

Dematerialisation and more Economic-Prospects due to Overall Life Cycle Consideration of Construction Projects

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The Resources Are Running Short

Future Topic „Availability of Resources“

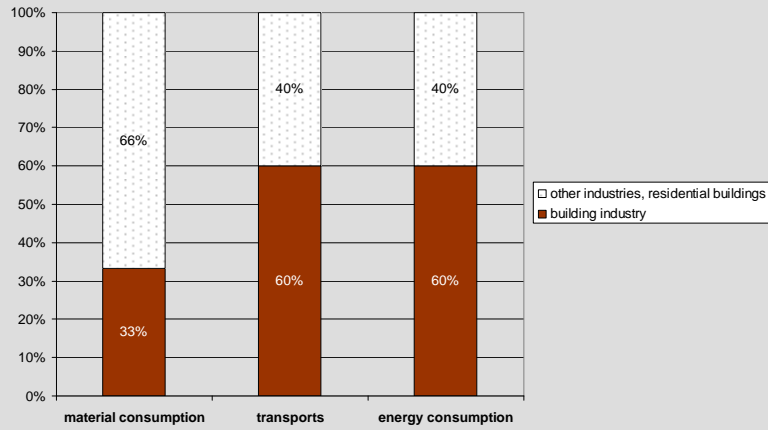
If five billions people tried to live our style...

...we would need more than two
planets for the resources supply!



Source: Prof. Dr. Schmidt-Bleek, Wuppertal-Institute

Resource Consumption of the Building Industry



Eco-Building – optimization of buildings fundamental study, future house

in ton kilometers, statistics Austria

2000 Watt-Society, Task force Construction & Energy, final report

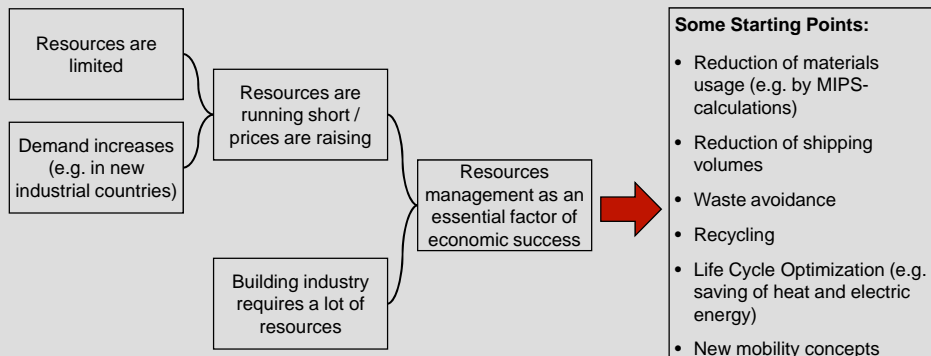
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Efficient Resources Management as Economic Factor of Success and Contribution to Environment Protection



Productivity of Resources



MIPS = Material Input per Service Unit

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20% Cost Savings Due to Life Cycle Consideration



- Running costs are significant „adjusting levers“ of ^{k1} buildings.
- Traditional planning processes and award procedures neglect significant cost drivers.
- The life cycle consideration gives new prospects for cost savings

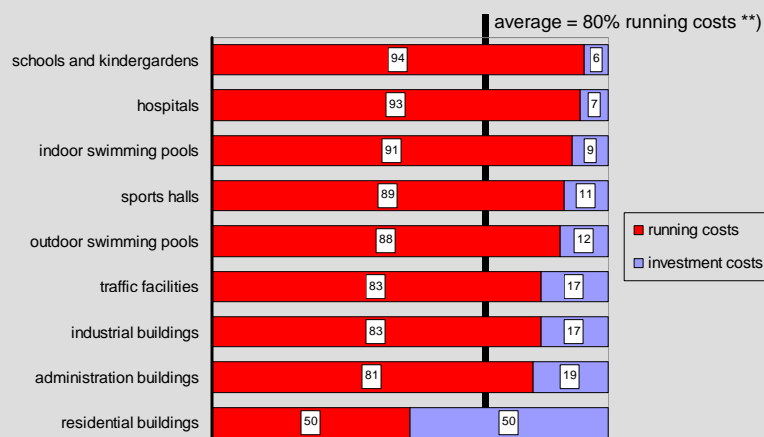
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Running Costs are 4 times higher than Investment Costs



Proportion of running and investment costs in % of Life Cycle Costs*)



*) Study „Total Quality Building“, Institute Dr. Bruck, Vienna
 **) Anette von Hagel (GCI)
 Further sources: Prof. Dr. G. Grabatin

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- k1** Gilt auch für die deutsche Fassung:
"Betriebskosten sind die wesentlichen Stellhebel von Gebäuden" ist sehr undeutlich. Gebäude haben nun mal keine "Stellhebel". Es sollte konkret erwähnt werden, um was zu "stellen" (ich vermute die Gesamtkosten).
komn; 19.08.2008

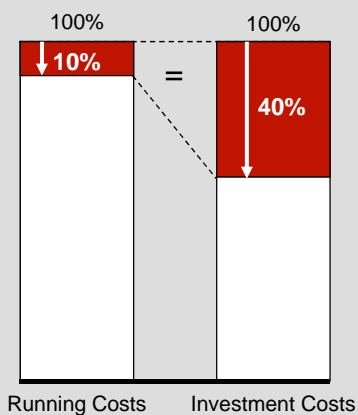
Running Costs as „Adjusting Levers“



A reduction of running costs by 10% is comparable to a reduction of investment costs by 40%*)

Typical saving possibilities of running costs:

- energy
- cleaning
- administration
- operating expenses



*) Assumption: Running costs represent approx. 80% of the Life Cycle Costs
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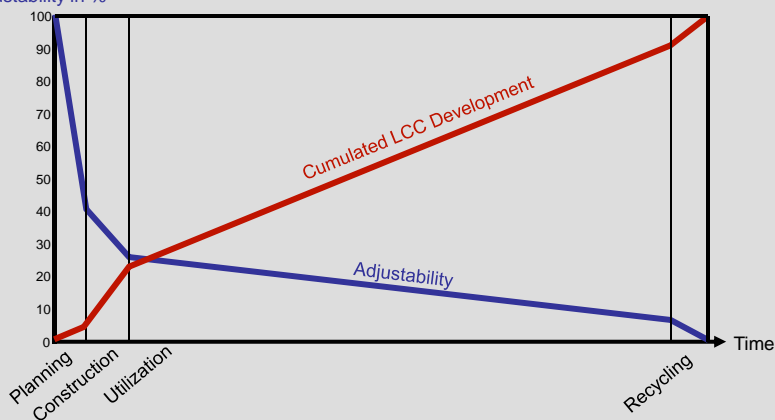
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80% of the Life Cycle Costs are already determined in the planning stage



Development of the Life Cycle Costs and their Adjustability

LCC Development in %
Adjustability in %



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Reducing the Running Costs



Project: Postareal Salzburg

- reduction of cleaning costs by 34%
- annual savings amount to a total of 114,000 €

- Applying knowledge and experience of building operation in the planning stage
- Slight changes and small measures create major impact



Postareal Salzburg: Office of GKK-Salzburg
(Foto: DI Christof Reich)

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Sustainable Technologies and Materials



- Project: "incl.wohnen / Sandgrubenweg"
 - interdisciplinary research project
 - broad scope of services and mobility concept
- Customer's benefits and convenience by considering economical, ecological and social factors
- Flexibility and conscious planning process



„Future House“, Sandgrubenweg Bregenz / Austria

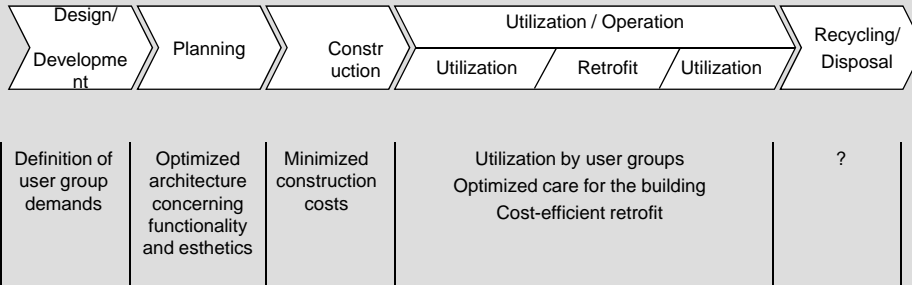
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The Sum of Single Optimizations is not the Total Optimum



Purposes according to the life cycle stages of a building



Optimization within the single stages,
but no overall consideration of costs and benefit drivers

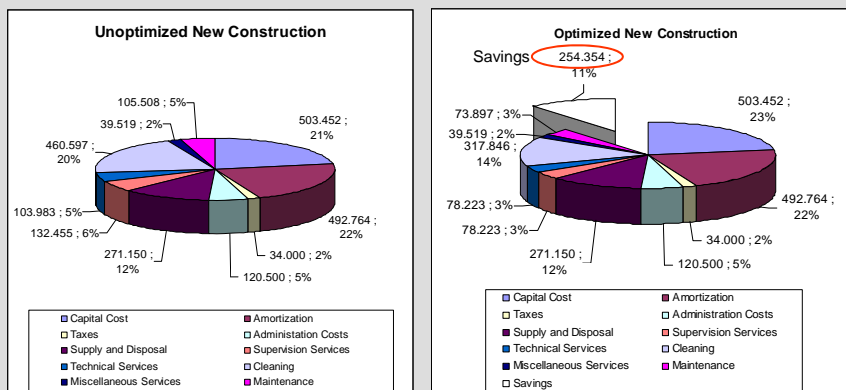
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Project Example of a Administration Building, 15,400 m²



Reduction of Utilization Costs due to organizational Optimizations and Bundling of Services



Source: Data from an own project
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Life Cycle Costs in Focus



Only a long term consideration provides the cost transparency

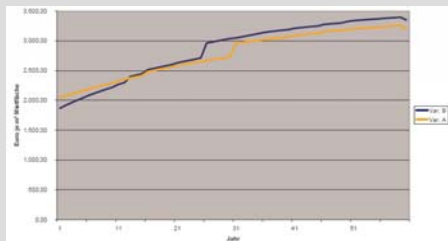
Optimization of Life Cycle = thinking ahead for the entire building utilization period after the construction.

The knowledge of the utilization period and know-how of operational issues enable us to implement considerable optimizations into the planning and construction processes of buildings.

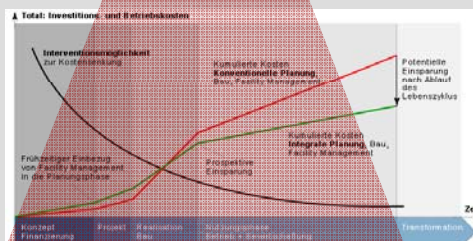
Every needless square meter and technical device which can be avoided saves investment and running costs.

Higher investment costs can considerably reduce the running costs in in long term.

Options of Life Cycle Optimizations



Our Focus



Source: LCC in Management of Real Properties, Dr. A. Pelzeter
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Extension of Open Options



Benefits of Life Cycle Consideration

- Cost savings and cost safety
 - **15 to 20% cost savings** compared to the traditional conducting of building projects*)
 - Constant cost distribution
 - Lower risk
- Increasing of the attractiveness and of the building value
 - Extension of regular and subsequent use alternatives
 - Sustainable operation enhances the efficiency and extends the service life of a building

*) see British General Accounting Office, Ministry of Finance Federal State of Nordrhein Westfalen

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Rhomberg: Well looked after for the entire lifespan



Developing ideas: The conception	Forming ideas: The planning	Implementing ideas: The execution	Living out ideas: The use	Reanimating ideas: Changes of use and remediation	Renewing ideas: Recycling
We judge a good idea by the criterion of whether it will "hold water" in the long term. The idea must meet both the current and the future requirements of the customer.	At Rhomberg, the bedrock of planning is founded on method. Beside detailed planning by optimization of the lifecycle costs, we adjust functional and spatial planning as well as planning for the sustain-able use of energy.	We realize and actualize projects for our customers in every order of magnitude. As your reliable partner for all aspects of the project, we stand for quality, transparency and cost-awareness.	We create and keep to our manifesto – quality of life. This is why we provide many services – from facility management to the supply of ecological energy. This enables us to reduce our customers' running costs.	When it comes to renovations, we are your first port of call. As a specialist in thermal remediation, we offer future-oriented solutions for improved efficiency through the use of ecological energy media.	We create recycling strategies for materials that are no longer used. We are attentive about restoring them back into circulation. So, the old forms the basis out of which something new can grow.

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Thank You for Your Attention!

