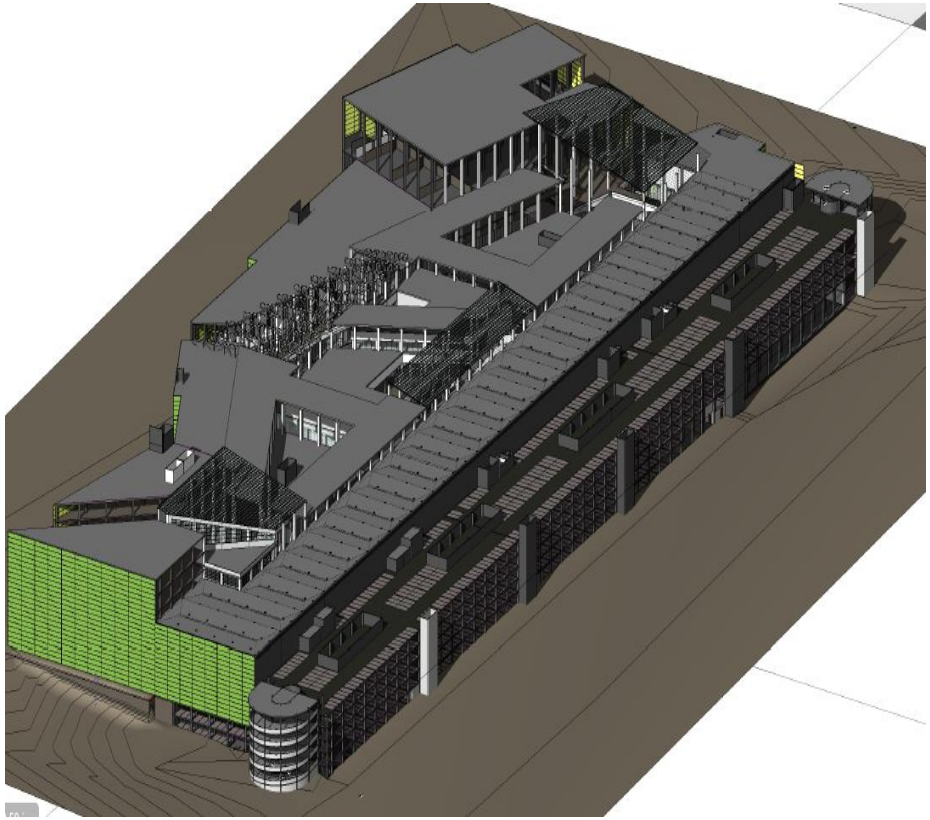
Latest ongoing project in retail…
Mall of Scandinavia, Stockholm, Sweden

- Construction investment 450M€
- 300 000m2 shopping area
- Construction time 45 months
- 15 cinemas for 2000 people
- Ruukki made Design, fabrication and installation (13 500tn steel and 36M€ contract



Ruukki in retail in Russia

Trade center Samara..ongoing



- Total steel delivery >50 000m2 GLA
- Steel Frames

Cosmoport mall, Samara

- Total area 127 000м2 GBA
- Steel Frames

The Association of European Businesses AEB

Christophe Vicic,

COO, Jones Lang LaSalle, AEB Real Estate Committee Chairman

Closing remarks

27 November 2013

Q & A

20 November 2013

The Association of European Businesses (AEB)

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