



Inspiring innovation.

Bacteria project

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Enartis Annual Meeting, May 2022



Who am I? Why am I in Enartis?

- Biologist and Microbiology PhD landed in ENARTIS in October 2019
- Researcher for 16 years in wine Lactic acid Bacteria in ENOLAB group UV

45 I+D+i projects

10 scientific/technical papers

26 congress publications

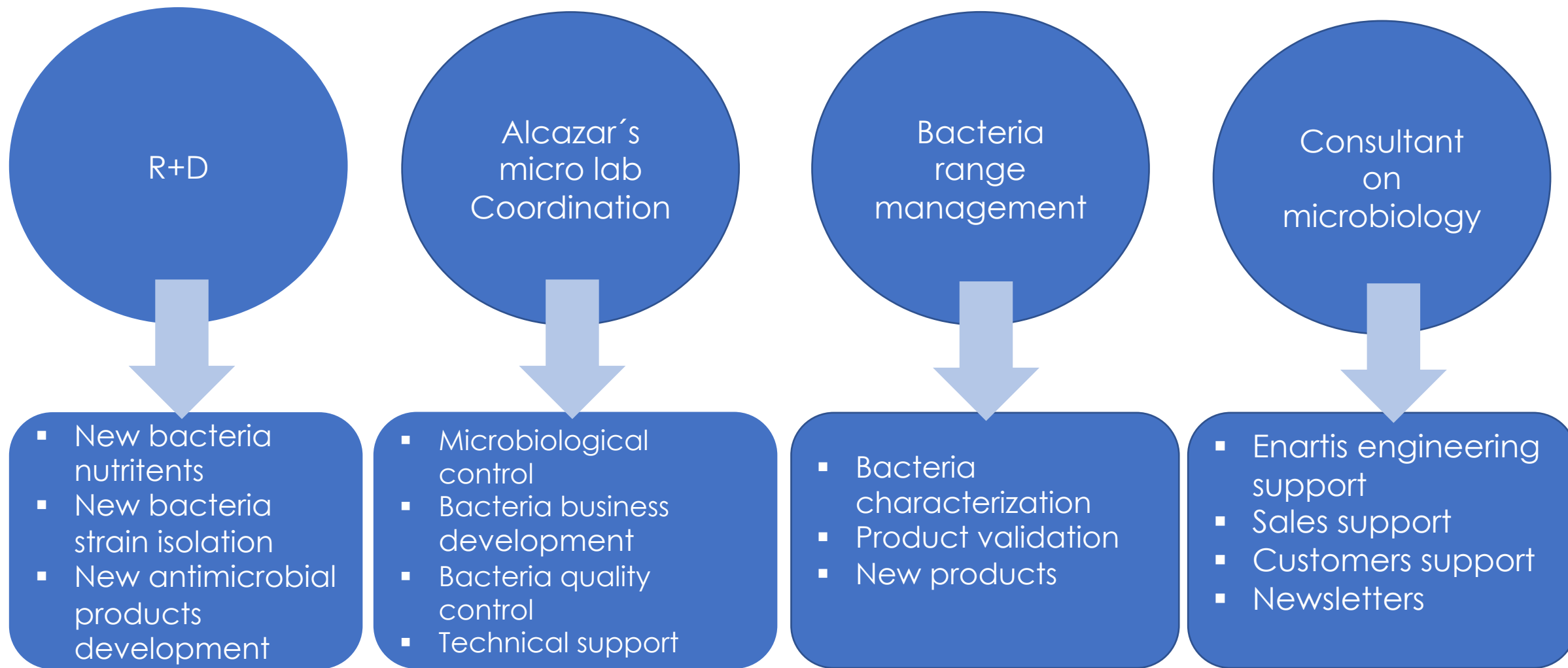


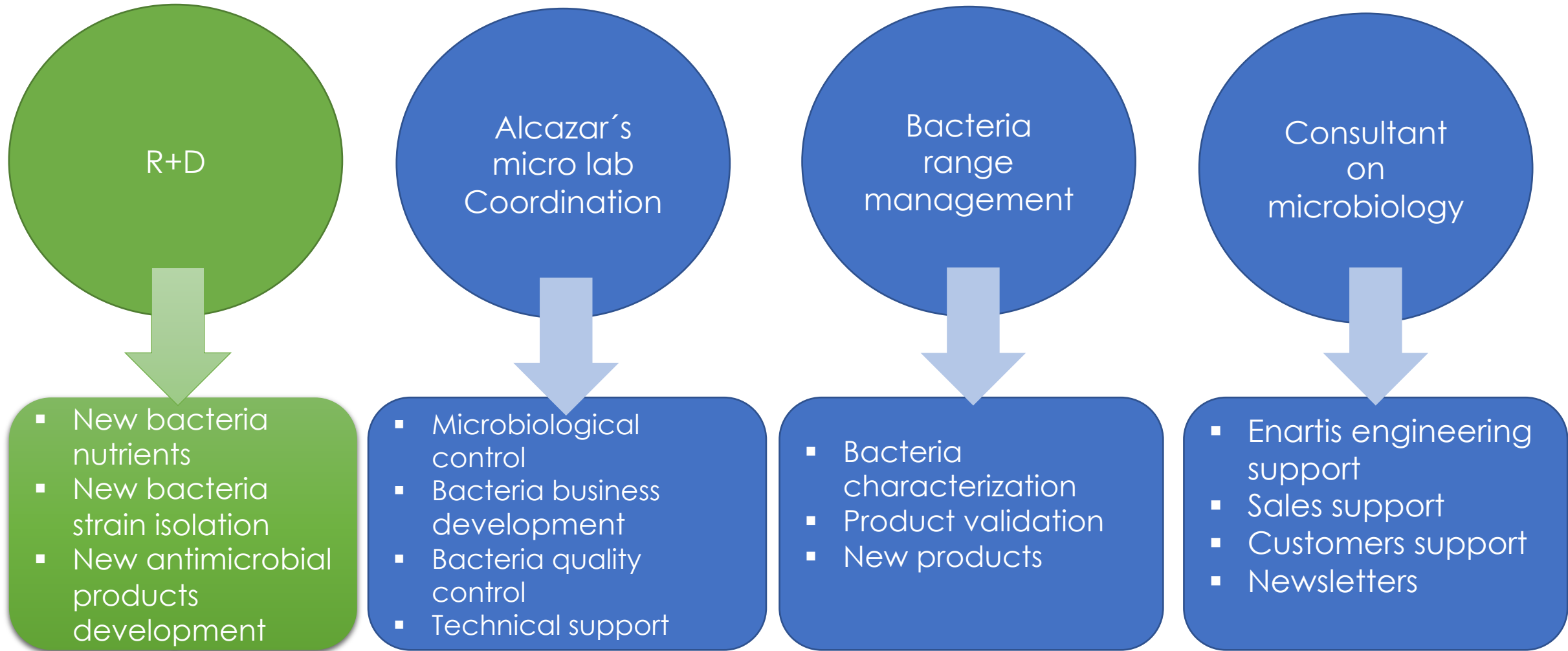
Velcorin® 2013

Stab Micro 2014



My role in Enartis







CDTI project: innovation in bacteria application



“Financiado por el CDTI”



UNIÓN EUROPEA

**Fondo Europeo de
Desarrollo Regional (FEDER)**

Una manera de hacer Europa



R+D

Alcazar's
micro lab
Coordination

Bacteria
range
management

Consultant
on
microbiology

- New bacteria nutrients
- New bacteria strains isolation
- New antimicrobial products development

- Microbiological control
- Bacteria business development
- Bacteria quality control
- Technical support

- Bacteria characterization
- Product validation
- New products

- Enartis engineering support
- Sales support
- Customers support
- Newsletters

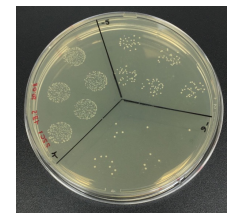
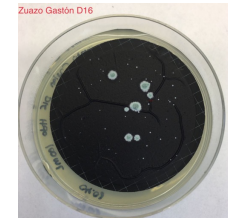
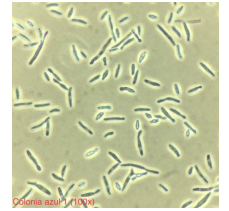
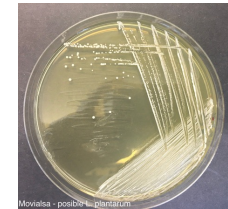
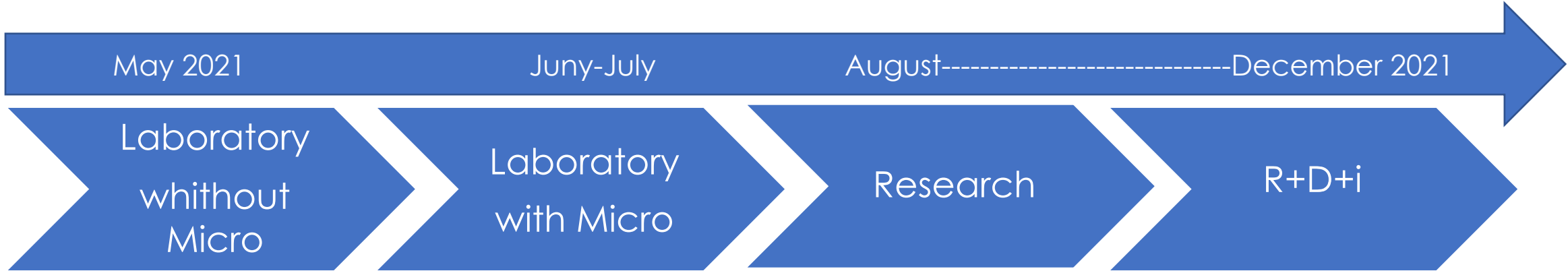
Firstly.....Microbiology laboratory was linked to CDTI project

- The microbiology laboratory in Alcazar was developed thanks to the support of CDTI research but now



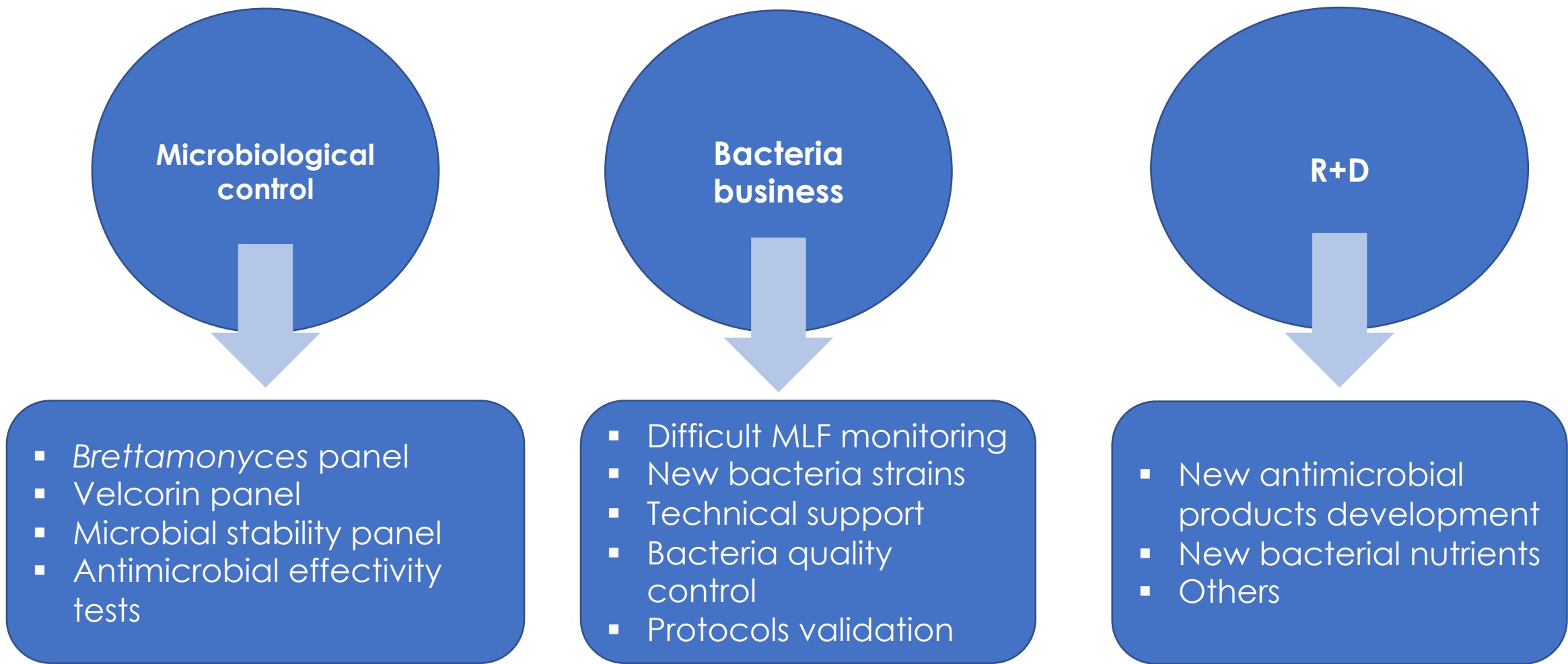


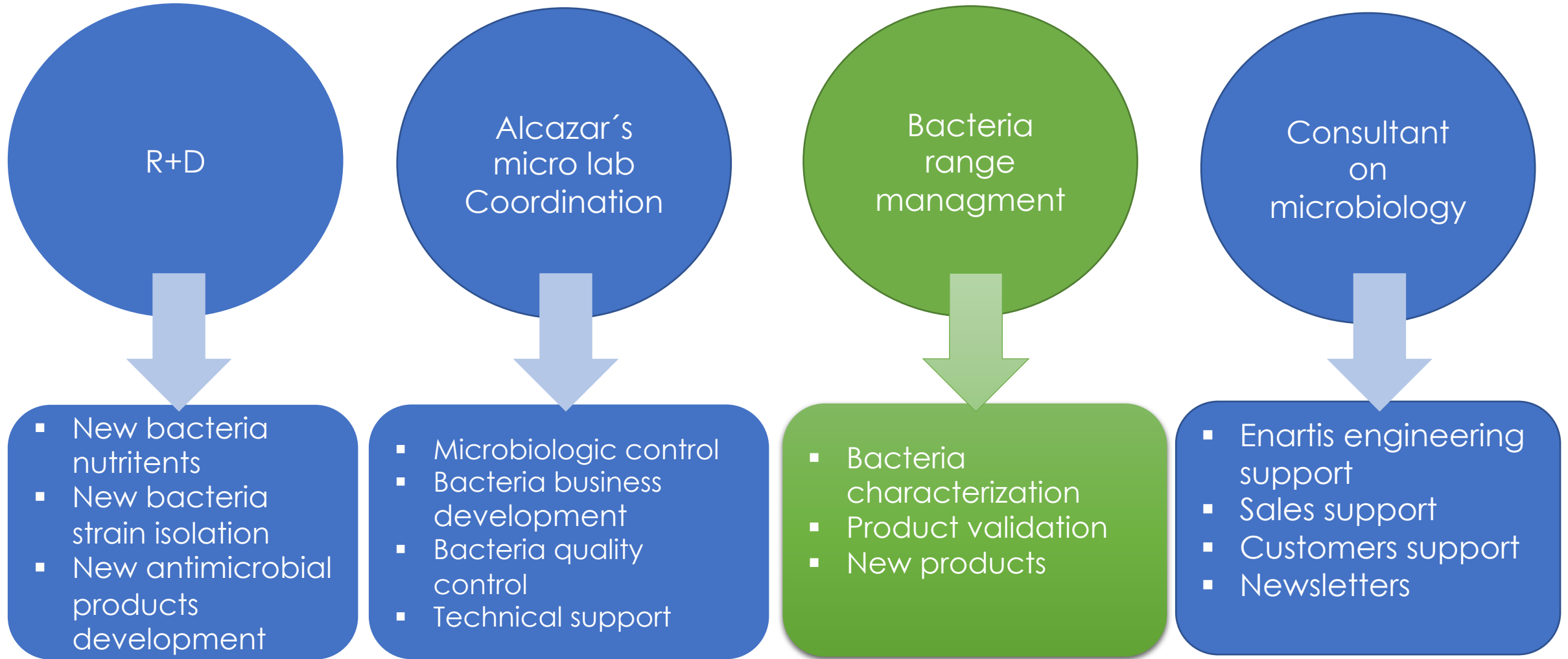
THE LAB EVOLUTION: BEFORE AND AFTER





What we can do NOW?







Bacteria and nutrients range support

HOW?

- Improving knowledge
- Technical validation

Example

- Genetic typing of strains
- Enartis bacteria characterization
- Secuencial MLF validation in different wines
- Coinoculation with Enartis Yeasts
- Implantation experiments
- Validation of nutriferm ML for secuencial MLF





Enartis bacteria characterization



Safety

Enartis bacteria don't produce biogenic amines

Security

MLF kinetics
Silver and Uno
have fast kinetic
Implantation test

Organoleptic character

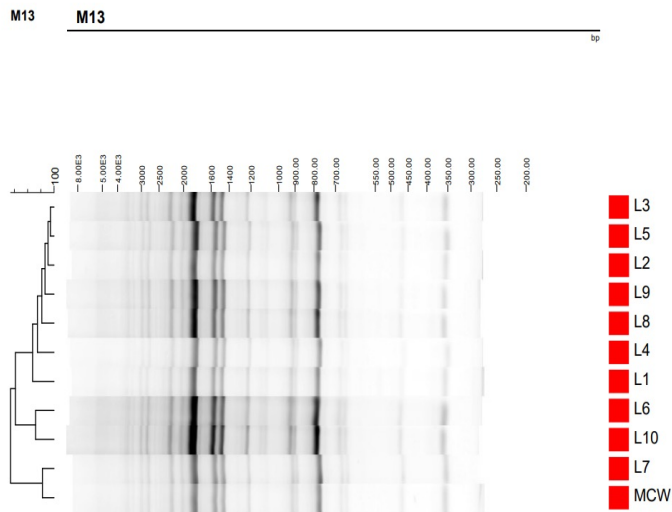
Characterization of the aromatic profile with the yeasts Es454, 488, Perlage and Q5

Mouth feel profile with the yeasts Es454, 488, Perlage and Q5

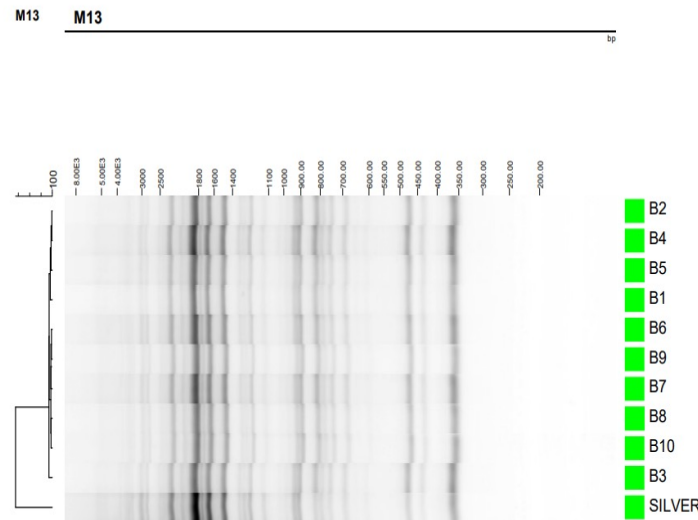


How does our bacteria behave in coinoculation?

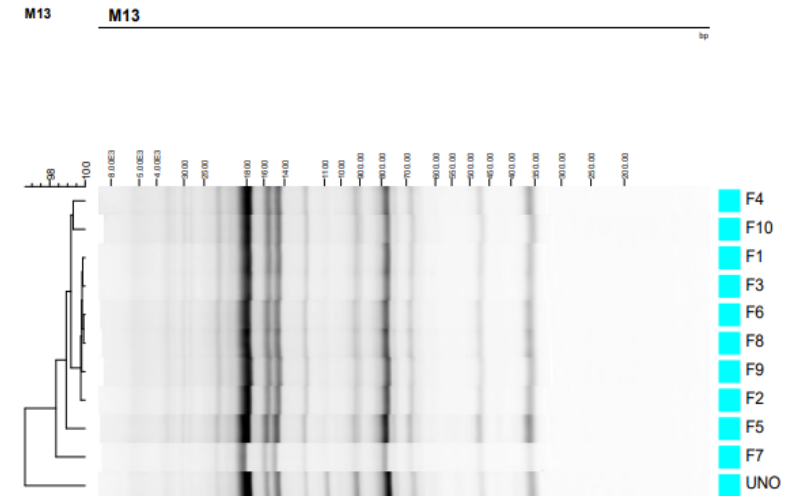
MCW



SILVER



UNO

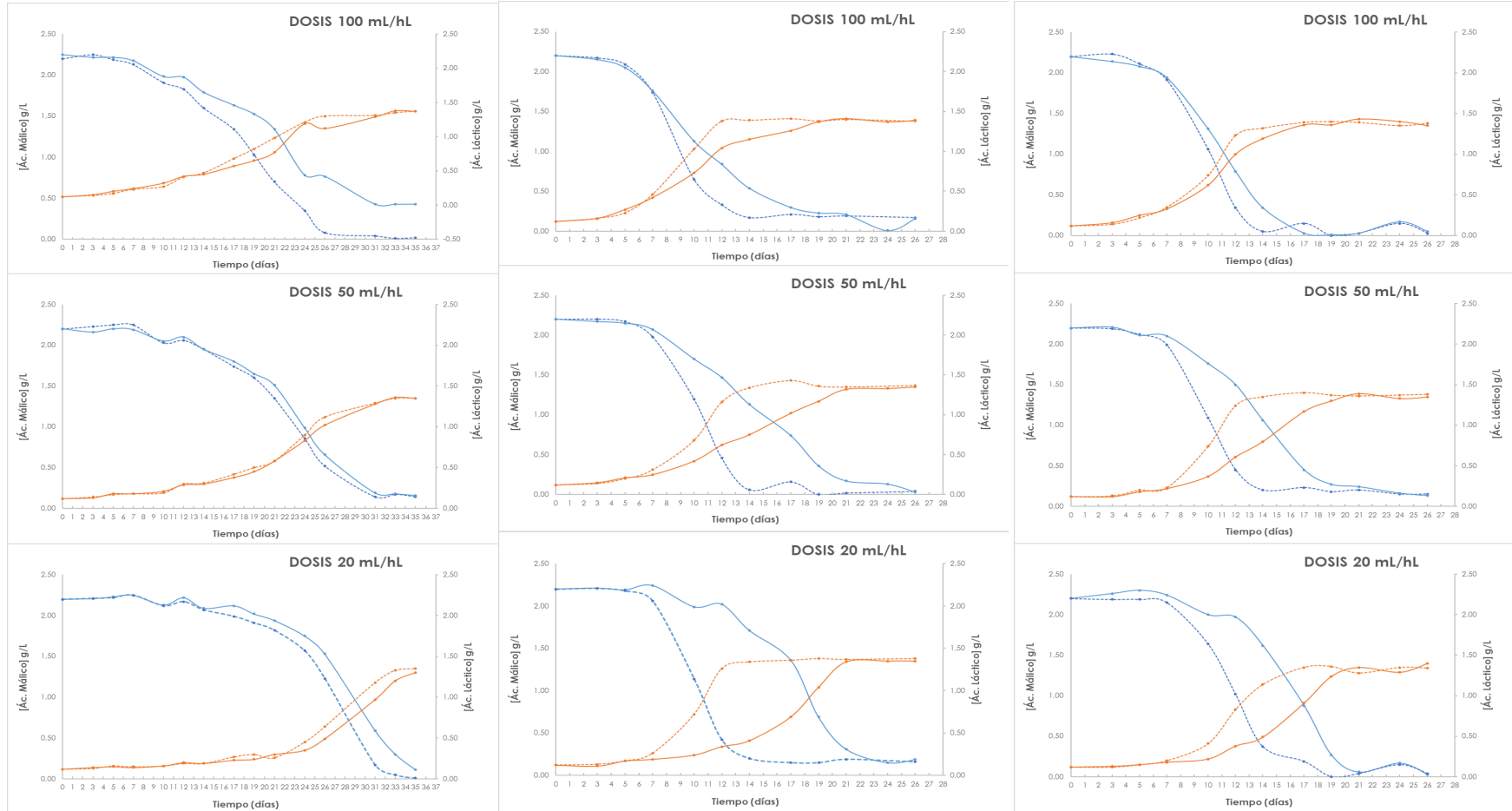


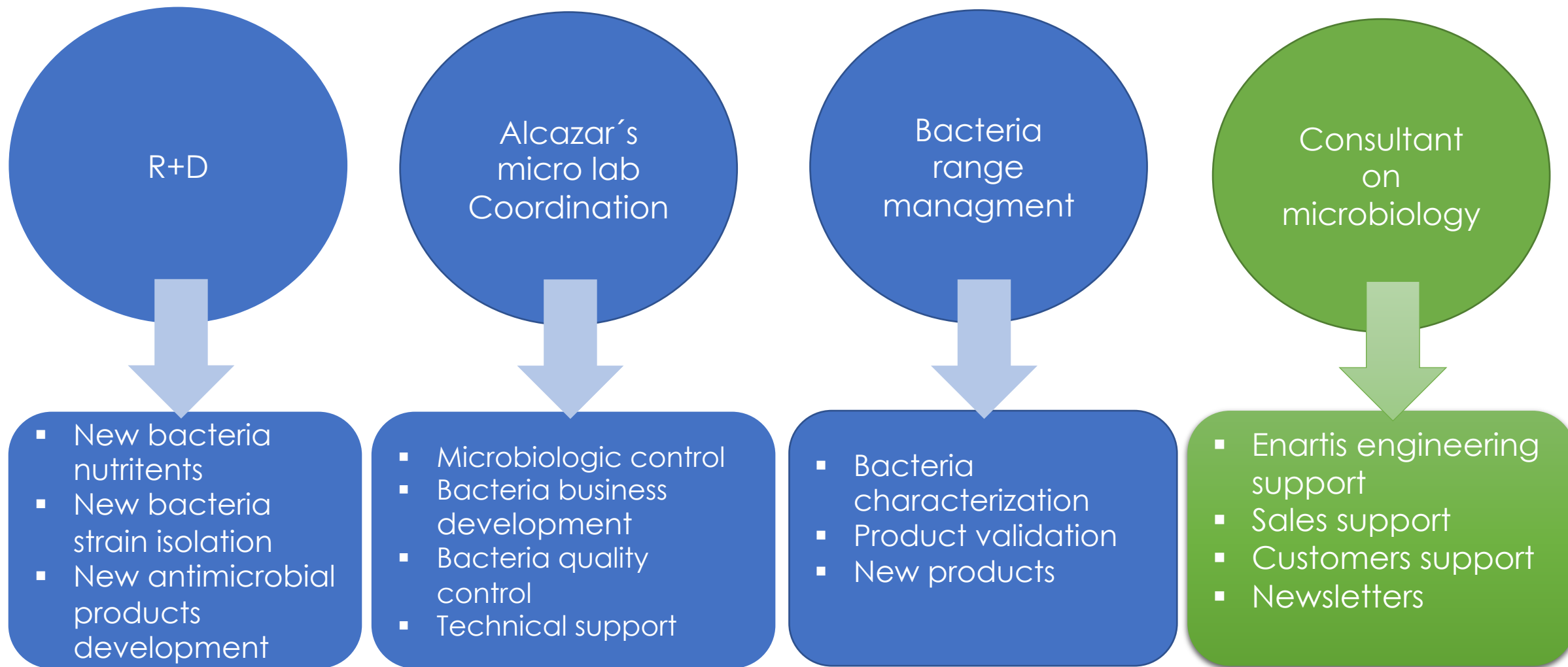
| STRAINS | IMPLANTATION % |
|------------------|----------------|
| MCW + ES Q5 | 100 |
| MCW + ES Perlage | 100 |
| MCW + ES 488 | 100 |
| MCW + ES 454 | 100 |

| STRAINS | IMPLANTATION % |
|---------------------|----------------|
| SILVER + ES Q5 | 100 |
| SILVER + ES Perlage | 100 |
| SILVER + ES 488 | 90 |
| SILVER + ES 454 | 90 |

| STRAINS | IMPLANTATION % |
|------------------|----------------|
| UNO + ES Q5 | 100 |
| UNO + ES Perlage | 100 |
| UNO + ES 488 | 100 |
| UNO + ES 454 | 100 |

Example of Product validation: Enartis Nutriferm ML







Technical Enartis Engineering support: Yeast propagation control

2 new protocols 1% (12 hours) and 0,5 % (15 hours)

Protocols validation for Enartis engineering machines, LEV2050 and Ever

New protocol for Lev propagator

Nutriferm Active plus development



Thanks!

enartis

