



**BETTER BASICS**  
LABORBEDARF

INFORMATION ON

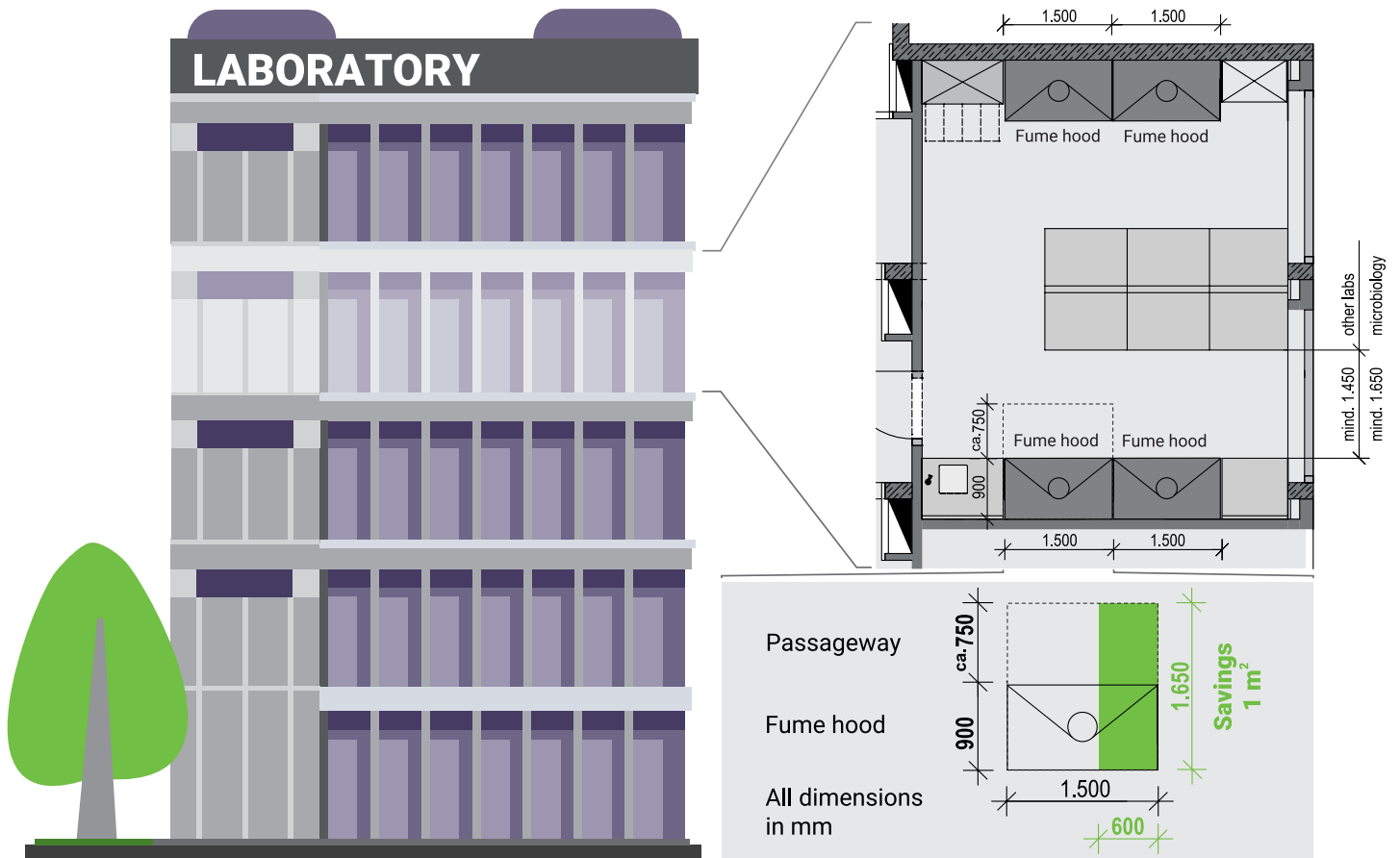
PROFITABILITY

BY USING THE SMARTRACK®



**THE SMARTRACK® ALREADY PAYS BACK  
ITS INVESTMENT COSTS  
FROM THE FIRST YEAR OF ITS USE.**

- Each SmartRack® saves € 5.200 in investment costs for the construction of a new laboratory, because by using a SmartRack®, a space saving of about 1 m<sup>2</sup> laboratory space can be assumed.
- The SmartRack® enables a more efficient use of space in existing laboratories and therefore **up to 80% space savings** at the laboratory workstation, which in turn creates free work space
- By using the SmartRack®, an **increase in efficiency of 10%** is achieved by optimising the working hours during the test execution as well as during assembly, disassembly and cleaning



Schematic representation of the space saved through the use of the SmartRack® and the associated reduction of investment costs

**Every SmartRack® saves  
€ 5.200 in investment costs**

By using a SmartRack®, a space saving of about 2 laboratory grids of 300 mm each can be assumed. With the passage area saved in front of the fume hood this results in a space saving of 1.00 m².

**Strategic cost savings as early as the laboratory planning stage.**

The use of the SmartRack® saves costs as early as the laboratory planning stage. The more efficient use of space eliminates the cost-intensive construction of laboratory space. In addition to the construction costs, other costs can also be saved by the lesser need for equipment. In the case of special laboratory fume hoods and safety cabinets, the savings due to the use of the SmartRack® are increased, since by reducing the width of a fume hood or safety workbench by one or two laboratory grids, e.g. from grid width 1,800 mm to 1,500 mm or 1,200 mm, significantly more costs for investment in laboratory equipment can be saved.

*Note: The basis for calculating the construction costs per square metre of laboratory space was developed by experts who have been working in the field of laboratory planning for many years and can be provided on request.*

**ROI about cost savings for laboratory construction**

**Construction costs** per square meter of laboratory space: **€ 5.200**

**Potential savings** per SmartRack® in square metres of laboratory space:

By using a SmartRack®, a space saving of approx. 2 laboratory grids (2 x 300 mm bench width) per SmartRack® plus 1.650 mm passage area in front can be assumed.  
2 x 300 mm = 600 mm

**600 mm x 1.650 mm corresponds to 1 m²**

**Potential savings per SmartRack® used in the construction of new laboratories: € 5.200**

## Space saving - in existing laboratories

### The saving of space through the SmartRack® and the SmartRack® mini in a concrete example:

Equipment object, and number of SmartRack®	Wide in cm	Depth in cm	Surface in cm <sup>2</sup>	Investment costs, acquisition costs in €	Space-saving in %	Savings potential through the use of SmartRack® / SmartRack® mini (in €)	Total savings (Savings potential minus investment costs in €)
SmartRack®	63,50	26,50	1.683,00	1.500,00			
SmartRack® mini	46,00	26,50	1.219,00	900,00			
<b>Fume hood</b>							
120 cm, 1 SmartRack®	110,00	65,00	7.150,00	5.000,00	<b>76</b>	<b>3.800,00</b>	<b>2.300,00</b>
150 cm, 1 SmartRack®	140,00	65,00	9.100,00	6.000,00	<b>82</b>	<b>4.920,00</b>	<b>3.420,00</b>
150 cm, 2 SmartRack®	140,00	65,00	9.100,00	6.000,00	<b>63</b>	<b>3.780,00</b>	<b>780,00</b>
<b>Safety cabinet</b>							
120 cm, 2 SmartRack® mini	115,00	62,50	7.187,50	12.200,00	<b>66</b>	<b>8.052,00</b>	<b>6.252,00</b>
130 cm, 3 SmartRack® mini	125,00	62,50	7.812,50	13.200,00	<b>53</b>	<b>6.996,00</b>	<b>4.296,00</b>
<b>Laboratory bench</b>							
120 cm, one-sided, 1 SmartRack®	115,00	77,50	8.912,50	2.500,00	<b>81</b>	<b>2.025,00</b>	<b>525,00</b>
120 cm, double-sided, 1 SmartRack®	115,00	77,50	8.912,50	2.250,00	<b>81</b>	<b>1.822,00</b>	<b>322,00</b>

The SmartRack® pays back its investment costs through the added value created by a more efficient use of space and the higher availability of free working space both when used in the laboratory fume hood, as well as in the safety cabinet or on the laboratory bench.

### How can up to 80% space be saved by using the SmartRack®?

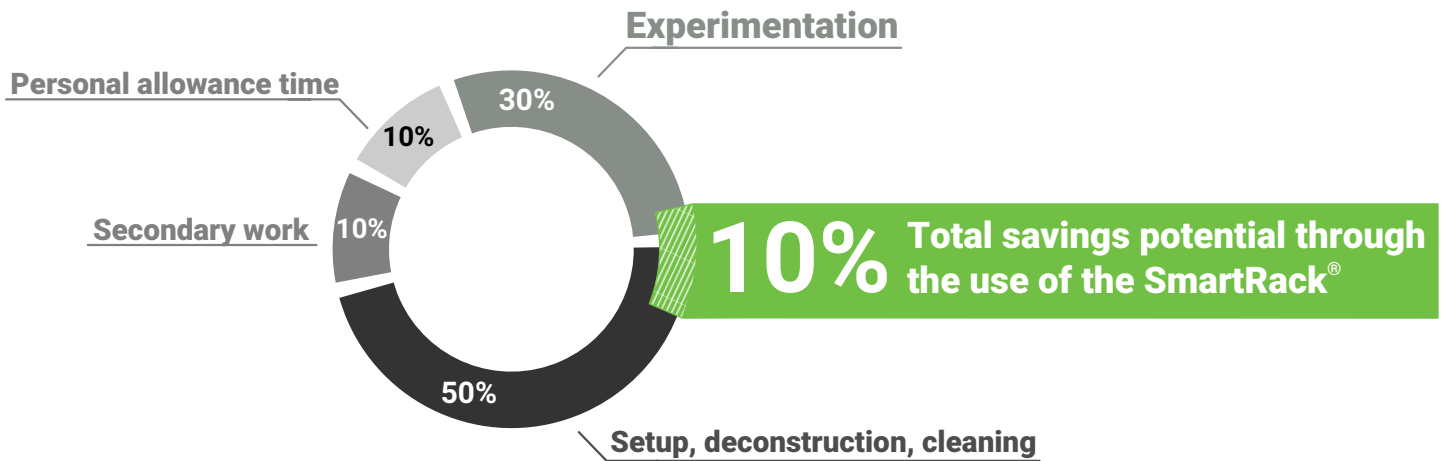
- The use of the SmartRack® offers enormous potential in terms of optimising laboratory workstations and increasing efficiency in work processes. This is made possible by the modularity of the SmartRack®, because with just one click you can adapt your organisational system to your individual needs and remain flexible in terms of height and depth in the use of your workplace – at the same time, all the work equipment will always stay at hand and organised.
- As the world's only organisation system for laboratory workstations, the SmartRack® allows the consistent use of the room height at the laboratory workstation to create additional storage areas. This is a significant advantage, especially when working in fume hoods and safety cabinets.
- Classic cork rings for the storage of round flasks, tripod linkage for the storage of shaking or separating funnels and chromatography columns are associated with a large space requirement, instability and a high time investment during construction. The SmartRack® solves all these problems.
- So the SmartRack® makes it possible to clear a wide variety of laboratory accessories, glassware and samples from the table level into the SmartRack® and, by doing so, to create a free work surface. The usable working area is significantly increased by consistent use of the room height at the laboratory workstation. This results in space savings of up to 80%.

#### ROI about added value in existing laboratories through more efficient use of space and higher availability of free work surfaces, example: laboratory fume hood<sup>1</sup>

Costs per laboratory fume hood with inside dimensions WxD of 140 cm x 65 cm: € 6.000

Space saving through use of the SmartRack® in a 150 cm laboratory fume hood: 82% (see Space saving table above)

Gain of space in the laboratory fume hood and the resulting added value € 4.920



Time distribution for classic laboratory work: 10% more efficiency by using the SmartRack®

**How can an increase in efficiency of up to 10% be achieved by using the SmartRack®?**

The SmartRack® increases efficiency both directly and indirectly, because increasing efficiency and saving space are mutually reinforcing. 10% more efficiency at the laboratory workstation and 80% space savings mean more employees who can work in the laboratory at the same time or more free workspace which can be used by the existing employees, who in turn can carry out more laboratory work per working day. Laboratory work is basically divided into four work steps:

1. assembly, disassembly and cleaning of the test set-up
2. test execution
3. personal allowance time
4. secondary activities.

The SmartRack® allows a larger number of sample vessels, (laboratory) work equipment and consumables to be stored directly at the laboratory workstation. This allows significantly more tests or analyses to be carried out. The potential of increasing efficiency in the work areas of test execution as well as assembly, disassembly and cleaning is explained by the following examples:

**Increasing the efficiency of the test execution using the example of column chromatography:**

- A chromatography column is installed in a SmartRack® with 2 chromatography column holders.
- In addition, numerous round flasks of the NS29 type are hanging in the same SmartRack®.
- With the round flasks, the fractions separated in the column are collected, while the flasks can be removed and hung up with one hand, without the flow of the column having to be interrupted when changing the flasks.
- The round flasks are secured in the SmartRack® in a way which prevents them from tipping over, and one after the other in a way which prevents them from being confused, and are safely stored temporarily.

**Conclusion: The SmartRack® increases the efficiency of the laboratory staff and already pays back its investment costs in the first year of use.**

This significantly increases the productive working time per laboratory employee and per laboratory workstation. Multiple burdens, such as those caused by the handling of unstructured vessels which have been set aside, are also eliminated. **This leads to an increase in efficiency of the laboratory staff of up to 10%.**

**For the first time, lean management and quality management systems such as 5S can be implemented and applied concretely in the laboratory environment with the SmartRack®: The SmartRack® makes it possible to achieve and secure increased process quality with increased efficiency and improved productivity at lower costs in the long term. The SmartRack® guarantees more order and cleanliness at the workstation and changes behaviour at the laboratory workstation.**

**ROI via increased efficiency per laboratory employee per year**

Labour costs per laboratory employee per month <sup>1</sup>	€ 3.511
plus non-wage labour costs, approx. 20%	+ € 702
wage costs incl. non-wage labour costs per month	= € 4.213

**Increase in efficiency per employee 10%**  
 € 4.213 € x 10% results in about € 421 per month, this amounts to € 5.052 p.a. per year

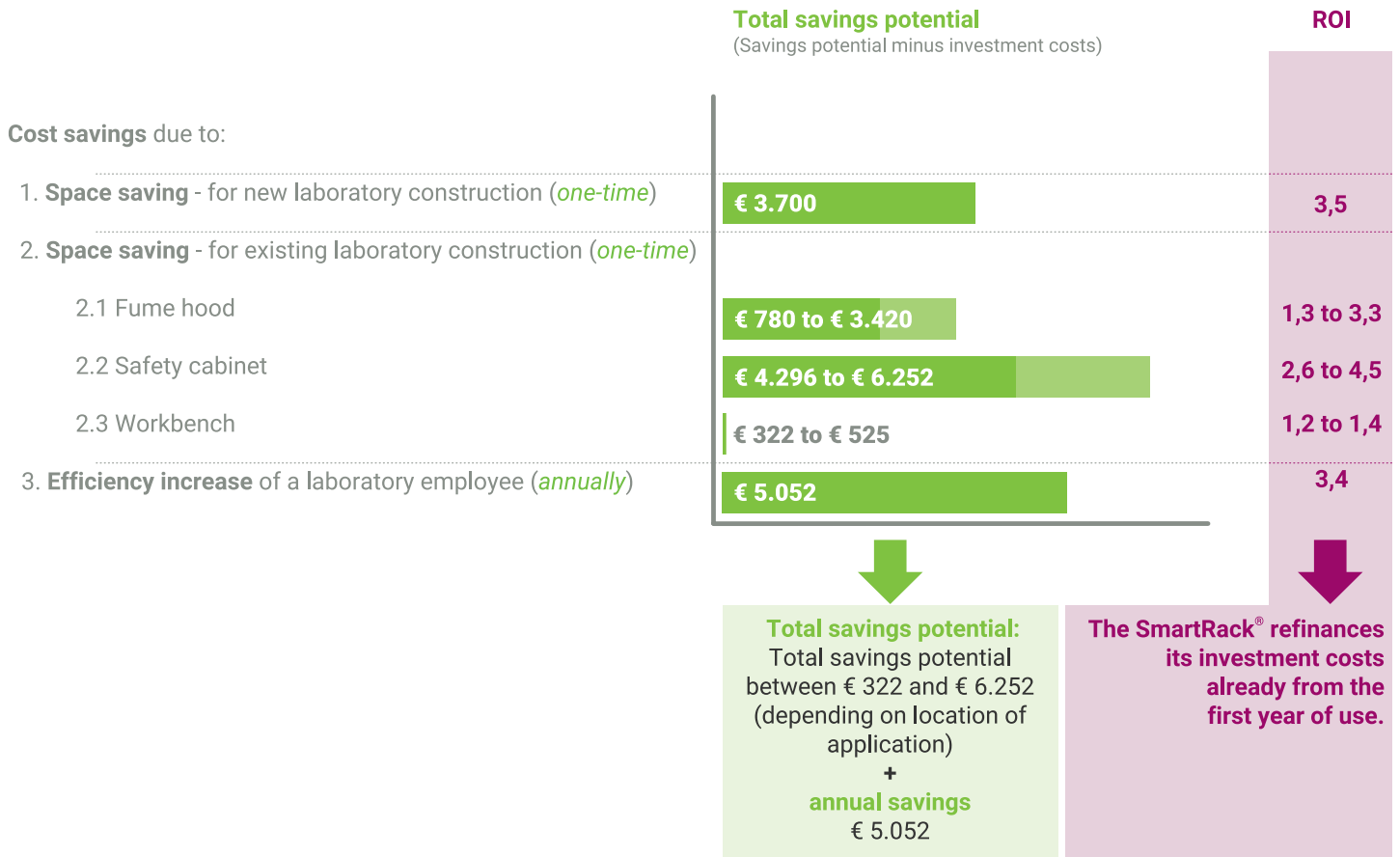
**Increase in efficiency per laboratory employee per year of € 5.052**

1: Laboratory employees in Germany receive an average monthly salary of € 3,511. Of course, significantly higher salaries are also possible and not uncommon. As of: January 2023. Source: [www.gehalt.de/einkommen/suche/labor-mitarbeiter](http://www.gehalt.de/einkommen/suche/labor-mitarbeiter)



## WHEN DOES A SMARTRACK® PAY OFF?

The SmartRack® already pays back its investment costs from the first year of its use. This is made possible by its versatile potentials. The following three configurations will be considered as examples at this point:



Return on Investment of the SmartRack® - A SmartRack® pays back its costs in every scenario within one year.

## The world's first laboratory organisation system reforms laboratory workstations and work processes in laboratories

Whether it's an initial equipment or a retrofitting of an existing laboratory, the SmartRack® offers the potential to optimise traditional laboratory work in terms of efficiency by up to 10% and, at the same time, to save 80% space in the laboratory fume hood. Direct as well as indirect potentials go hand in hand, because creating more order and cleanliness at the laboratory workstation leads to a reduction of ergonomic strains and increases efficiency. This means that

- Laboratory equipment and laboratory glassware as well as
- samples and consumables in the laboratory

can be stored much more easily and used more safely. Walking distances and set-up times are eliminated, time and space are saved at the laboratory workstation and used more optimally.

### The SmartRack® supports you:

- **As safe as possible, as flexible as necessary:** laboratory users can adjust both the height and the depth of the slot rails. The module holders suspended in the slot rails can be moved horizontally within the slot rail.

- **User-friendly & ergonomic:** The one-handed equipping and removal of the laboratory equipment and samples from the SmartRack®, within the user's gripping range, greatly simplifies and speeds up access.
- **Lean Management and quality management systems** such as 5S can be implemented and applied concretely in the laboratory environment with the SmartRack®: The SmartRack® guarantees more order and cleanliness at the workstation and changes behaviour at the laboratory workstation.
- **Time-saving:** Materials and laboratory equipment are provided exactly where they are processed and needed. So the SmartRack® reduces walking distances and time needed to search throughout the user's laboratory.
- **Space-saving:** By using the room height in the laboratory fume hood, the SmartRack® creates new storage areas. So the SmartRack® multiplies the available working space in the gripping area, reaching area and stretching area.



Photo: Building of the Better Basics Laborbedarf GmbH in Dresden



Contact: Dr. rer. nat. Marcus Heinze

### Dr. Marcus Heinze

Marcus Heinze was born in Zittau and is now a shareholder and head of development at Better Basics Laborbedarf GmbH. He completed his studies in polymer chemistry at the TU Dresden with a doctorate in the field of mineralisable hydrogels.

Today, he is responsible for development at Better Basics Laborbedarf. There, the possibilities of various 3D printing processes are combined with those of classic metal processing for optimal component design.

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### YOU ARE INTERESTED IN OUR PRODUCTS OR YOU HAVE FURTHER QUESTIONS?

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### Our request to you

A product like our SmartRack® is only as good as its users. With our roots in the Leibniz Institute for Polymer Research Dresden, our company Better Basics Laborbedarf stands for the tradition of "Made in Germany" quality. We feel in multiple aspects committed to this quality label for German companies, which stands for high innovative strength. Even beyond our product catalog, the same applies for us at Better Basics: Just contact us if you have ideas for extensions or improvements or if you notice something in your daily laboratory routine that we should optimize right away.

We want to create the best possible working environment for you in the laboratory and we are grateful for any comments and inspiration. We can jointly shape the future of laboratory work by cooperating with scientists and researchers. Just like you, we're always looking for a way to make our world a little better every day.

#### Impress:

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