

Solutions to identify and eliminate contaminations and impurities

2012 Life Science Information Day

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Molsheim, France - December 5, 2012

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Darmstadt · Germany



Disclaimer

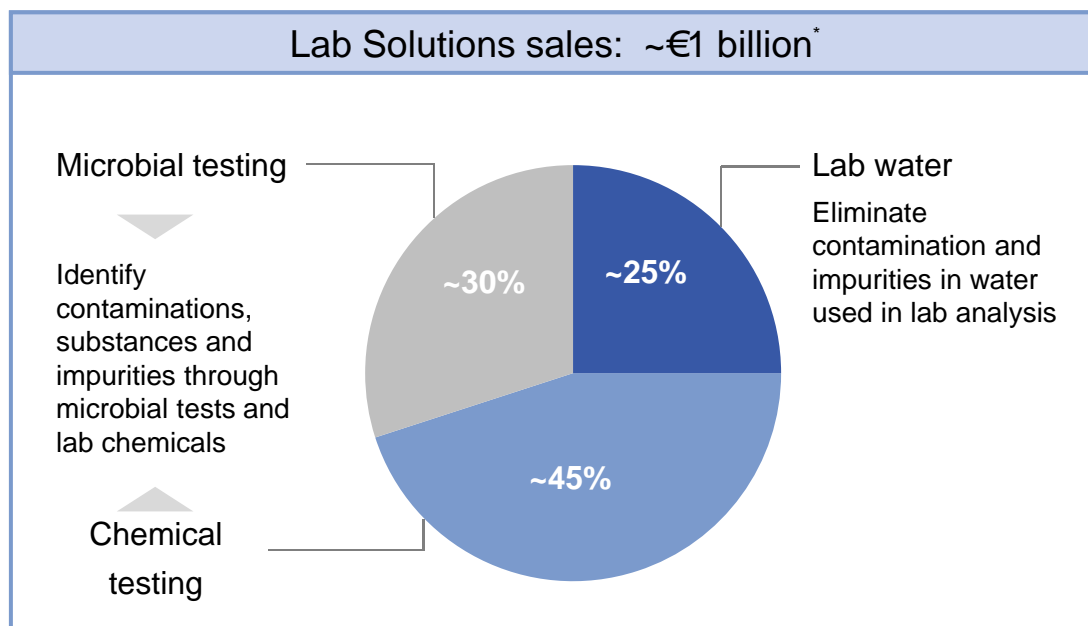
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Agenda

- **Lab Solutions Business Unit and Biomonitoring**
- Lab Water Overview

Lab Solutions helps customers to identify and eliminate contaminations and impurities



**We have a strong steady business
primarily around quality and analytical labs**



*2012E

Product safety in pharma and food – solid business not dependent on R&D funding

Product safety is a global concern

Consumers and regulatory authorities expect products to be safe and healthy

Detection of impurities and contamination is key to ensuring safety of products

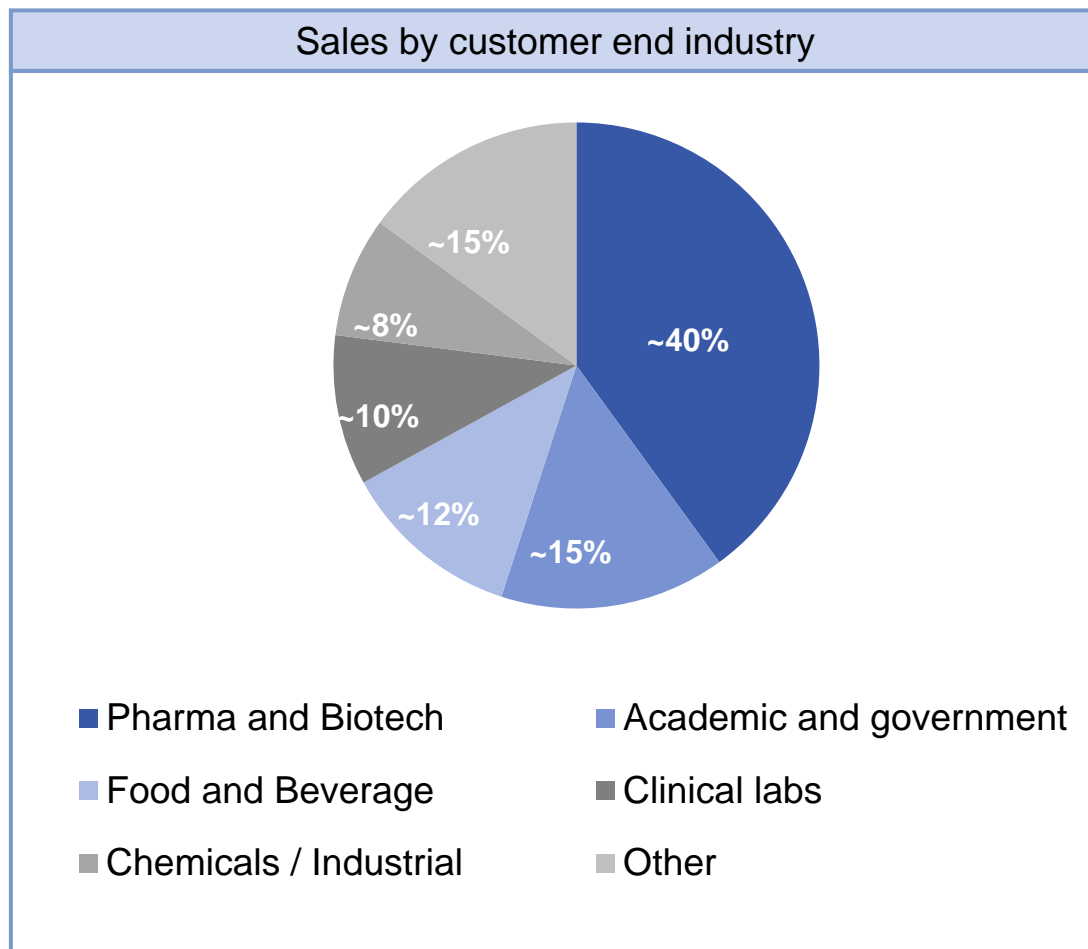
Lab Solutions offers tools for analytical detection and measurement



Pressure on R&D spend does not affect analytics spend

Strengthening regulatory requirements and more stringent detection limits are a global trend.

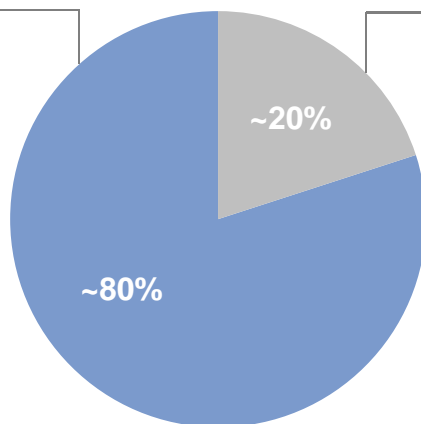
We serve hundreds of thousands of customers across a broad range of segments



Our business is primarily driven by consumables and small transaction sizes

Lab Solutions sales by product group

Consumables
Reagents, solvents
and consumables
for lab water and
testing
instrumentation.
Average
transaction ~€500



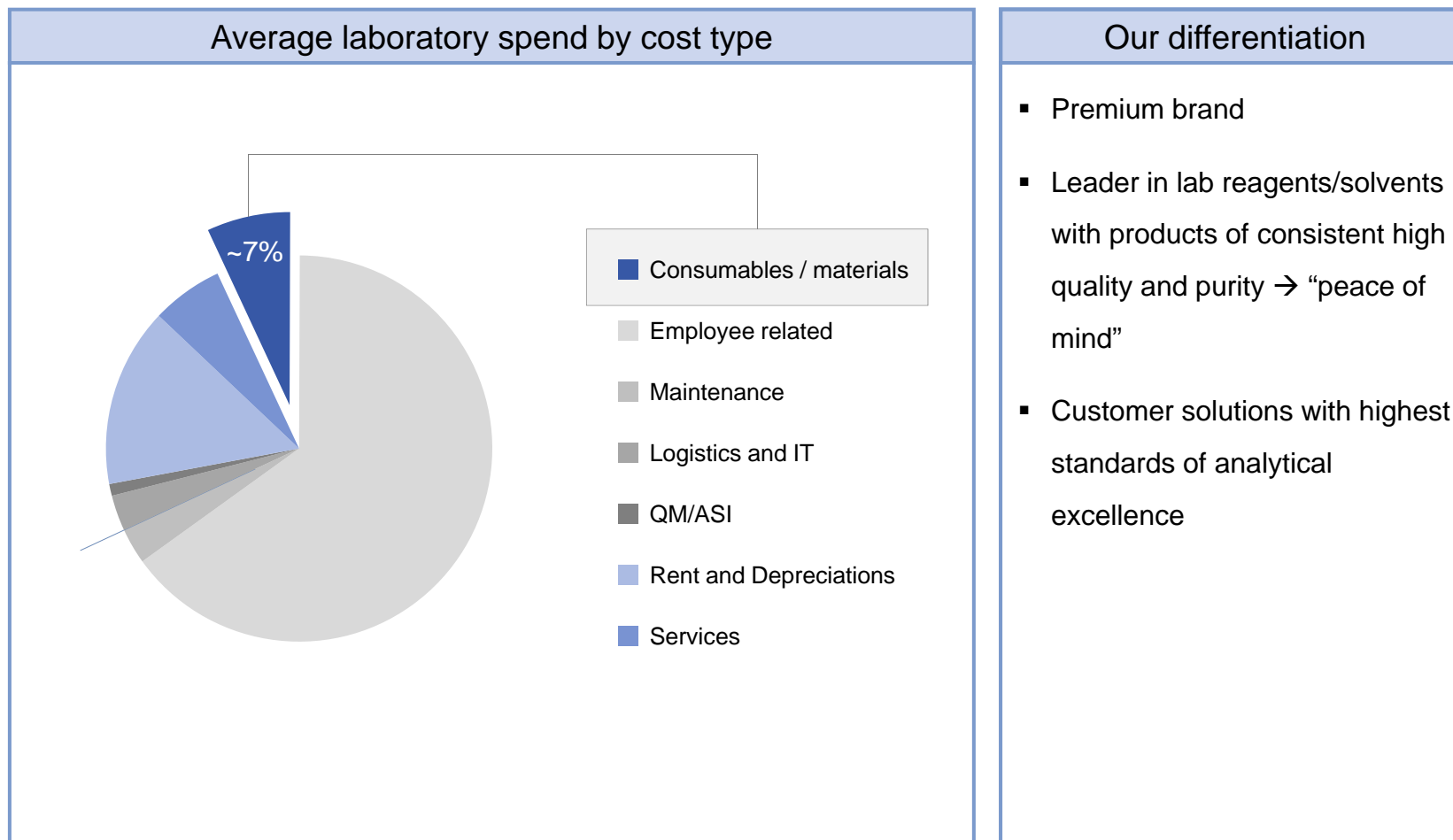
Instruments*
Instruments that
drive high amounts
of consumable
sales. Average
transaction < €15 k

**High recurring sales and high margins on both
instruments and consumables**

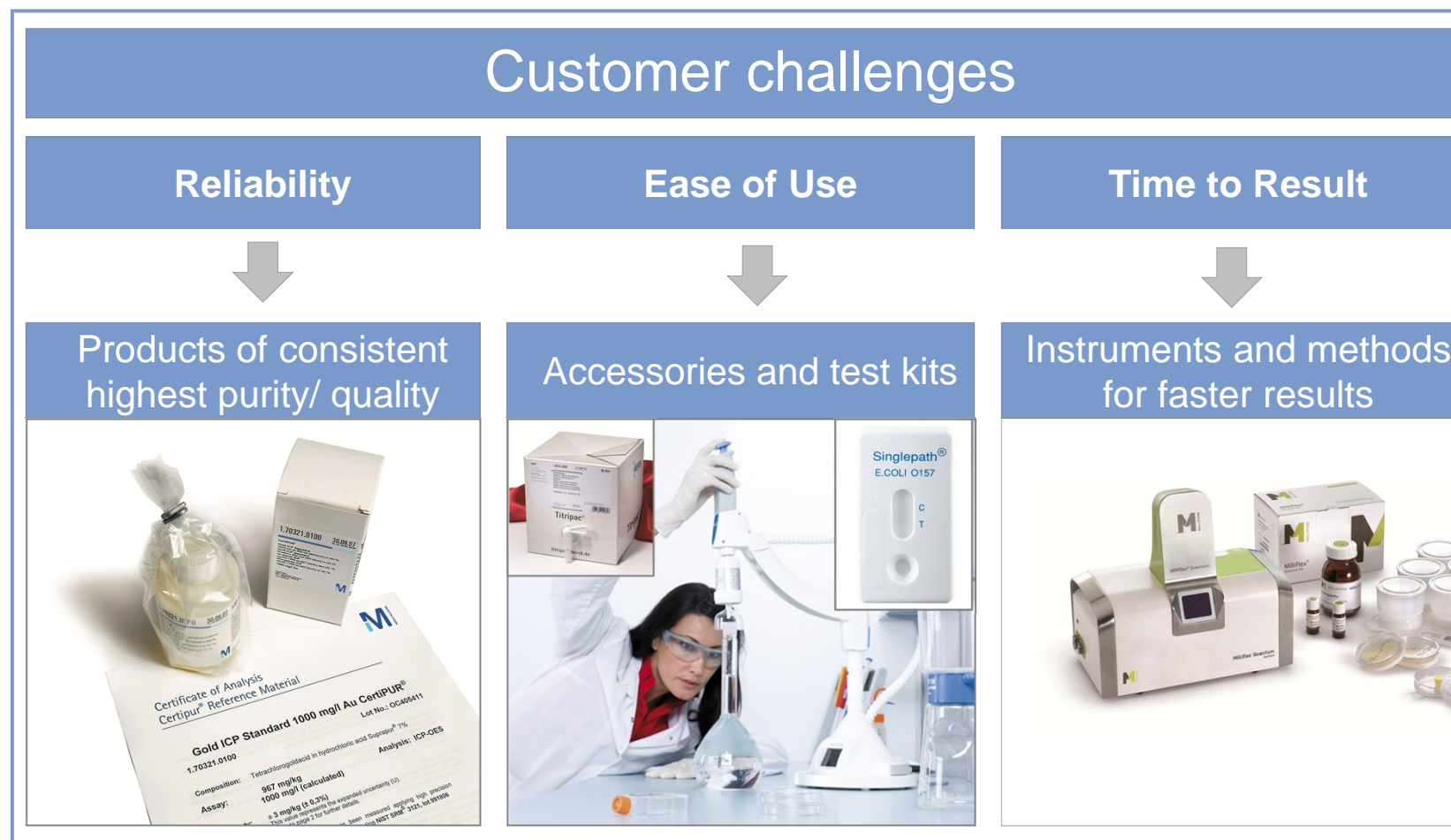


*Includes services

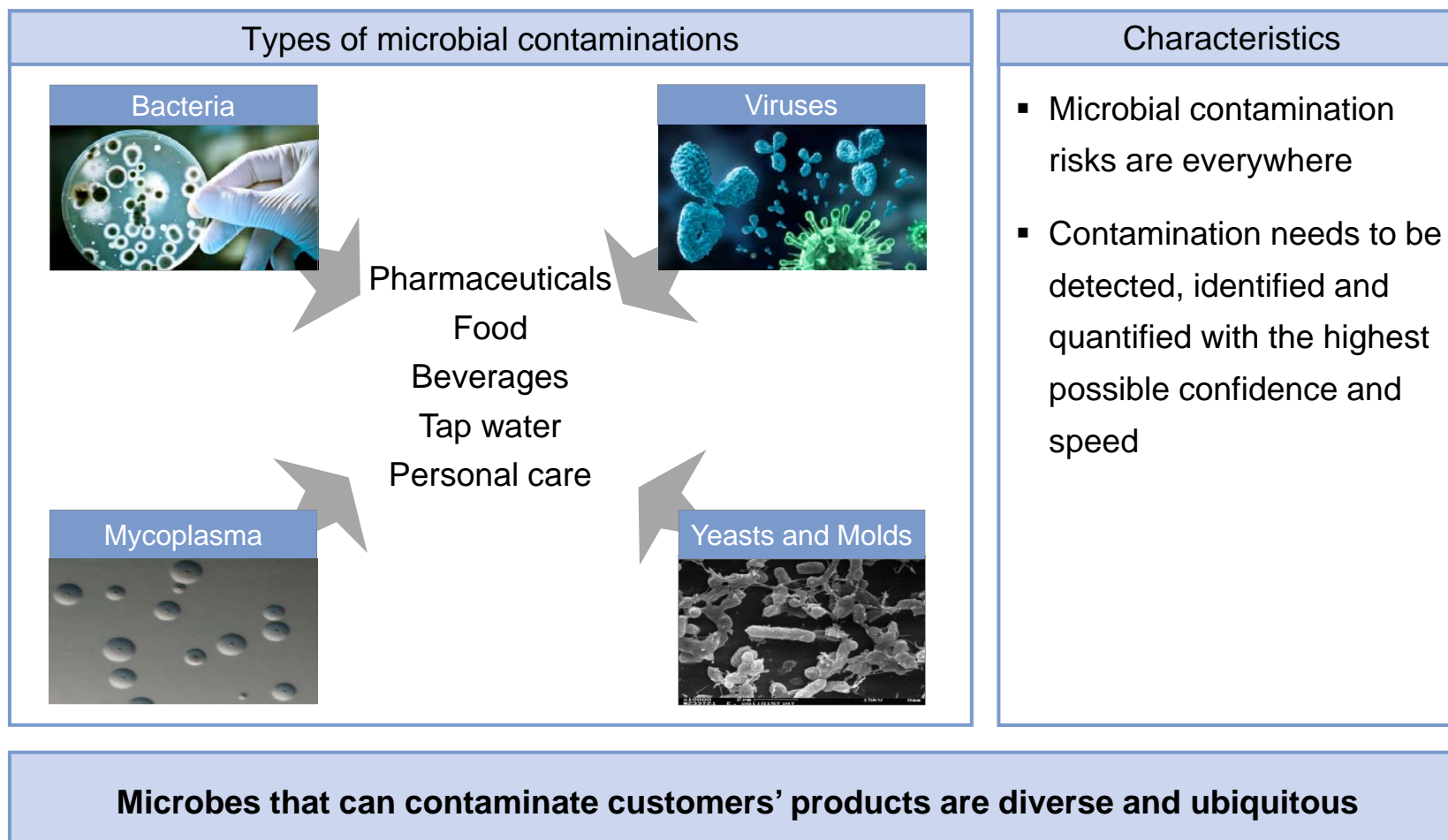
Consumables are not discretionary and account for only 7% of a lab's total cost



Our solutions address customers pain points



Biomonitoring identifies and quantifies microbial contaminations that can harm life



Innovation: We are helping our customers to conduct faster and more accurate tests

Rapid detection of microbial contamination

Customer challenge



Identifying & monitoring potential microbial contaminations is time consuming, taking up to 10 days using traditional methods

Life Science solution



Milliflex Quantum a rapid test for raw materials, water, and drug products using ID technology

Value to customer



Faster and more accurate tests, with test results in 2 days, which allows faster release of product compared to traditional methods

Milliflex® Quantum Rapid Detection System

An easy-to-use, non-destructive, fluorescent staining-based system for faster microbial detection



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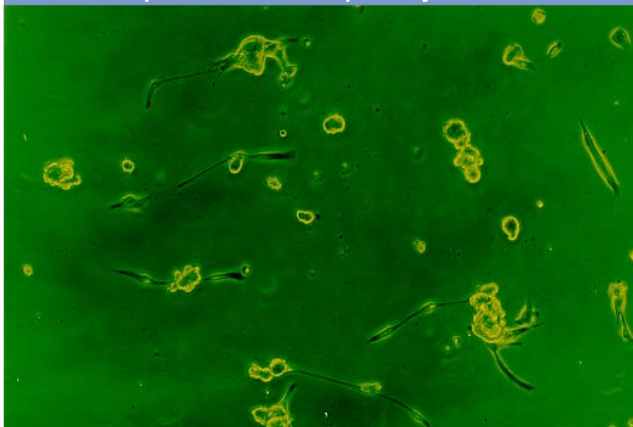
Water purity is critical to ensuring the success of R&D lab experiments...

Example : Importance of purified water in a cell biology experiment

Cell biology task: grow cells in culture media to mimic body environment

Neural stem cell growth

Impact of low quality water



Cell growth and morphology disturbed by poor water quality

Result using optimal water quality



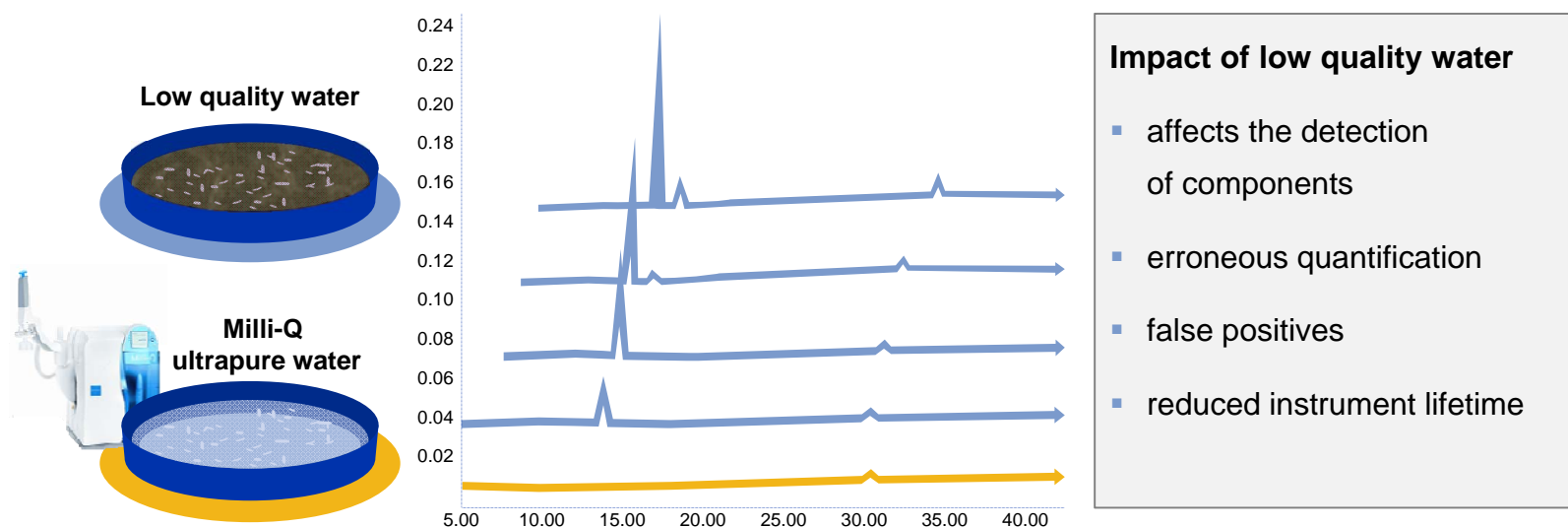
Normal cell growth from using optimal water quality

**Risk from low quality water significant:
contamination, wrong conclusions, waste of time and money**

...as well as the success of chemical analysis in analytical laboratories

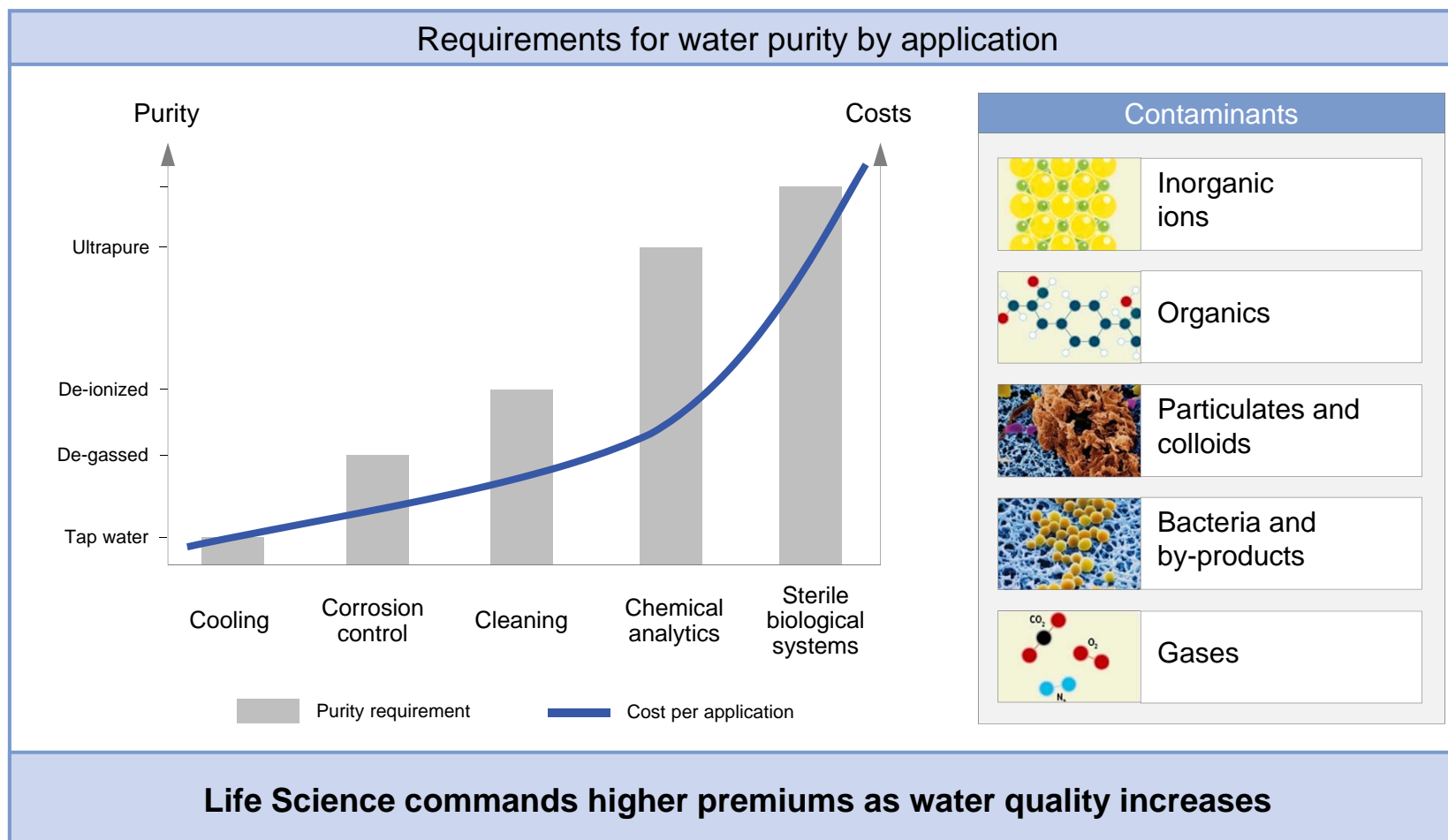
Example: Importance of purified water in analytical chemistry

Analytical chemistry task: identify composition of an unknown sample

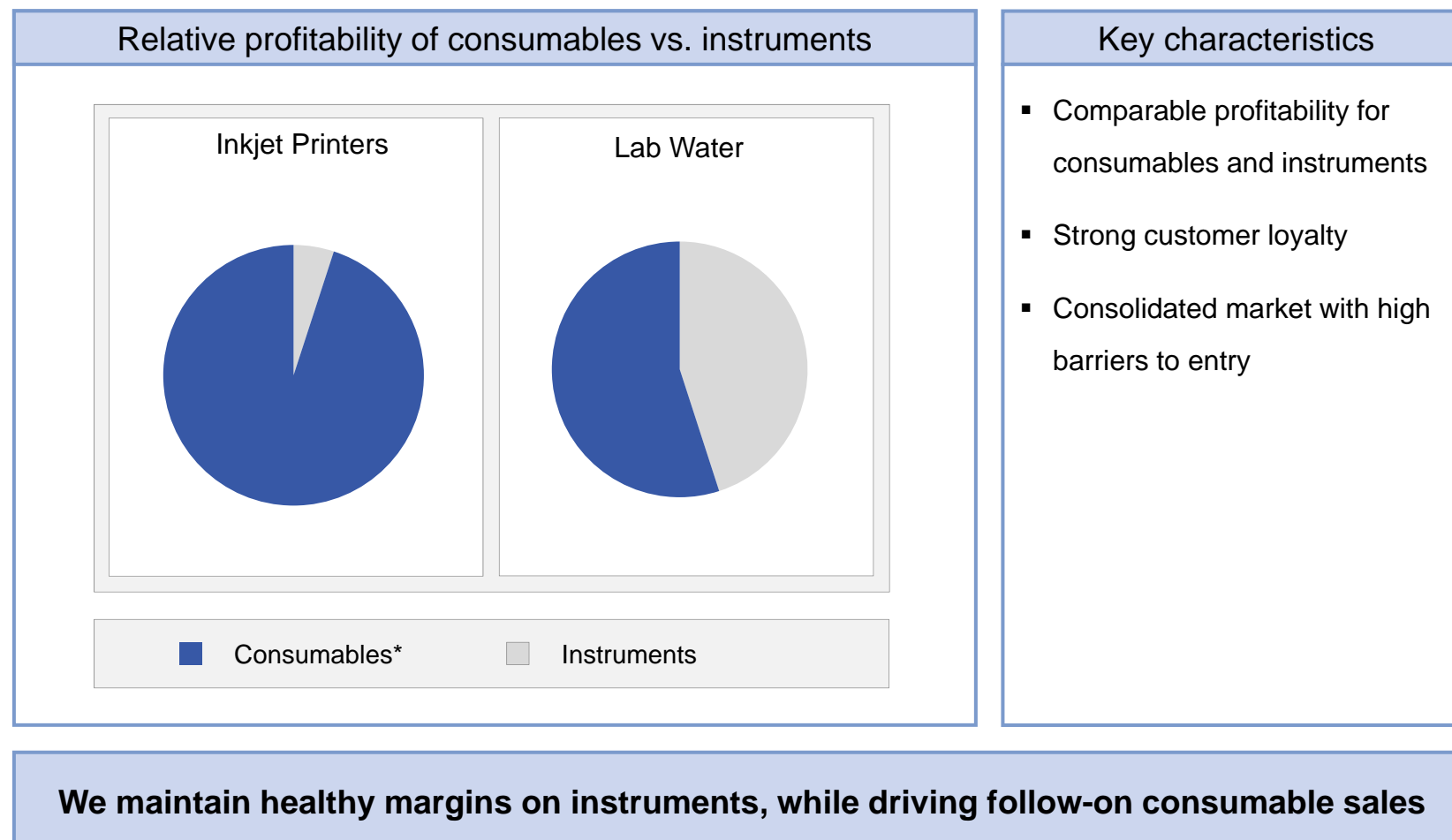


**Risk from low quality water significant:
contamination, wrong conclusions, waste of time and money**

The purity of water that scientists require varies by type of application

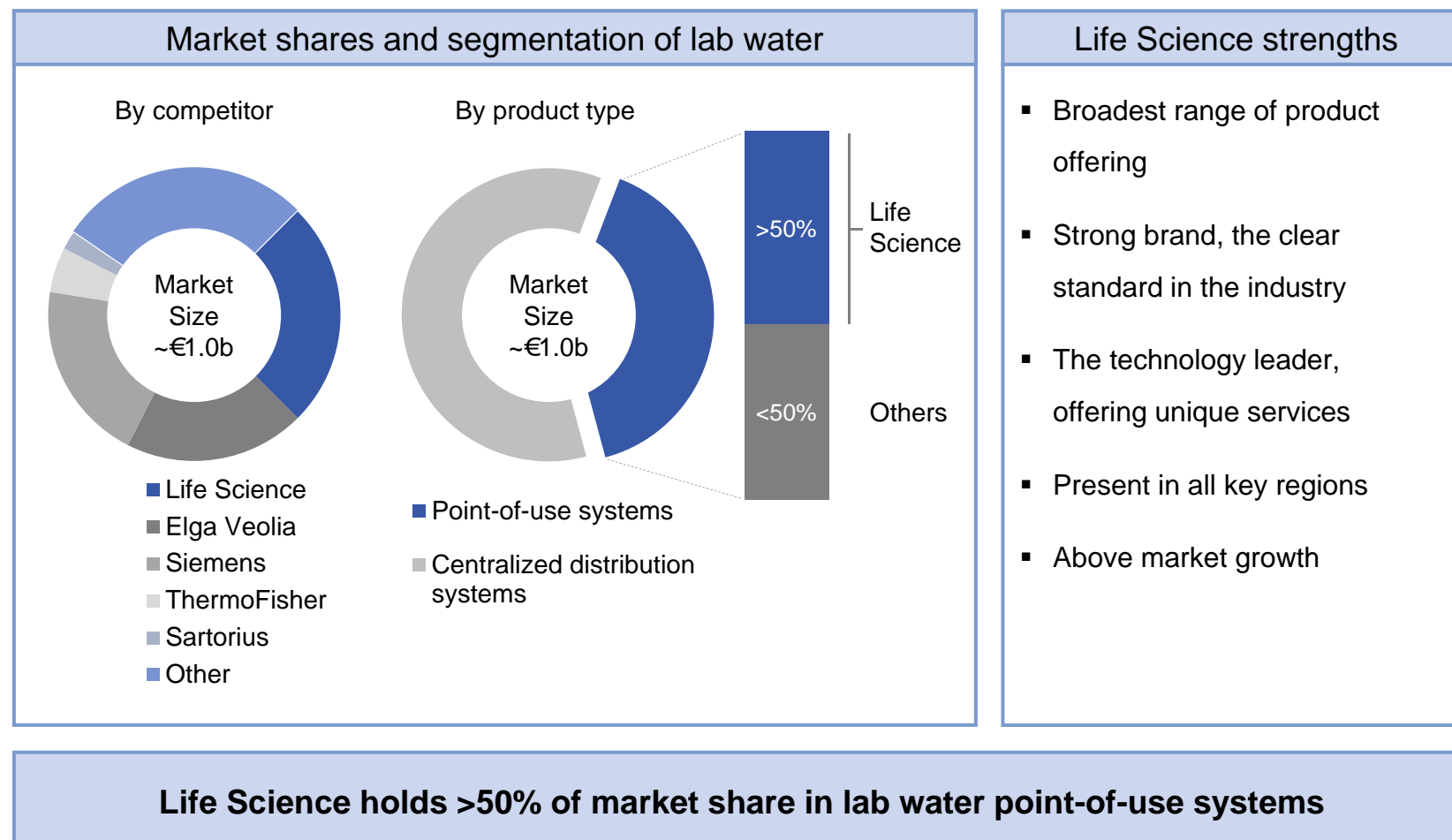


Unlike other industries, lab water market is attractive for consumables AND instruments






*includes services

Life Science is clear market share leader for point-of-use systems



How can “water” be innovative?

Customer challenges and Life Science's innovations				
Customer requirement	Ensure quality of purified water at any time despite varying qualities of tap water	Life Science innovation		Built in features <ul style="list-style-type: none"> ▪ Broad range of purification cartridges ▪ Calibration, verification and suitability testing
Customer requirement	Necessity for easy and reliable quality checks	Life Science innovation		Milli-Q Integral <ul style="list-style-type: none"> ▪ Combines water purification and monitoring technologies
Customer requirement	Ensure regulatory compliance	Life Science innovation		Millitrack software <ul style="list-style-type: none"> ▪ Provides audit trails, e-signature and others

Our products help customers to meet both volume and compliance demands

Cutting-edge lab water purification system

Customer
challenge



Customers' facilities have fluctuating 'on demand' volume requirements for pure and ultrapure water

Life Science
solution



Milli-Q Integral water purification system

Value to
customer



High quality and user friendly system that enables customer to meet both volume and compliance/regulatory requirements



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