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Offer, Demand, and Needs in Training and Education: A Study Focusing on Microbial Culture Collections within the MIRRI Consortium

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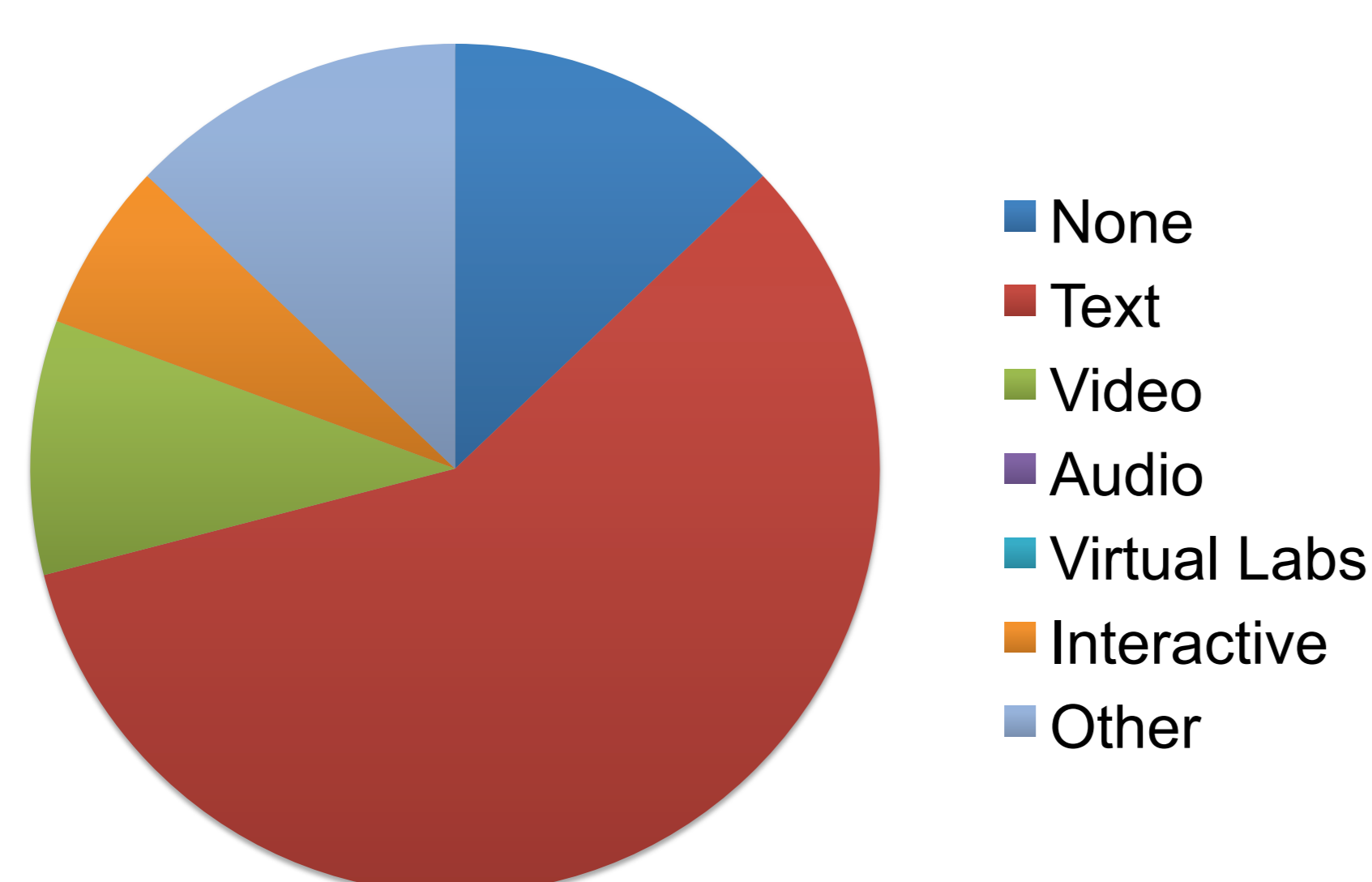
Introduction:

MIRRI is an EU-ESFRI project, aiming to provide facilitated access to microbial resources, associated data and expertise, and promote knowledge transfer and foster innovation. In order to achieve these goals, it is crucial to properly define our stakeholder community and identify their current and future needs. We conducted wide-scoped surveys targeting current and potential users of microbial resources and services, as well as providers within MIRRI. Here we present and analyze some of the results of this survey, focusing on offer, demand, and needs in training and education.

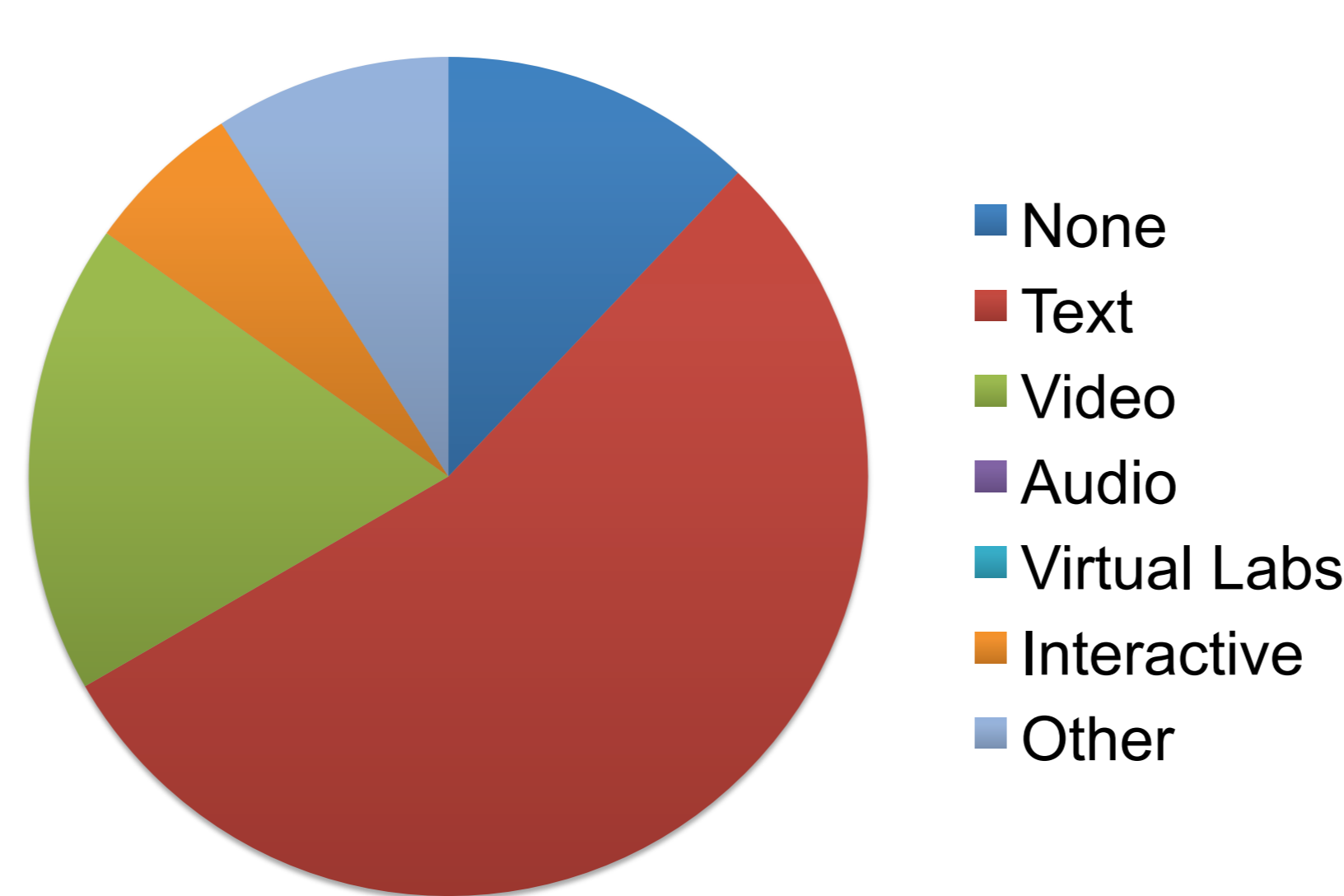
Results:

I- Education Tools and Contents within MIRRI

A. Type of Contents/Tools being produced



B. Type of Contents/Tools being used



II- Training Outsourcing Needs

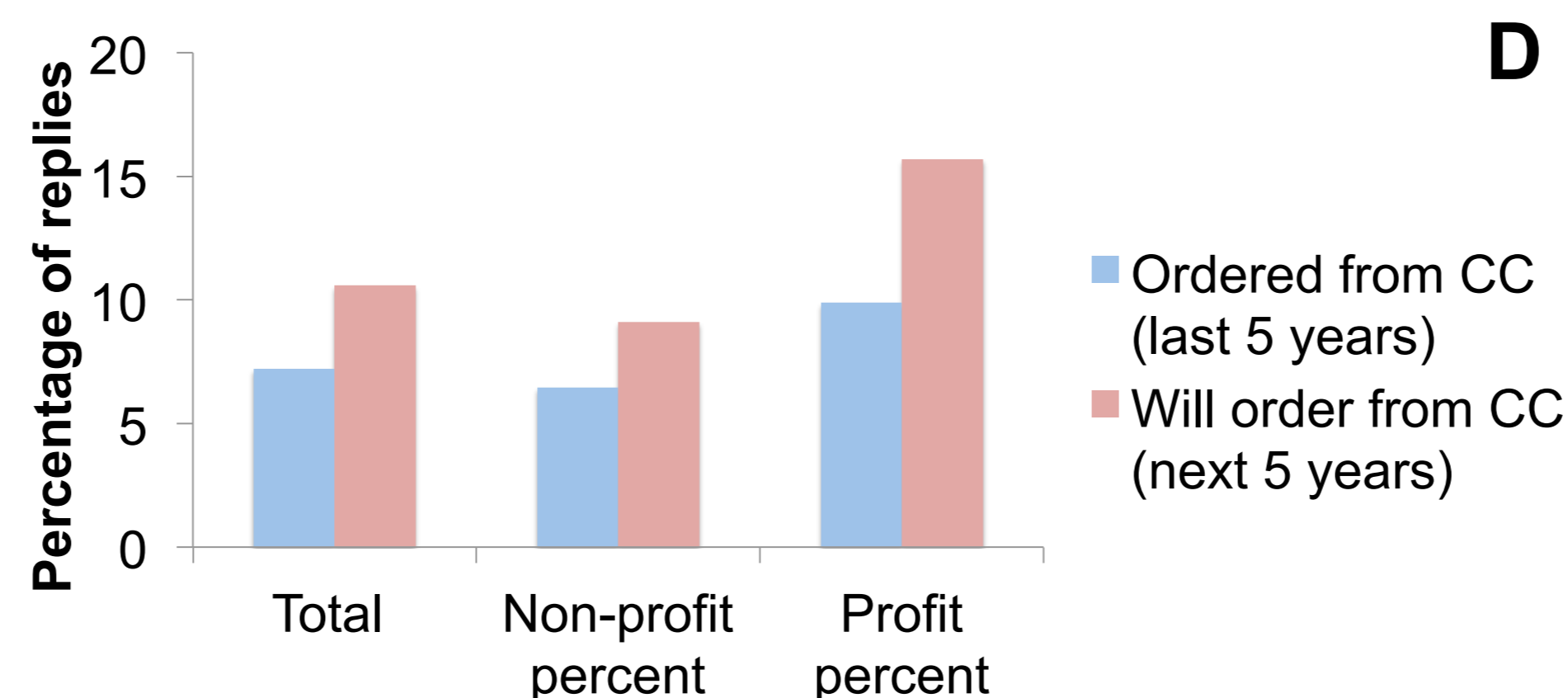
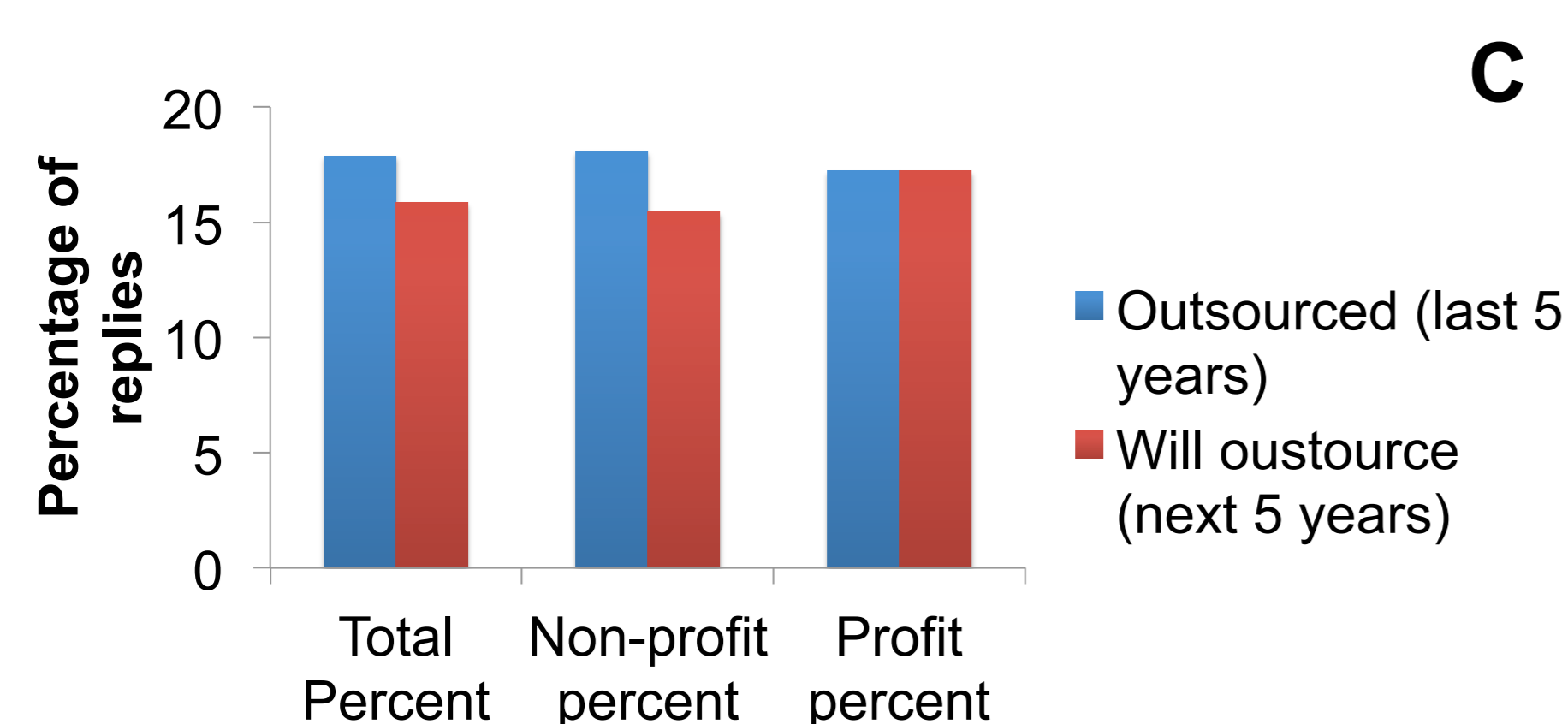


Fig. 1- Overview of past and future training demand by customers of members of the MIRRI consortium: Outsourcing procured from third parties (A), CCs (B) and gap between both (C).

III- Training Topics Demand (Top 5 Profit vs. Non-Profit)

Table 1- Top training topics identified by non-profit (left; answered: 362) and profit (right; answered:115) customers/users of MIRRI.

Training service	Non-profit (count)	Non-profit (percent)
Data analysis	163	45.0
Molecular tools	139	38.4
Microbial identification and characterization	138	38.1
Culture collection management	122	33.7
Taxonomy	115	31.8

Training service	Profit (count)	Profit (percent)
Microbial identification and characterization	73	63.5
Cultivation (e.g. anaerobic, fermenters, intracellular bacteria)	60	52.2
Microbial detection and diagnostic techniques	49	42.6
Preservation	45	39.1
Culture collection management	42	36.5

Discussion:

→ Overwhelming use of face-to-face interaction, and classic contents, with very limited use or production of video, interactive or new contents types (I- A, B).

→ Wide gap between training procured from 3rd parties (18%) and CCs (7%). Gap will decrease due to future spike in demand, mainly from profit sector (II- C,D).

→ Training needs are frequently covered by 3rd parties, or in-house. Our offer suffers from reduced visibility, and price-competitiveness.

→ Marked differences in topic demand from the profit and non-profit sectors (III).

Conclusions:

→ Market for training is much wider than the one currently covered by MIRRI's culture collections.

→ Adjusting our offer, via adoption of new tools and technologies will increase our competitiveness, by reducing costs, and duration and better serve the needs of our customers.

