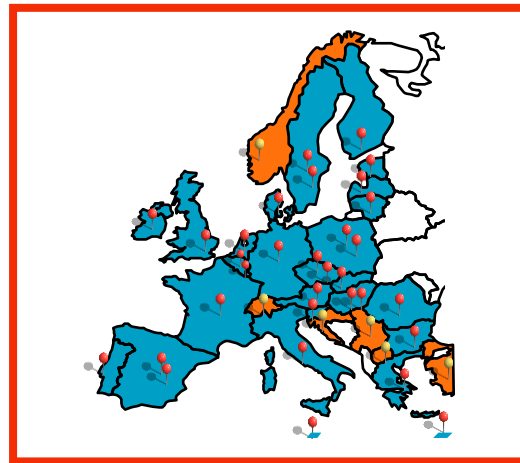


Network Activities

PTs on VTEC detection and typing and training initiatives



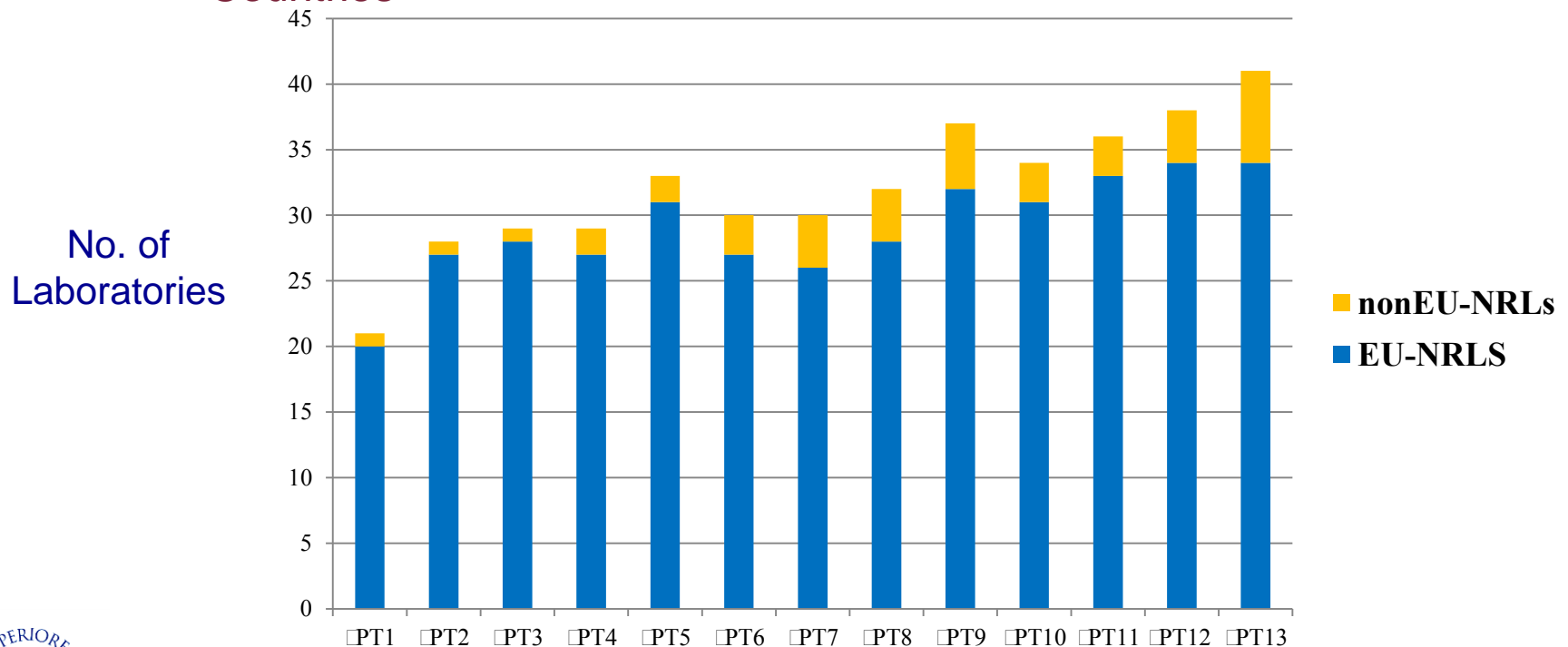
Proficiency tests (PT) on *E.coli* organized by the EU-RL

➤ Two main types of PT:

- Strain identification and typing
- Detection in food matrices

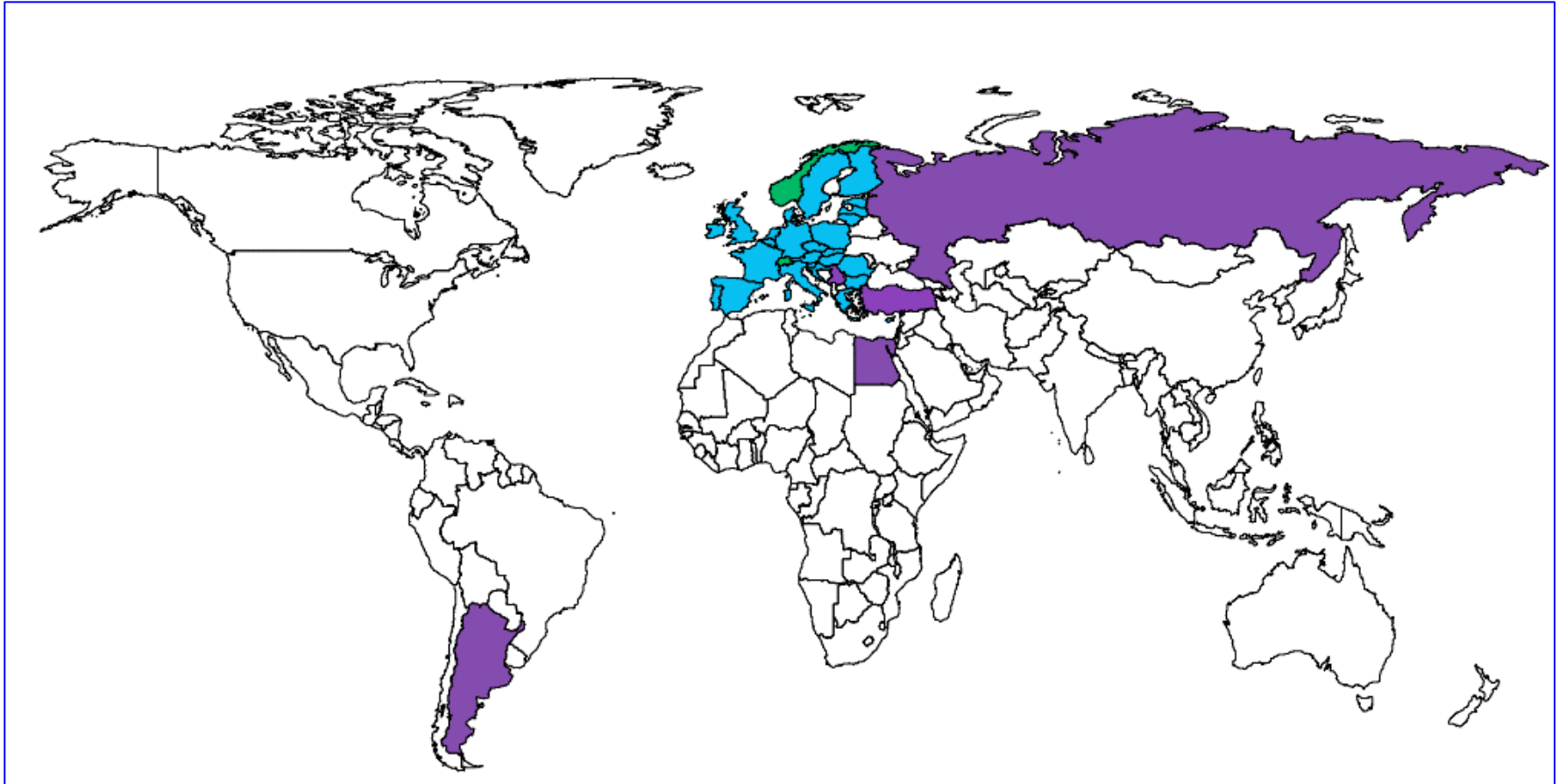
➤ Involvement of 42 NRLs designated by:

- All the 28 EU Member States and other European and extra European Countries



Proficiency tests (PT) on *E.coli* organized by the EU-RL

- **Involvement of 42 NRLs designated by:**
 - All the 28 EU Member States and other European and extra European Countries



Detection of virulence genes in VTEC strains

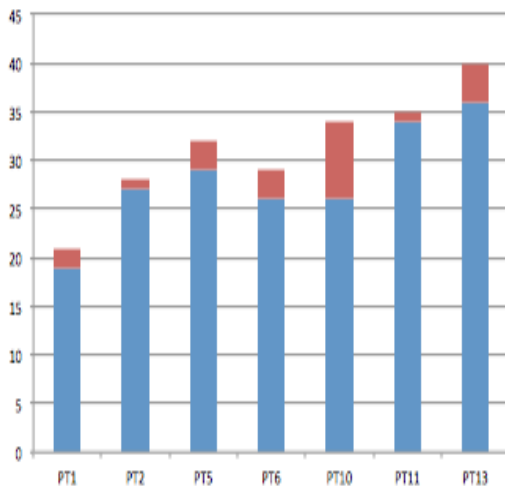
Participation and proficiency of the NRLs

Correct results

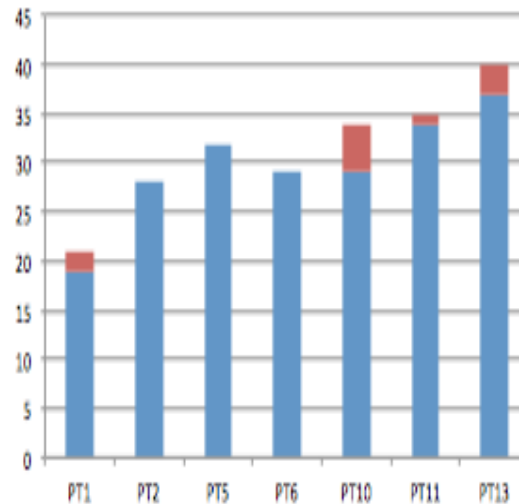
Wrong results

No. of laboratories

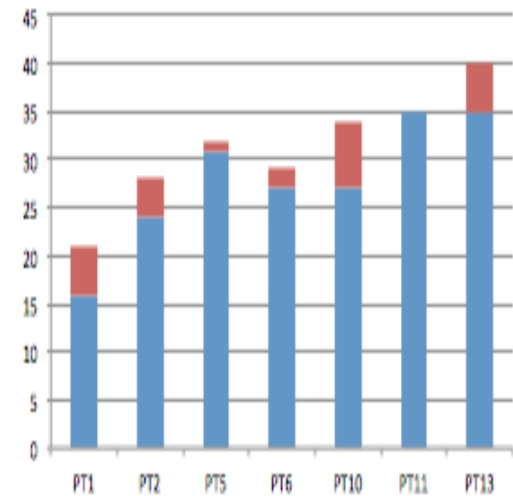
vtx1



vtx2



eae

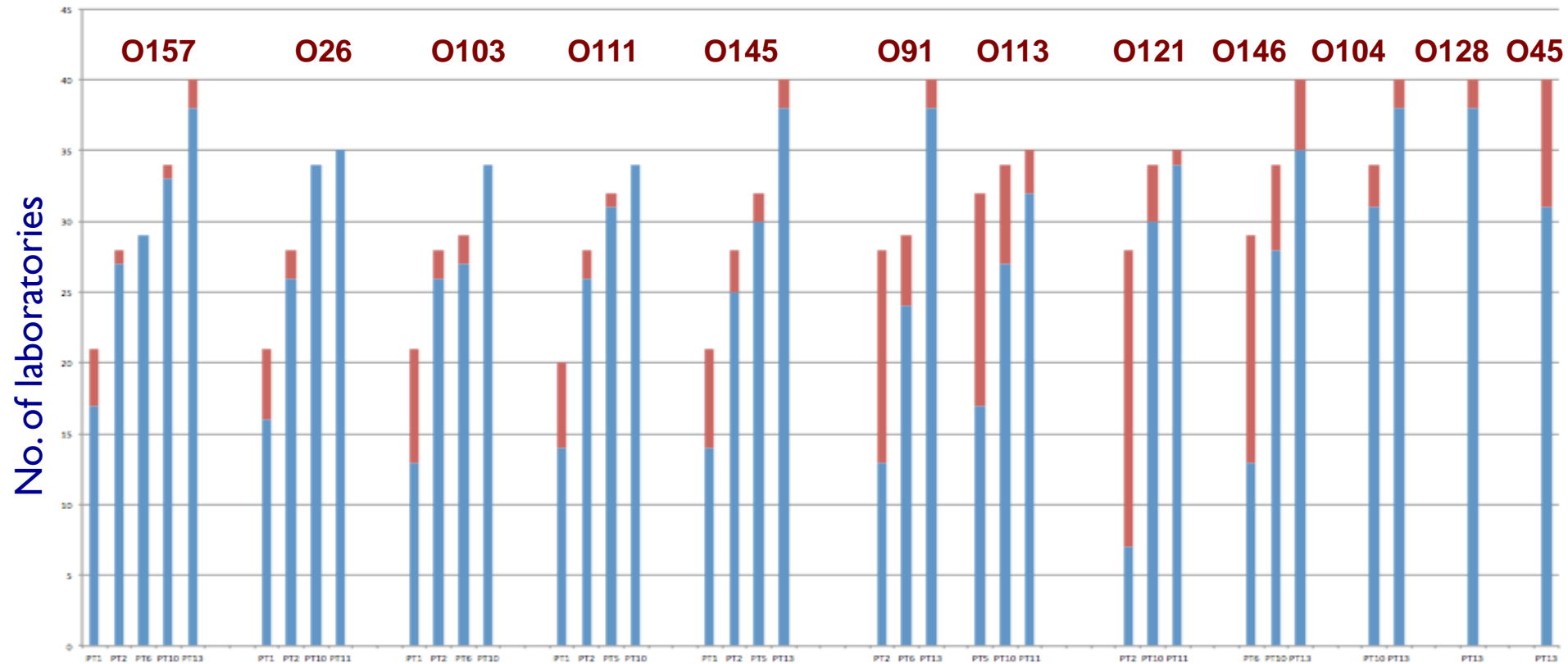


Detection of O-groups in VTEC strains (pheno-genotyping)

Participation and proficiency of the NRLs

Correct results

Wrong results



Proficiency tests (PT)

PTs on the detection of VTEC in food by ISO/TS 13136

Proficiency tests organized by the EU-RL VTEC

- 2009: Carcass swabs - O157 and O26



- 2010: Milk – O103



- 2011: Vegetables (spinach) – O157 and O145



- 2012: Water samples – O157



- 2012: Seeds – O157



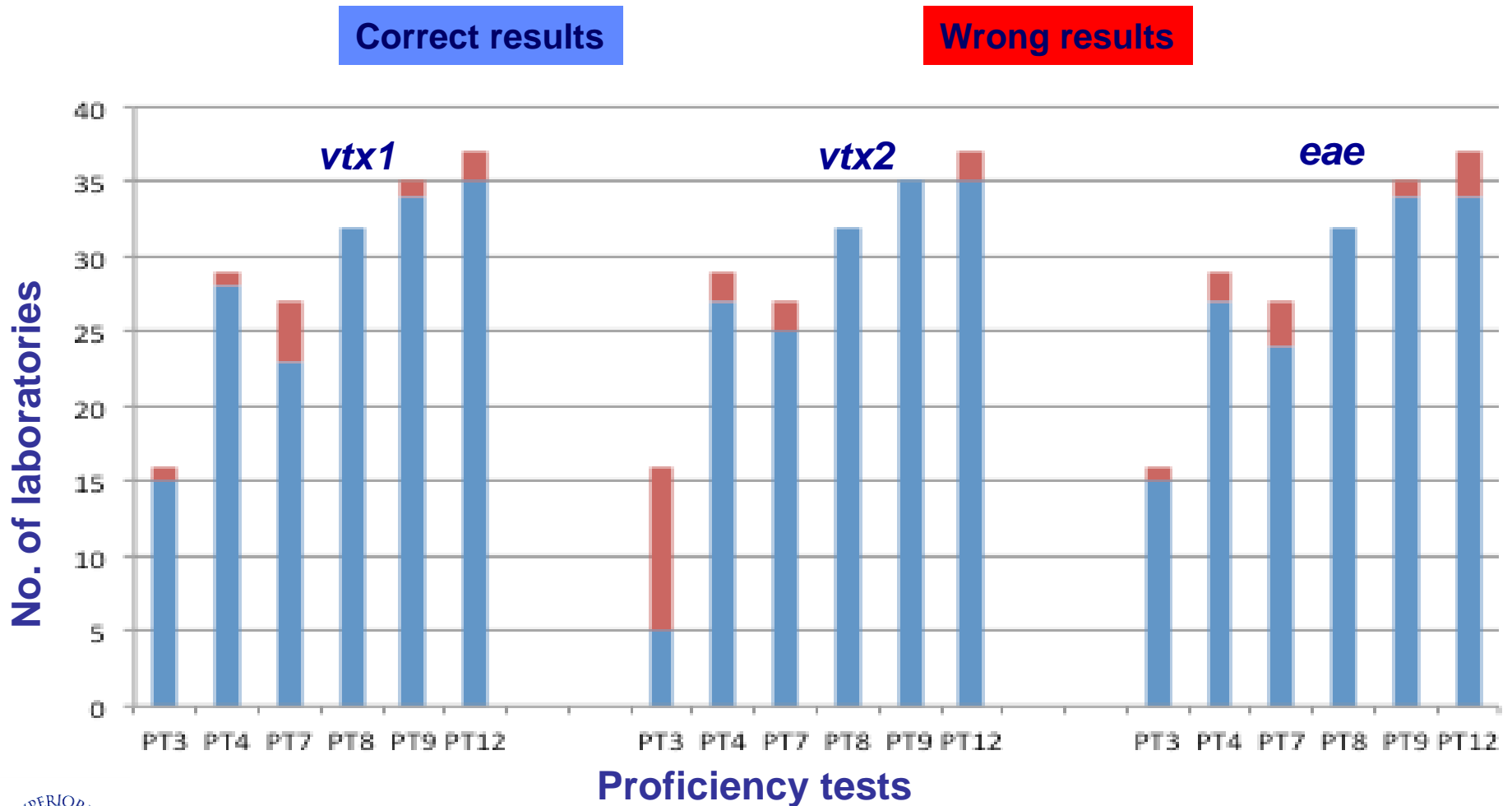
- 2013: Sprouts – O157 and EIEC



- 2014: Sprouts - ?????

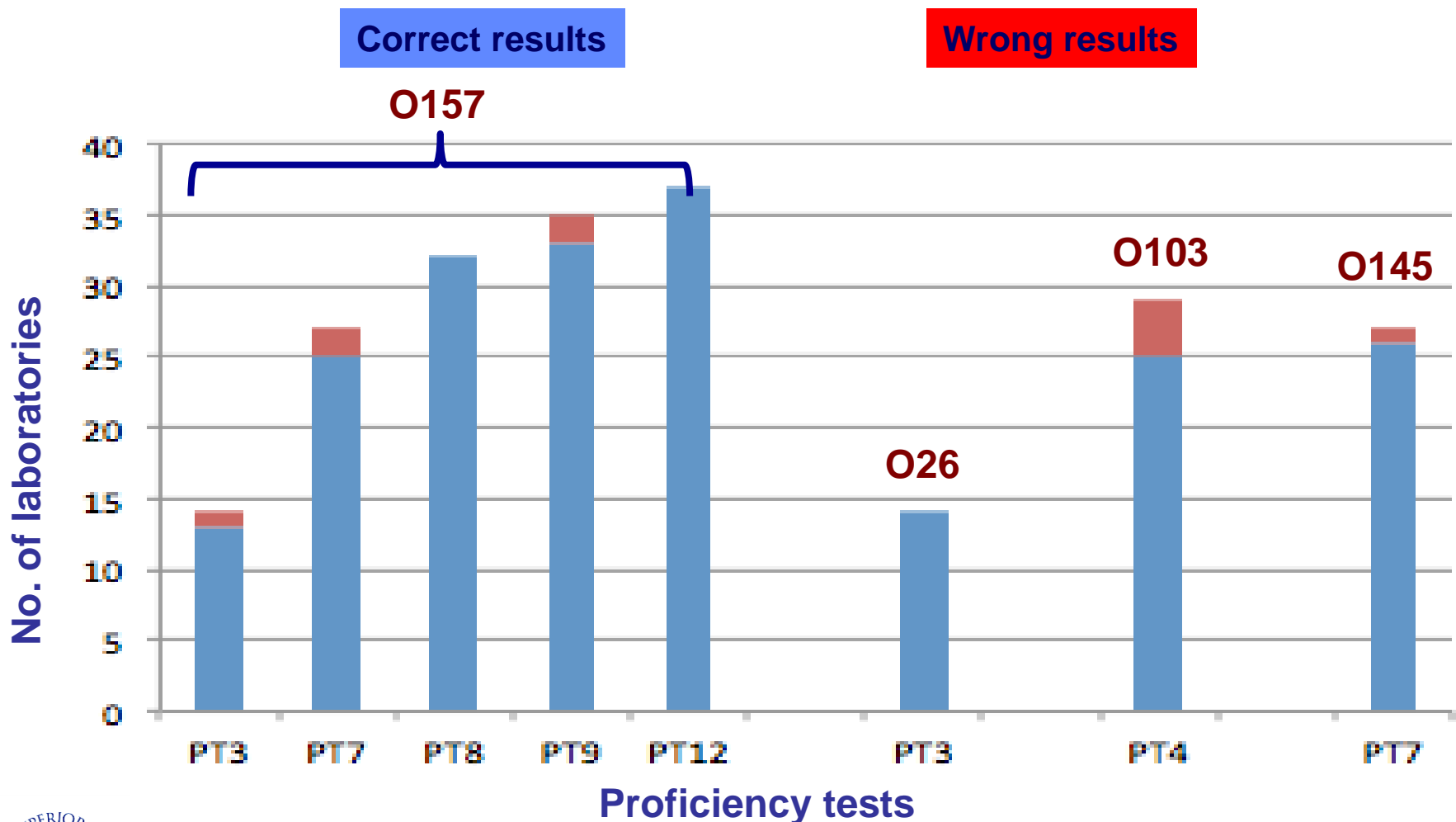
Proficiency testing: Detection of VTEC by ISO/TS 13136

Real Time PCR screening step: virulence genes



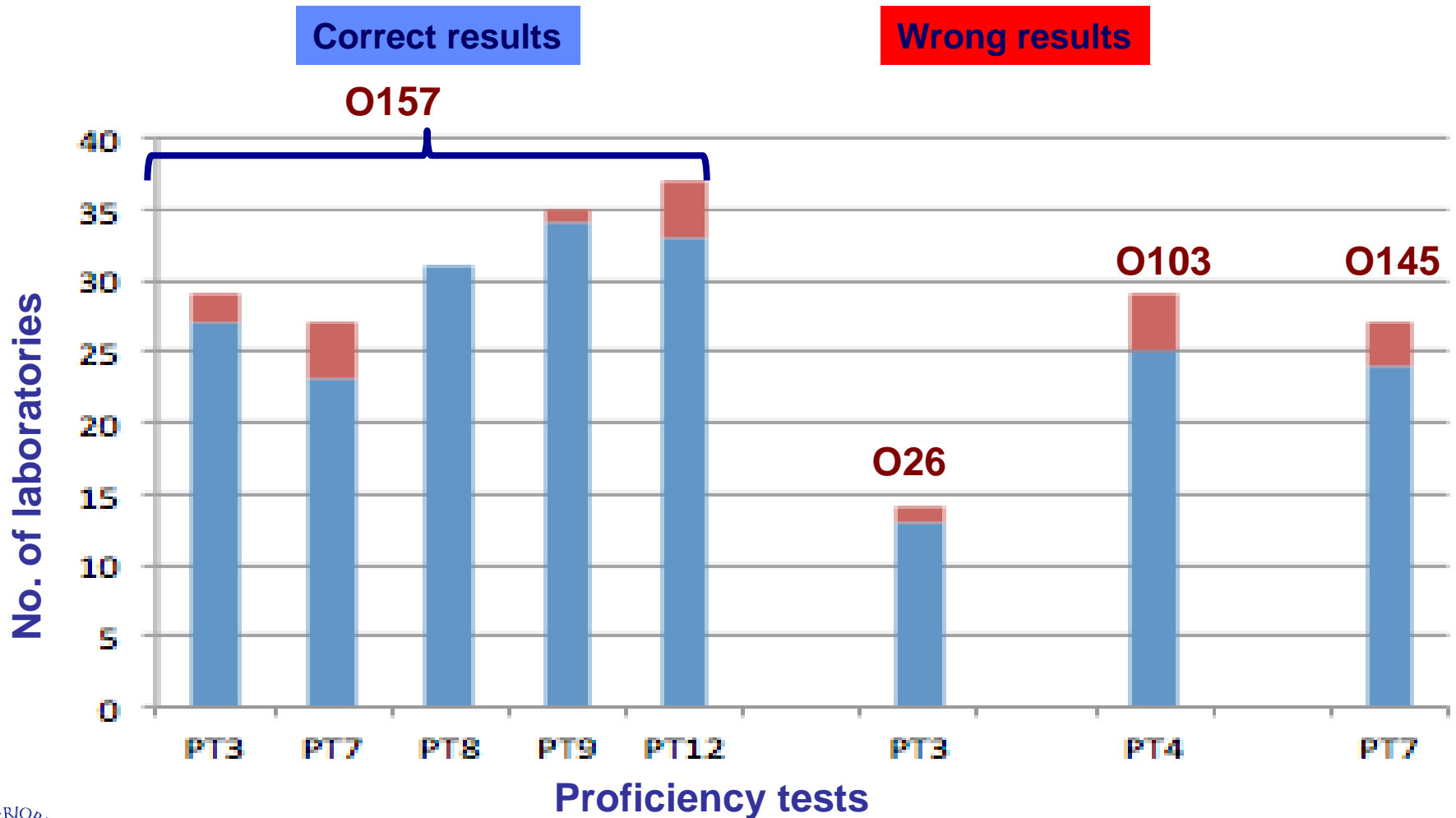
Proficiency testing: Detection of VTEC by ISO/TS 13136

Real Time PCR screening step: O serogroup genes

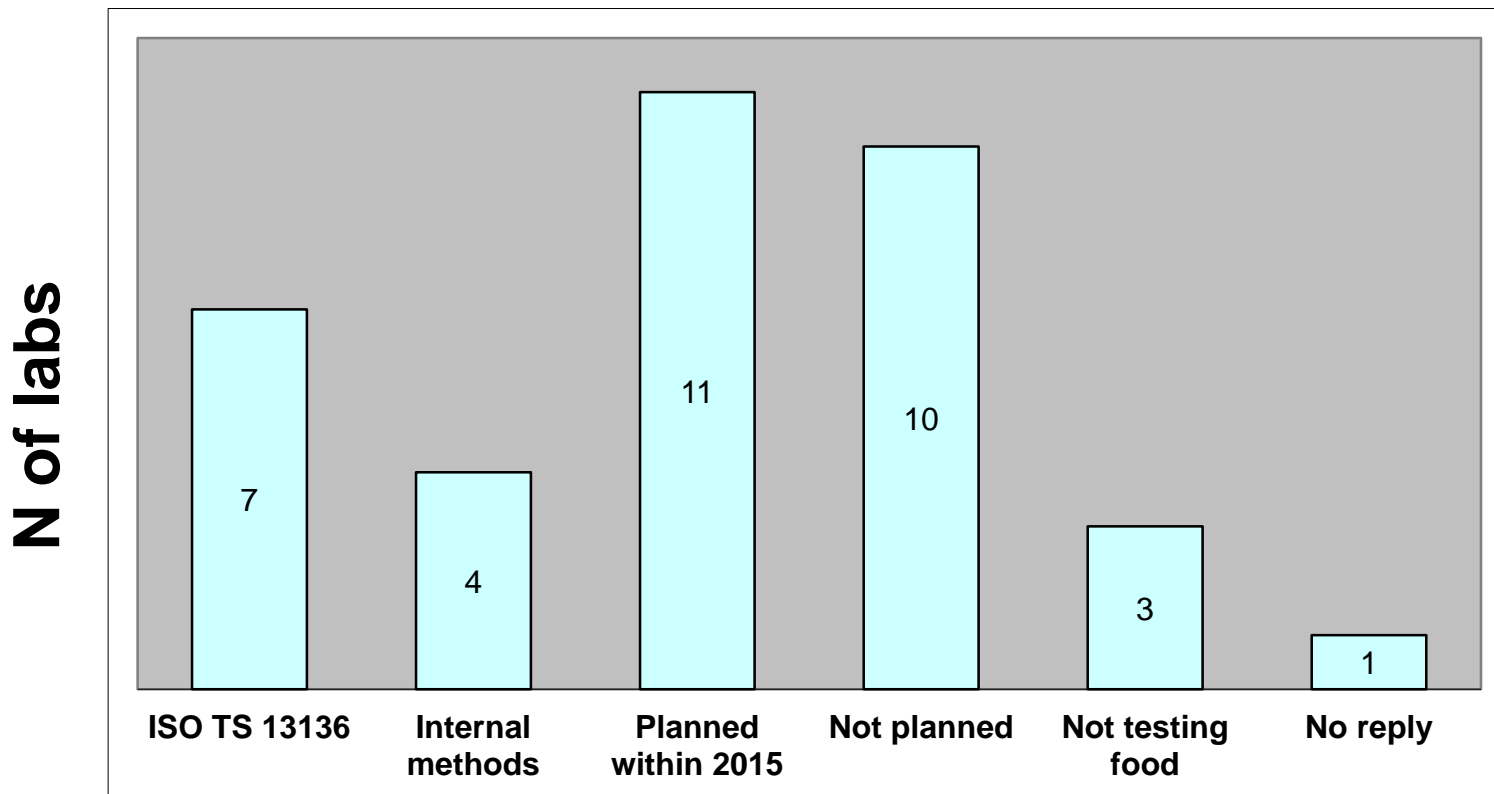


Proficiency testing: Detection of VTEC by ISO/TS 13136

Isolation step



Accreditation of ISO/TS13136:2012 – State of play



Revision of ISO/TS 13136:2012

- ✓ **As a Technical Specification, revision after 3 years, following:**
 - ✓ **Technical evaluation (PT results)**
 - ✓ **Technical evaluation (Validation)**
 - ✓ **Experience from routine use**

- ✓ **Roadmap:**
 - ✓ **7 November 2015: 3 years from publication**
 - ✓ **CEN/TC275 WG6 2015 general meeting (June): NWIP – revision proposed**
 - ✓ **Early 2016: the revision project could start**

- ✓ **Issues:**
 - ✓ **Enrichment**
 - ✓ **Stx variants**
 - ✓ **Performance data will be updated (including those related to DNA extraction)**
 - ✓ **Isolation???**

Evaluation of the analytical performance

Assignment of **penalty points** for incorrect results

- ✓ More reliable than Cohen's kappa for this type of PT
- ✓ Better possibility to analyze historical trends of performance for each NRL
- ✓ Retrospective analysis of the previous PTs

Laboratory training at the EU-RL VTEC

Standard Training Programs

Program for a 5-days training on the identification and characterization of VTEC strains (EU-RL VTEC_Training Program_Identification of VTEC_Rev 2) [PDF - 45.14 kbytes]



Program for a 4-days training on the identification and characterization of the different groups of pathogenic *E. coli* by Real Time PCR amplification of their virulence genes (EU-RL VTEC_Training Program_Identification of pathogenic *E. coli*_Rev 1) [PDF - 44.66 kbytes]



Program for a 4-days training on the detection of VTEC in food matrices according to the method ISO/TS 13136:2012 (EU-RL VTEC_Training Program_ISOTS13136_Rev 1) [PDF - 44.76 kbytes]



Program for a 5-days training on molecular typing of VTEC by PFGE (EU-RL VTEC_Training Program_PFGE typing_Rev 2) [PDF - 123.83 kbytes]



Training at the EU-RL VTEC

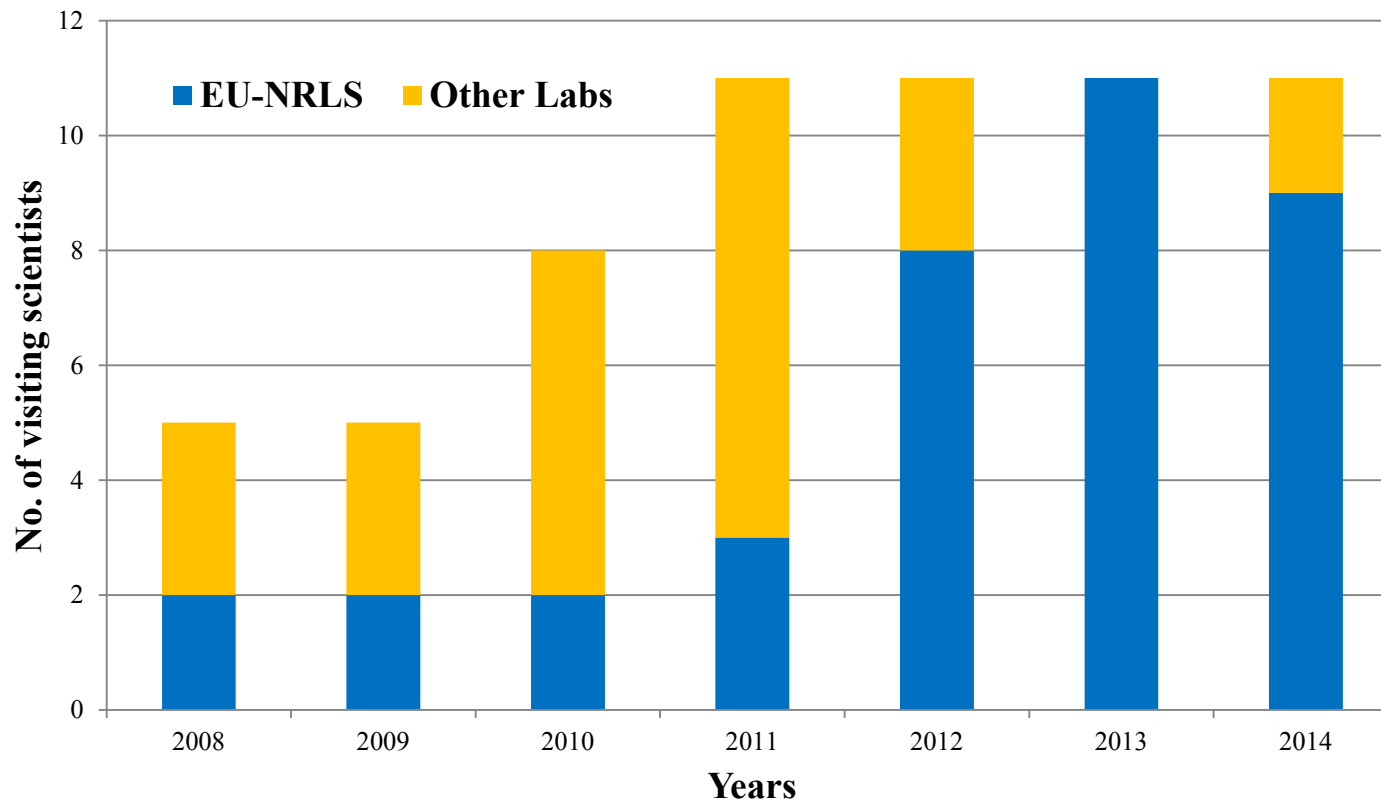
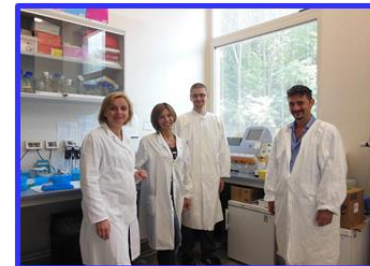
Since 2012

- ✓ Dedicated Budget from DG SANCO to support the training visits
- ✓ At the beginning of each year a call to apply for short term visits is launched



Training at the EU-RL VTEC

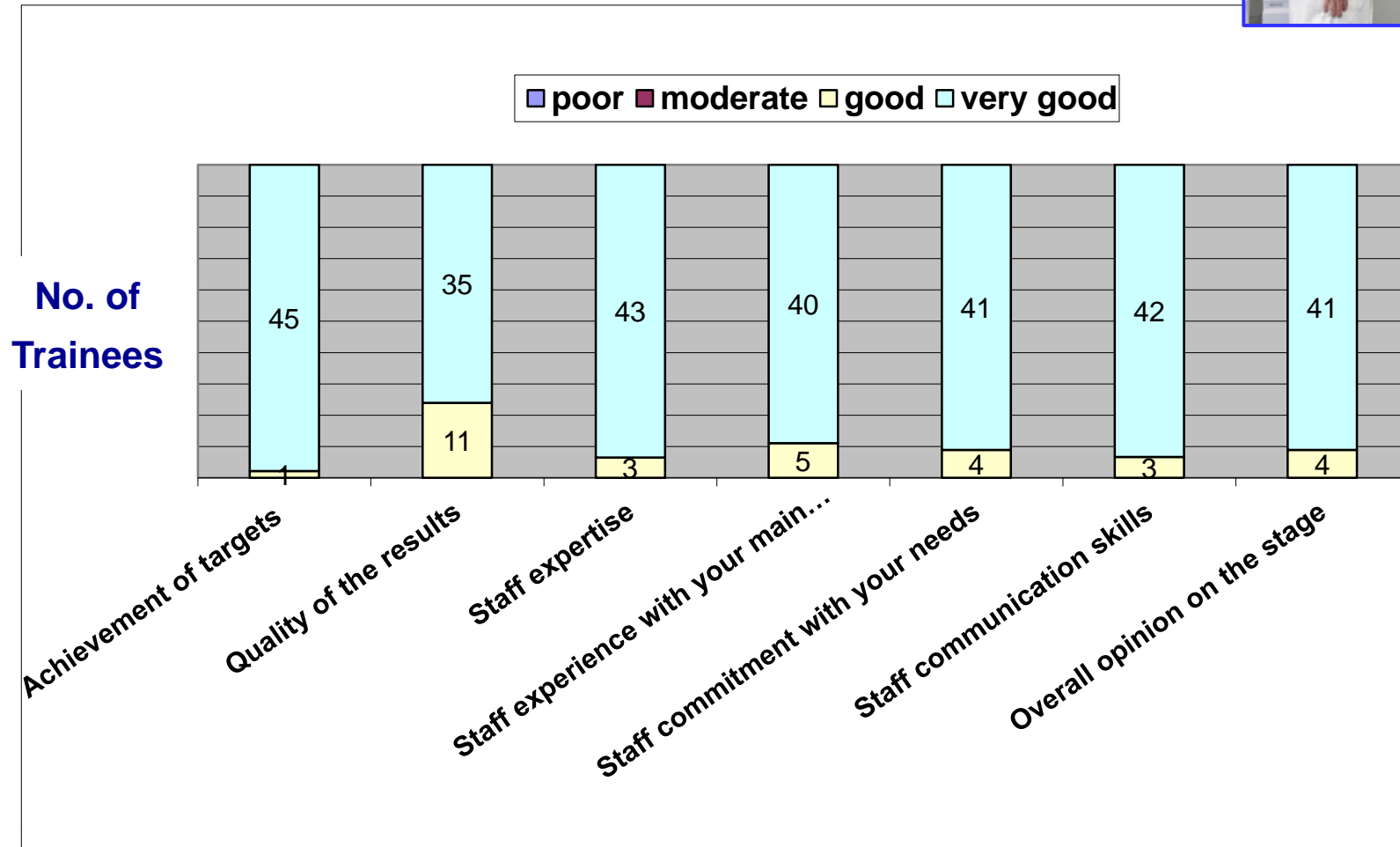
➤ As of today, a total of 62 scientists visited the EU-RL



Training at the EU-RL VTEC



Training Satisfaction Survey (46 trainees)



Training courses at the EU-RL VTEC



- ✓ 2014 - Training course on the use of the software package **BioNumerics** for PFGE
- ✓ 2015 - Training course on **Bioinformatics** for assembling, mining, and analysing NGS data
- ✓ Dedicated Budget requested to DG SANCO

