

Single-use plastic reduction

Analysis of the first INSEAD Community Impact Challenge



With support from



APRIL 2020

Executive summary

Together, 2340 INSEAD members engaged to reduce their single-use plastics (SUP) consumption, and persuading ~180k people to do the same

- INSEAD community participants engaged to reduce their SUP consumption by 4500kgs or 3.7kgs/head on a yearly basis
- They further engaged 181k people in their network with over 250 companies engaged
- Mostly impactful reduction was in plastic bottles (~50% of total reduction), plastic wrappers (20%) and bags (17%)
- Countries with the biggest reductions overall, and biggest reductions per capita, were Lebanon and China
- MBA and Exec Ed. students achieved the largest reductions, while PhDs consumed the least plastics at the start
- No significant difference in plastic reduction effort between age categories

The challenge created a shift in mindset and behaviours

- 73% of people became more aware of ecological issues
- 98% of people made lasting changes to their habits
- The biggest change of habits was using reusable shopping bags by 84% of the participants

People faced challenges, but came up with ingenious solutions

- The biggest challenge people faced when reducing plastics were finding alternatives for single-use plastics and finding adequate stores close to living place
- However, participants came up with creative solutions, such as requesting governments to support plastic alternatives or impose use of single use plastics and creating a centralised platform to indicate where to buy products
- In total, 26 circular economy projects have been planned or launched in companies

Going forward, several recommendations are critical to reduce consumption of single use plastics

- Government driven: e.g. subsidies to overcome the cost of plastics alternatives, banning, or education on the impact of plastics
- Community-driven: e.g. sharing of plastic-free shops, tracking/gamification of plastics reduction, or developing / sharing DIY solutions

The first-ever INSEAD Community Impact Challenge?

1 School

90 countries

2340 people:

students, alumni, staff, their families and companies



The Challenge: reduce **single-use plastic** consumption for **1 month** in January 2020

Tackling solve 3 Sustainable Development Goals :

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



11 SUSTAINABLE CITIES AND COMMUNITIES



14 LIFE BELOW WATER





> Results snapshot

Consumption reduction

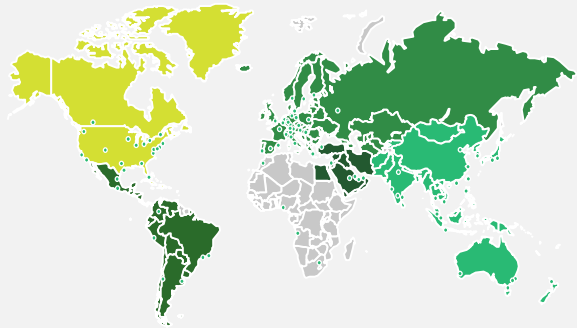
Shifts in mindsets and behaviours

Ingenious recommendations

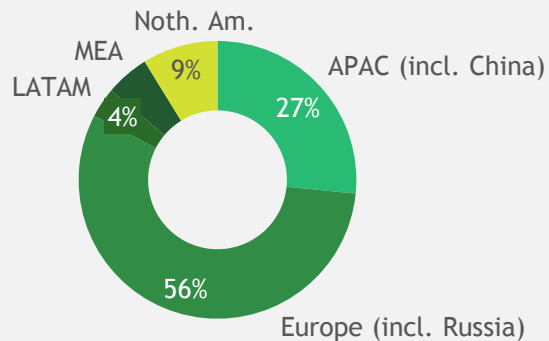
Next steps/recommendations

2300+ members from the INSEAD community participated in challenge

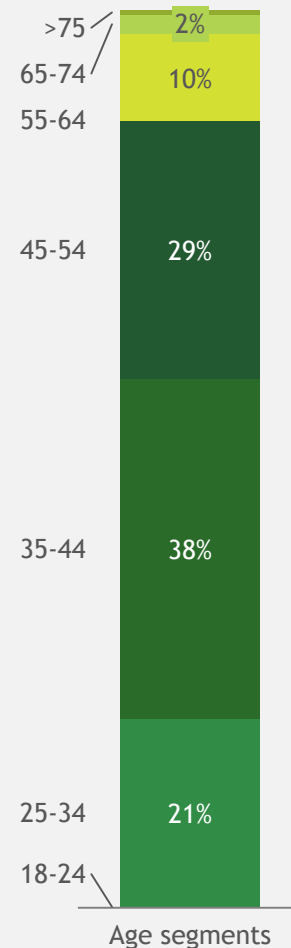
2,340 participants from 90 countries across all world regions



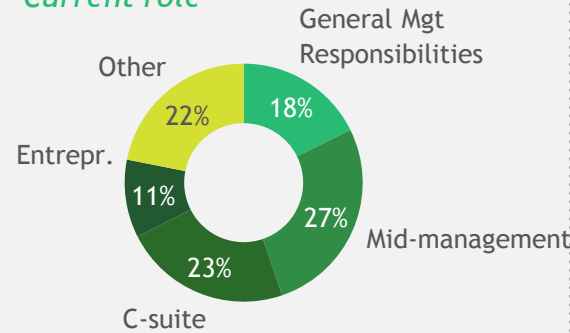
European and APAC countries represent ~85% of total participants



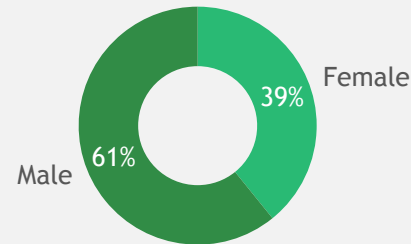
Age spectrum



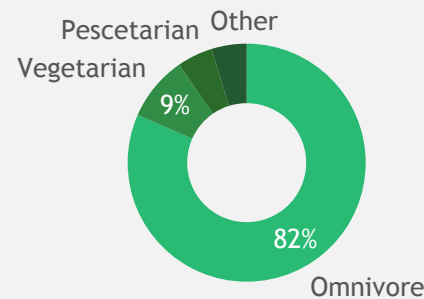
Current role



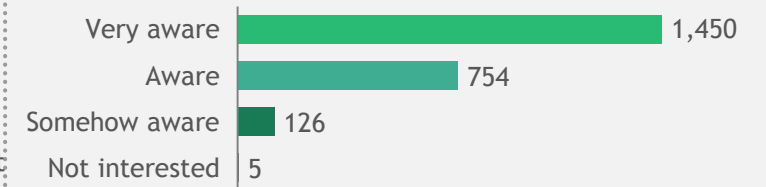
Gender split



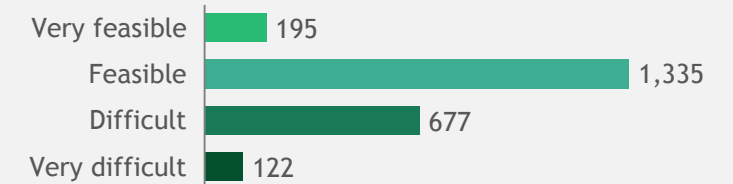
Diet



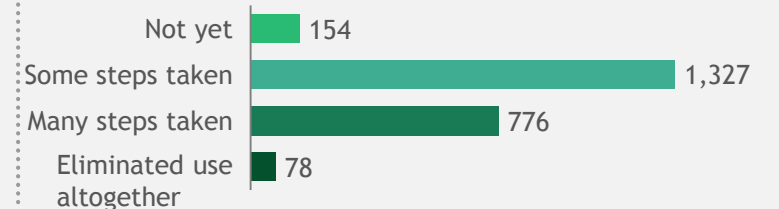
To which extent are you aware plastic pollution is an **important issue**?



With your **current lifestyle**, how difficult is it to take this challenge?

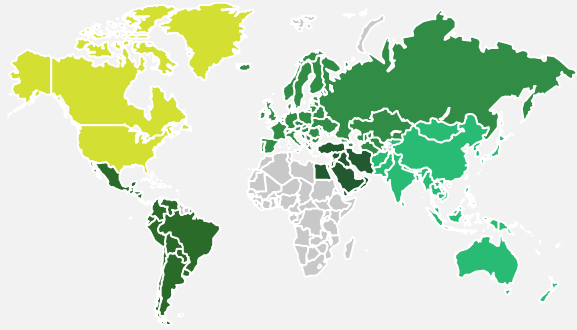


To which extent are you **already taking action** to reduce your use of single-use plastic?

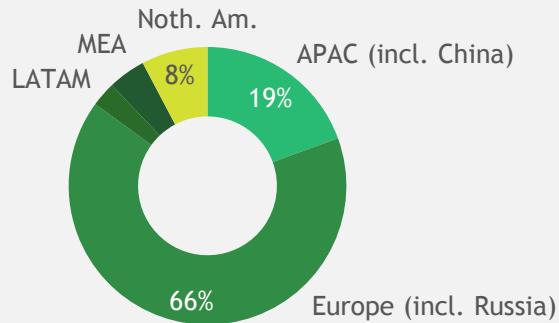


~1200 INSEAD participants entered data on the results (used for analysis of impact in this document)

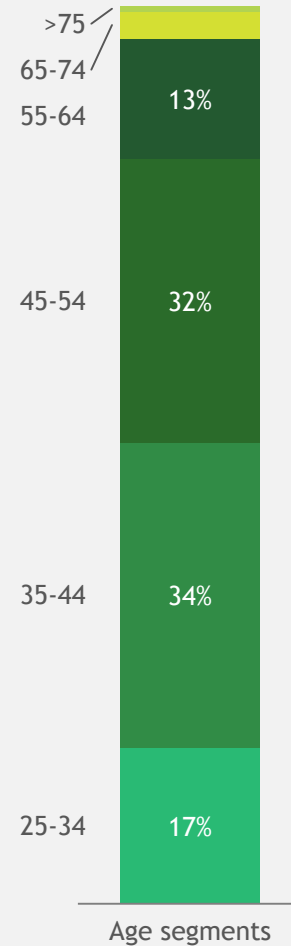
1,207 participants from 72 countries across all world regions



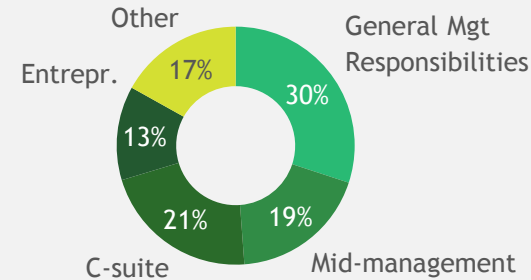
European and APAC countries represent ~85% of total respondents



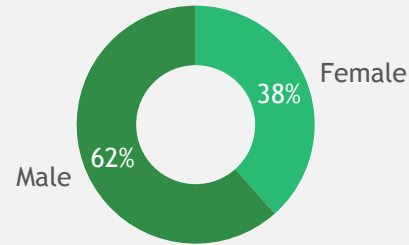
Age spectrum



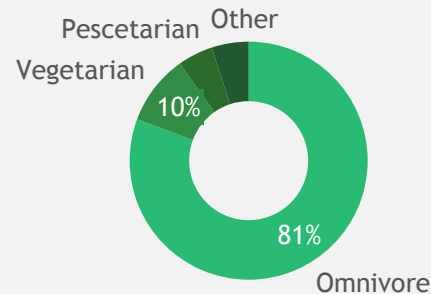
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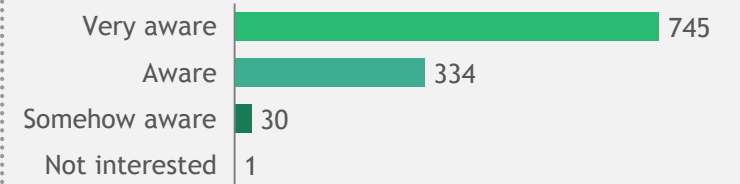
Gender split



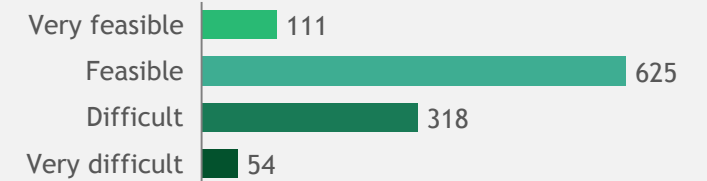
Diet



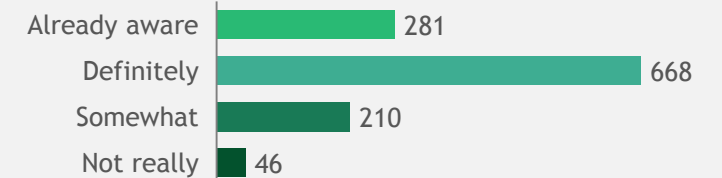
To which extent do you see plastic pollution as an important issue?



With your current lifestyle, how difficult is it to take this challenge?



Did this challenge help you become more aware of single-usage plastic consumption?



Results snapshot

 Consumption reduction

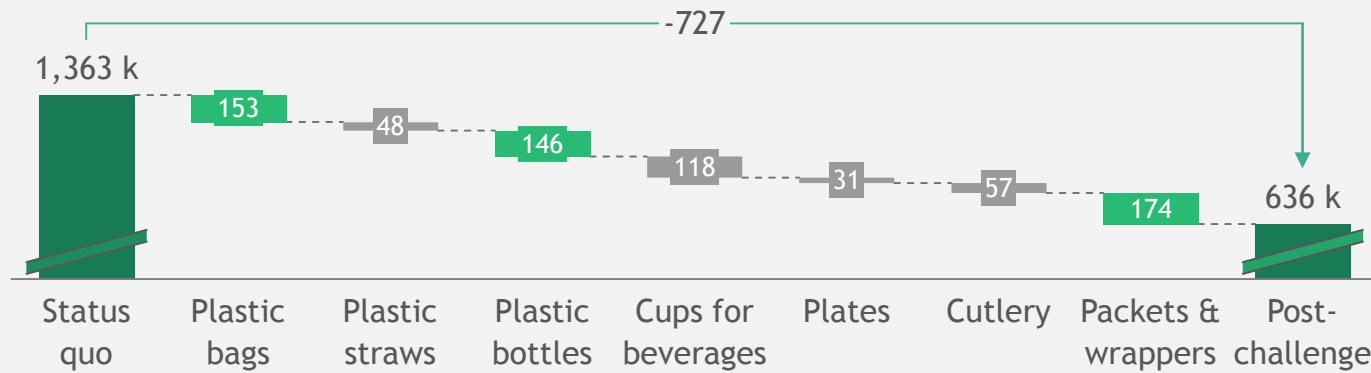
Shifts in mindsets and behaviours

Ingenious recommendations

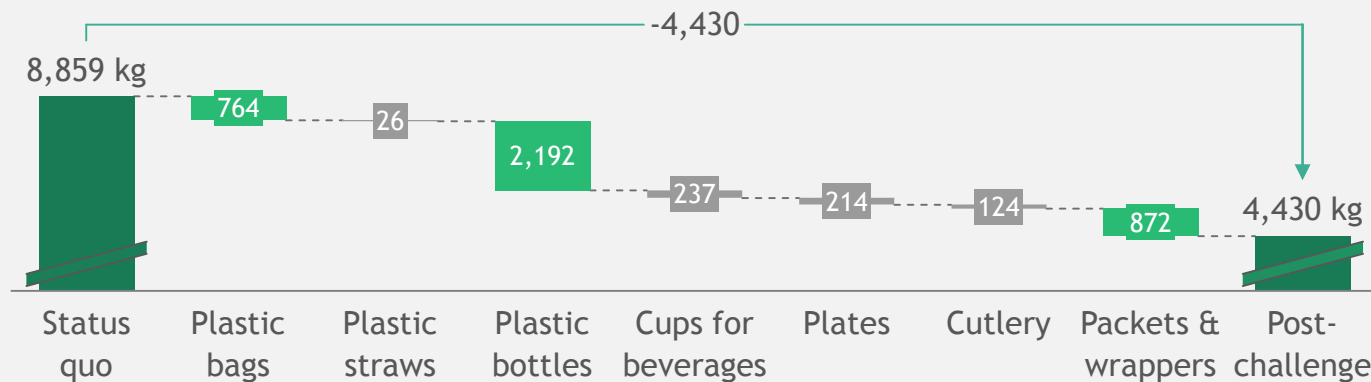
Next steps/recommendations

Together, INSEAD participants could reduce their consumption of single-usage plastics by 4,5T per year

Impact of challenge on single-usage plastic consumption (in k units)²



Impact of challenge on single-usage plastic consumption (in kg)^{1, 2}



1. Starting from an average consumption of 7,2kgs per head before the challenge in the selected categories
 2. Note: data on 1 month (January) extrapolated to year

If they continue their habits...

727k
units

Yearly reduction of single-usage plastic

4,5
tons

Less tons of plastic consumed per year¹

52%
reduction

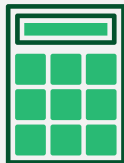
3,7 kg of plastic consumed less per year per head

Backup: Reduction calculated based on survey results



Survey data on:








- single-use plastic consumption before challenge (in units/week)
- estimated reduction share
- Data for 1 month (January 2020)










Calculated:

- single-use plastic consumption after challenge
- Weight of reduced plastic by multiplying with average unit weights indicated on right hand side
- Extrapolated to yearly numbers

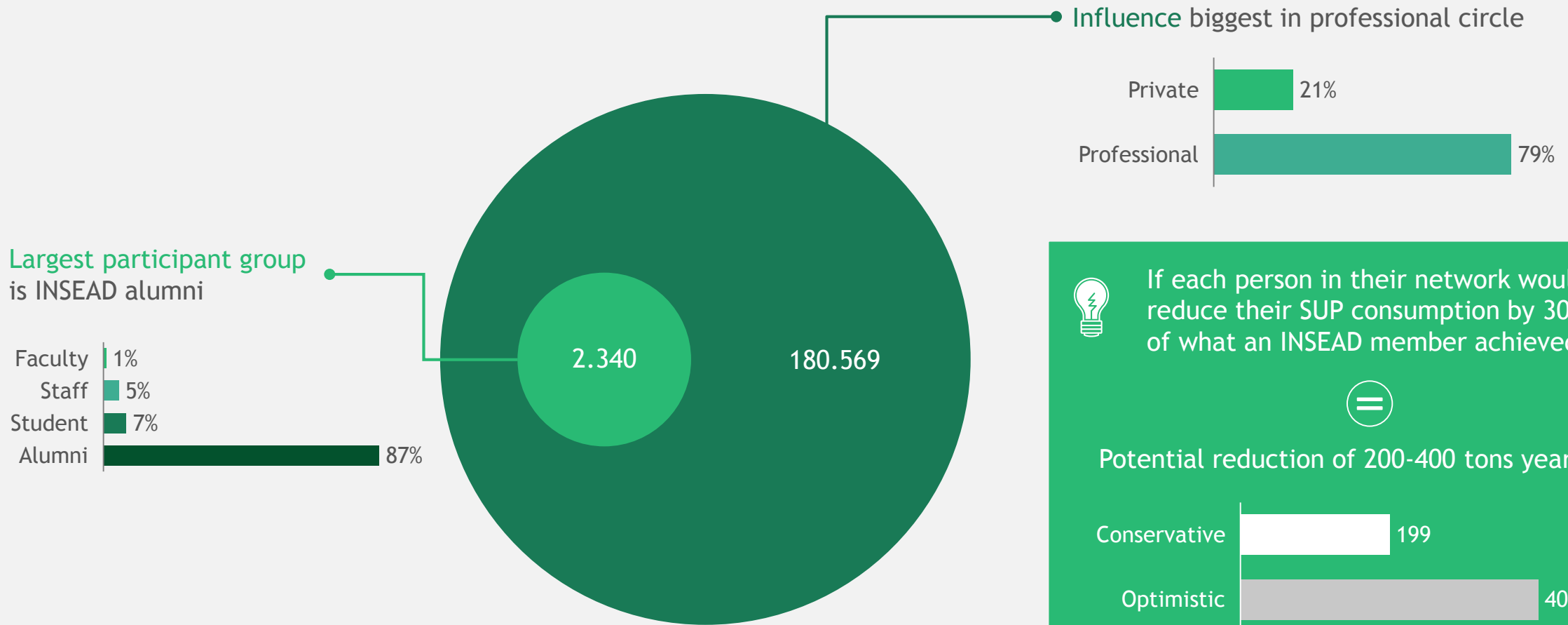
Assumed weight per item

Item	Weight (g)
 Bags	5,0
 Straws	0,5
 Bottles or similar	15,0
 Cups	2,0
 Plates	7,0
 Cutlery	2,2
 Packets and wrappers	5,0

Weight reduction is largely driven by three categories: plastic bags (14%), plastic bottles (41%), and packets and wrappers (33%)

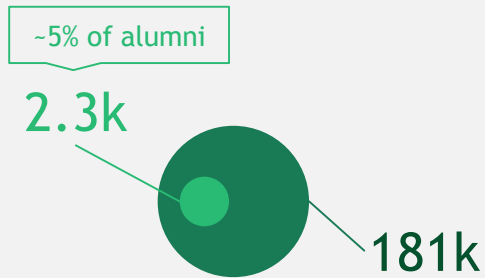
Categories	Yearly consumption (k units)	Av. Per participant (in units)	Av. units reduction	Impact of decrease (kg and %)
 Plastic bags	255	211	60%	764 17%
 Plastic straws	66	55	72%	26 1%
 Plastic bottles or similar	264	219	55%	2,192 49%
 Plastic cups	175	145	68%	237 5%
 Single usage plates	51	42	60%	214 5%
 Cutlery	87	72	65%	124 3%
 Packets and wrappers	464	385	38%	872 20%
Total	1,363k	1,129 units	53%	4.429 kg 100%

Through their network, each INSEAD member reached on average an additional 80 people

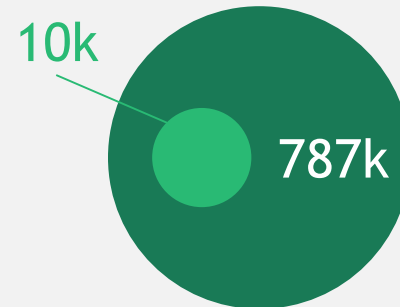


Addressing more INSEAD members or networks from top-10 business schools would multiply the reach

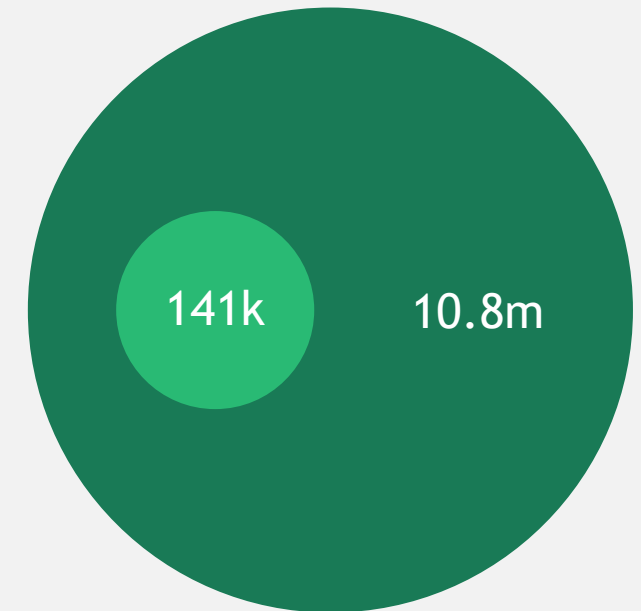
Current challenge reached 181k people



Extending to 1/5th of all INSEAD alumni would reach 787k people

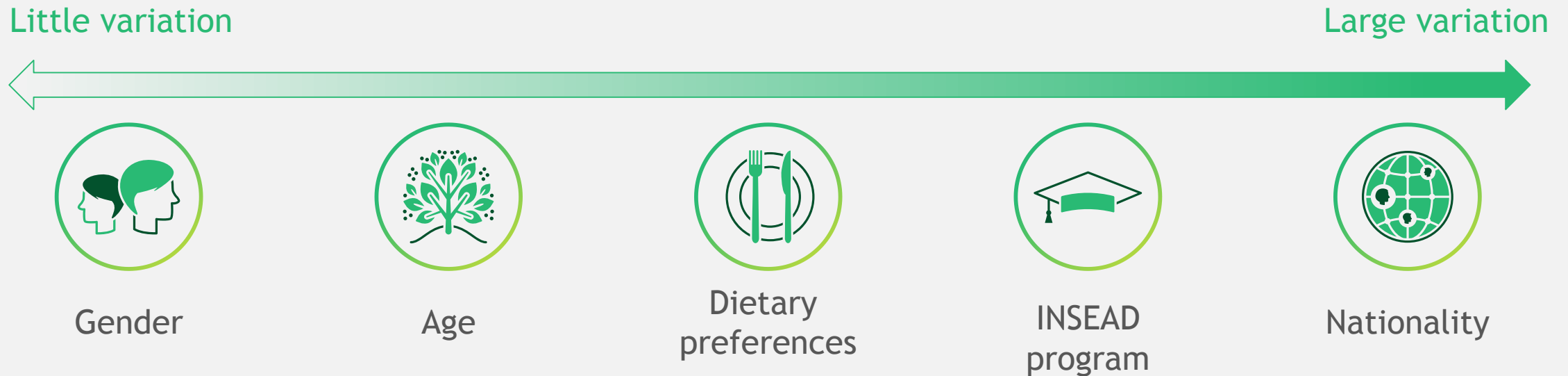


Top-10 business schools¹ would together reach over 10m people



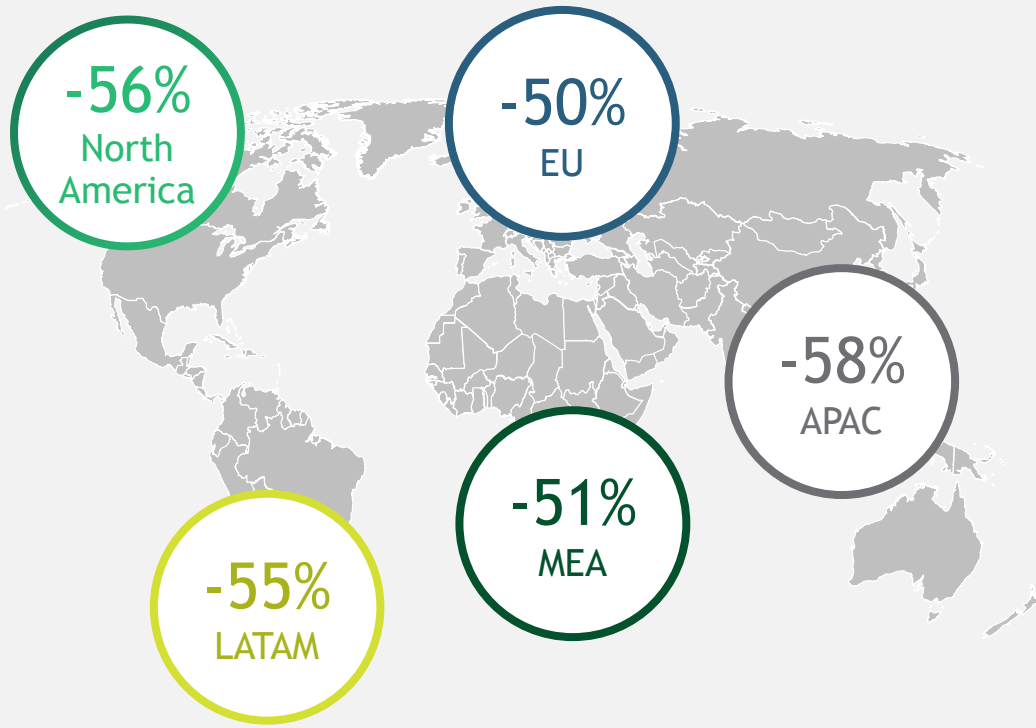
1. Considered 1/3th of combined alumni networks of Stanford Graduate School of Business, Harvard Business School, Insead, University of Pennsylvania: Wharton, Ceibs, London Business School, University of Chicago: Booth, MIT: Sloan, Columbia Business School, University of California at Berkeley: Haas

Reduction of consumption differs through demographics characteristics

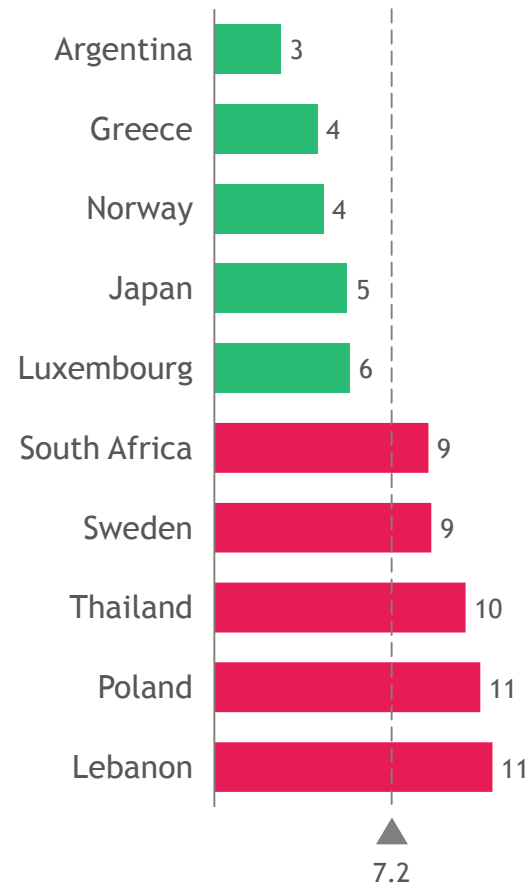


Although differences are not clear at regional level, at nationality strong differences on individual tendencies to decrease consumption

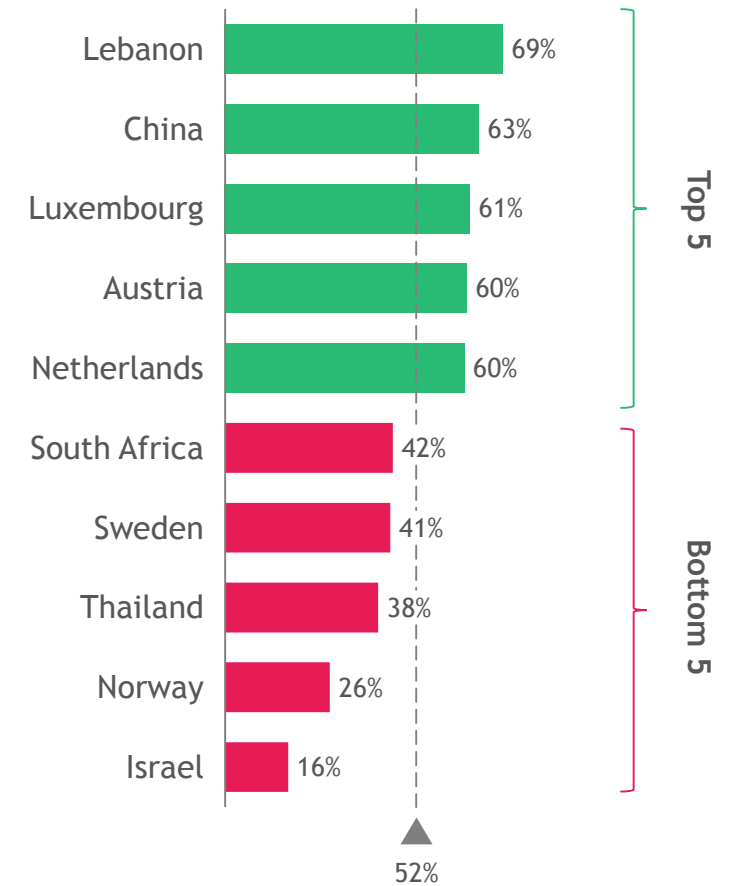
Average decrease in consumption per region following the challenge (in %)



Per head average consumption per country before challenge (in kg)



Average decrease in consumption per nationality following the challenge (in %)



Top 5

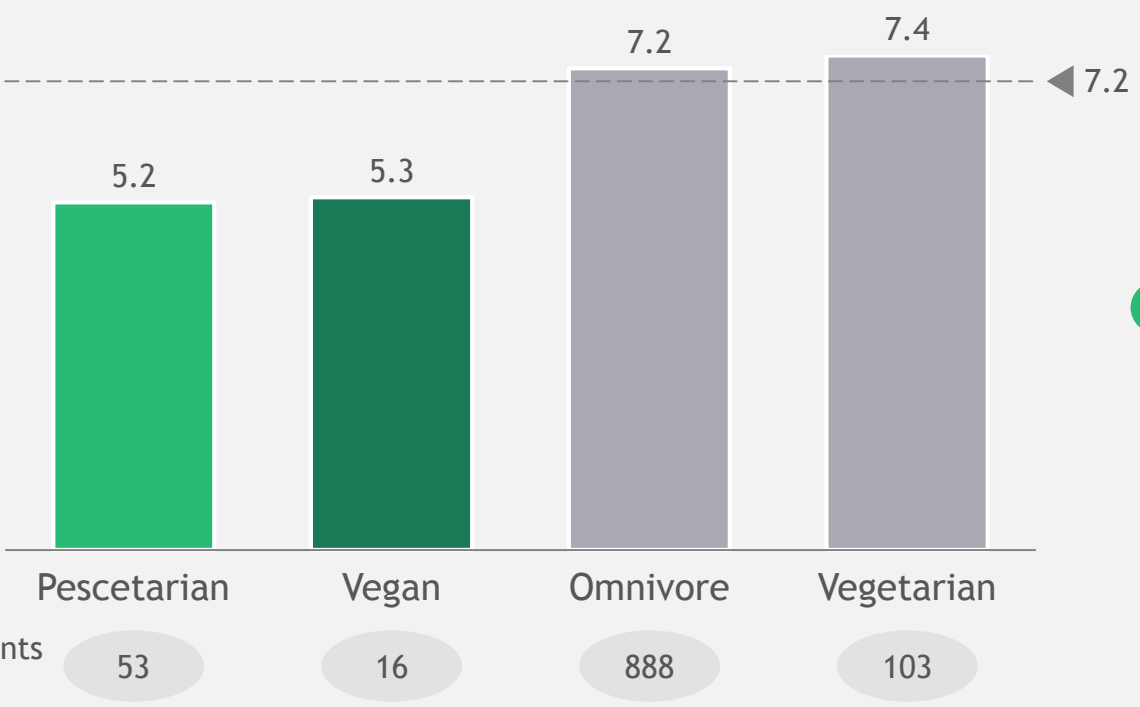
Bottom 5

Note: Considering countries with at least 5 participants

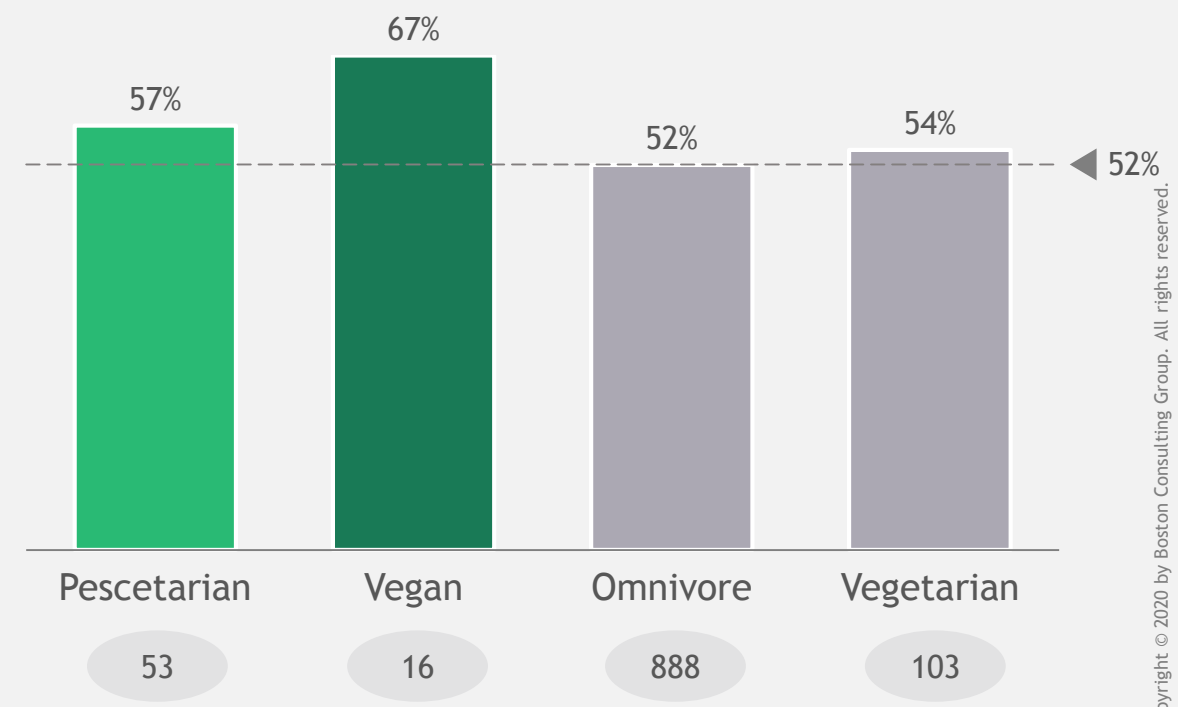
Pescatarians and Vegans seem to both use less SUPs and also make larger efforts to further reduce their consumption

Two dietary choices appear as the *winners* in the context of our survey (*pescatarian and vegan*), of which *vegan participants have the largest reduction per head*

Per head average consumption before challenge (in kg)



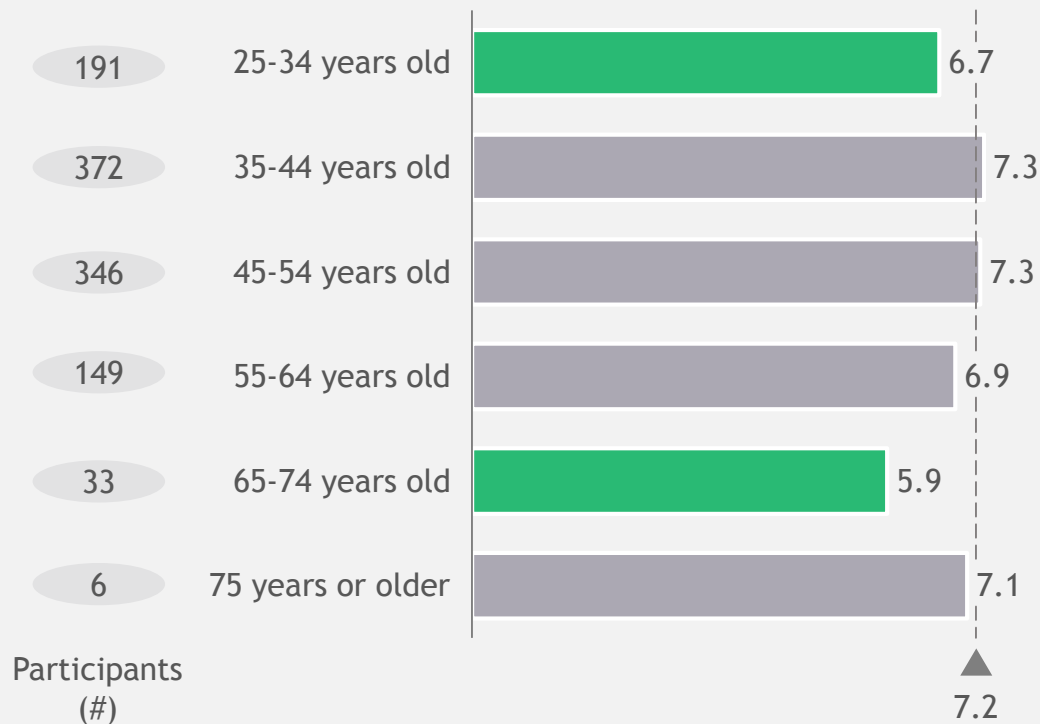
Per head average decrease in consumption following the challenge (in %)



25-34 year olds and 65-74 year olds seem to consume the least single use plastics, yet all age groups achieved similar reductions (except for >75 years)

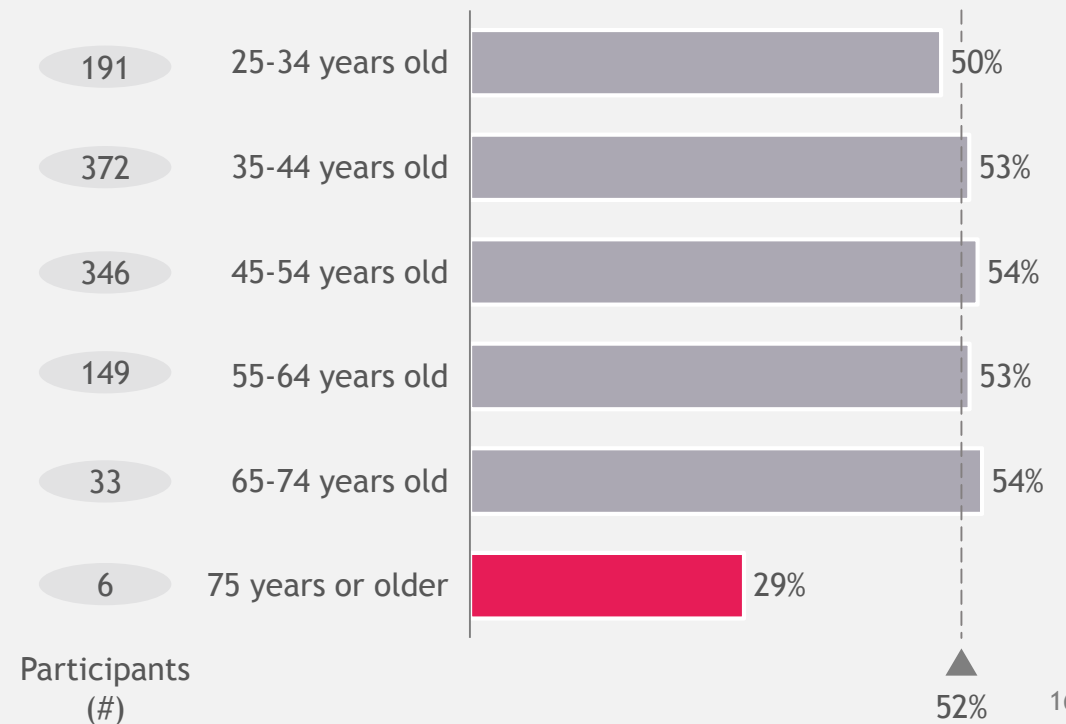
Younger (>34) and older (>75) consumption's lower than average

Per head average consumption before challenge (in kg)



Age does not have a clear impact on consumption decrease except for >75 age range which decreased by only 29%

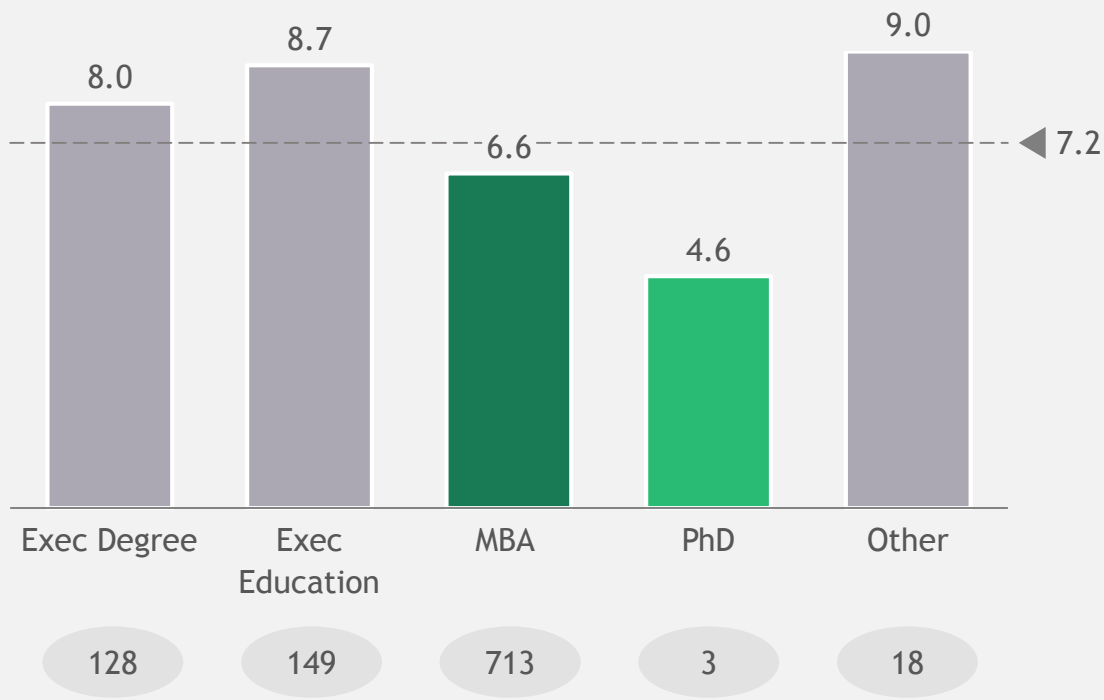
Per head average decrease in consumption following the challenge (in %)



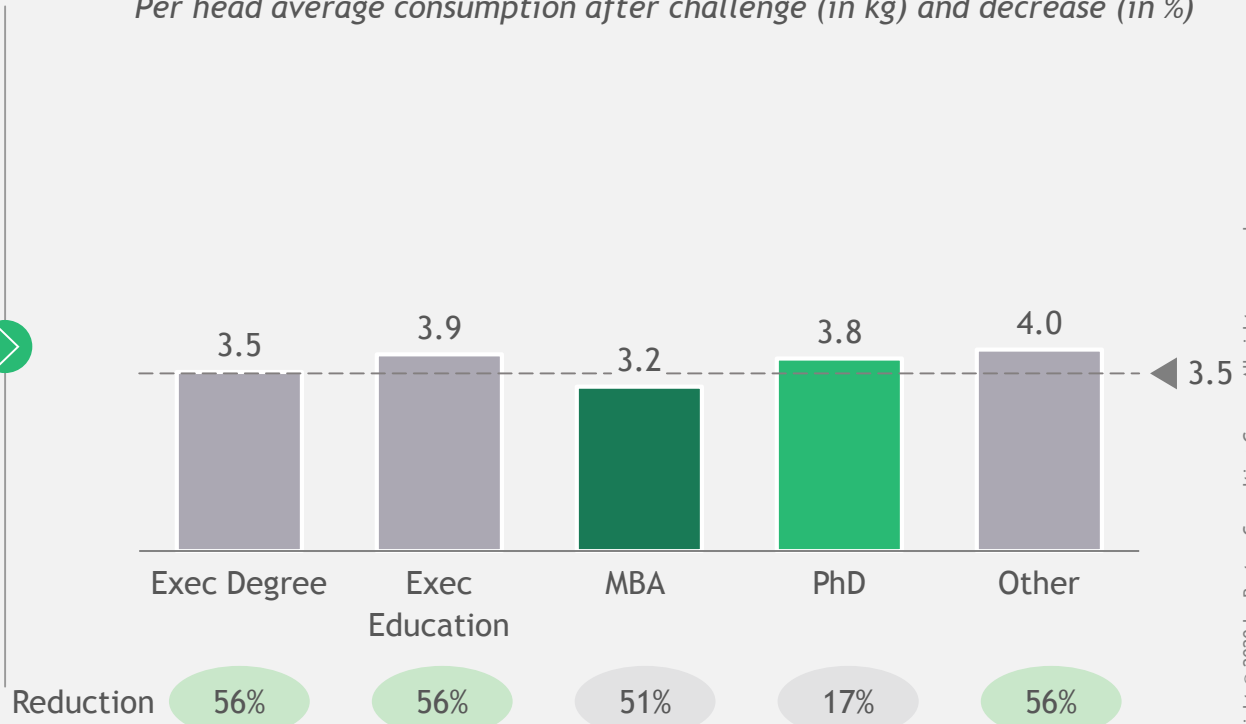
PhD and MBA program participants used the least plastic before and after challenge but difference between programs decreased due to the community challenge

PhD and MBA program participants used least plastics before the challenge and MBAs remain best in class after challenge, despite relative smallest reductions achieved

Per head average consumption before challenge (in kg)



Per head average consumption after challenge (in kg) and decrease (in %)



Results snapshot

Consumption reduction

> Shifts in mindsets and behaviours

Ingenious recommendations

Next steps/recommendations

The challenge created a shift in mindsets and behaviours



80%

Indicated they became more aware of environmental issues following the challenge



98%

Indicated they would stick with their new habits¹



93%

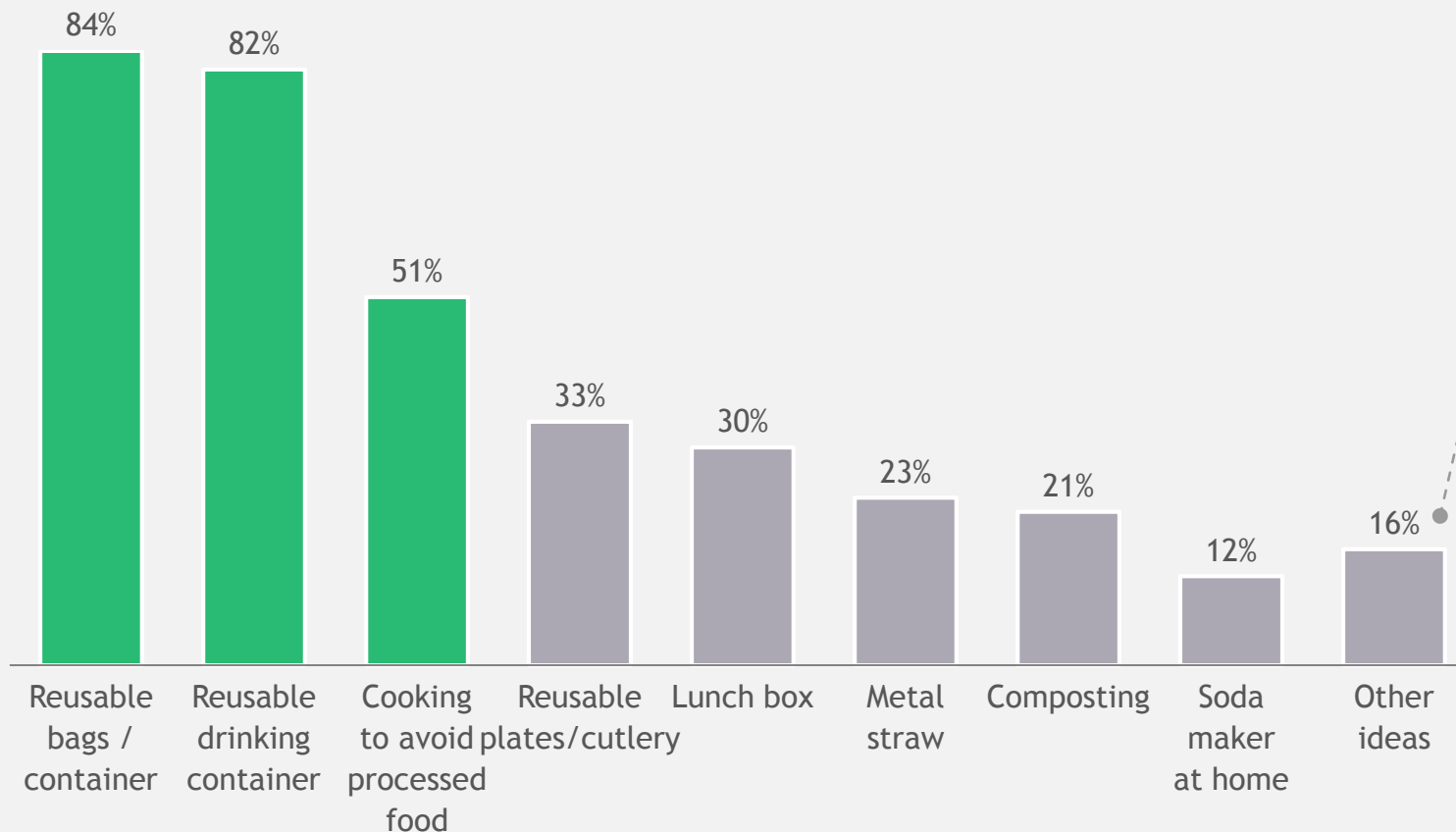
12%

Indicated they would take part in next challenge (of which 12% as part of organization team)

1. Out of 1207 closing survey respondents, starting from 2340 respondents for initial survey

Respondents' change in habits mainly went to using reusable bags (84%), using a drinking container (82%), and avoiding processed food (52%)

Within respondents who indicated they will continue new habits, which habits are they likely to keep? (in %)



Large share of respondents indicated that they would significantly change their buying habits, which include:

- Choosing store based on their non-plastic offering
- Buy in larger proportion
- Give up coffee capsules
- Reduce online orders
- Invest in "do-it-yourself" products (hygiene, etc.)

Results snapshot

Consumption reduction

Shifts in mindsets and behaviours

 Ingenious recommendations

Next steps/recommendations

Significant number of challenges identified, yet variety of solutions proposed

Challenges

- 1 Additional costs of going plastic-free
- 2 Getting better educated on prevalence of plastic
- 3 Lack of time or not enough thinking ahead
- 4 Finding adequate stores
- 5 Tracking single-use plastic consumption
- 6 Finding alternatives to plastic (especially while travelling / at clients)
- 7 Finding motivation



Types of solutions suggested

- 1 Government subsidies to potential solutions
- 2 Education on prevalence of plastics, impact on nature and ways to reduce
- 3 Government enforcements (small - at municipal level - or large) e.g. banning plastic bottles
- 4 Centralized platform to indicate where to buy products plastic free
- 5 Mobile app to track consumption / gamification
- 6 Develop / lookup DIY solutions and share with community
- 7 Small efforts in small groups (e.g. interest groups, local community)

Numerous funny moments were encountered despite the challenges

In a restaurant in Arizona they brought me a straw made of organic bio-degradable material packaged in a plastic container.

When I teach class, the support staff gives me a couple of small water bottles the moment I am in. I was using this as a demo to my class to say no to these bottles and carry a reusable bottle like I do. As the water cooler was not functioning that day, support staff ended up refilling my bottle from the two small plastic bottles. Made my class laugh at the irony of it but the message hit home.

A restaurant offered me a plastic bag to carry the reusable container that I brought in.

My organization requires water to be supplied in jugs and not for single use plastic bottles to be used. At one conference the hotel only had single use plastic bottles so they emptied these into the jugs.

Every week, we order take-away Thai. Last Friday, I collected all the plastic bags we received over time and brought them back. They were surprised but appreciated the opportunity to reuse those restaurant brand bags.

Results snapshot

Consumption reduction


Shifts in mindsets and behaviours

Ingenious recommendations

 Next steps/recommendations

Selected recommendations

- Extend the community challenge to other schools and public institutions
- Organize placement program from INSEAD where students can work part-time to help companies in avoiding and recycling SUP (e.g. food producers, supermarkets, ..)
- Create online and face-to-face groups per city to share best-practices among people taking the challenge
- Develop tools to monitor individual and collective SUP consumption
- Engage with wider audience through different media to raise awareness and educate



Ideas, questions, or want to help
out on the next community
challenge?

Reach out to
communitychallenge@insead.edu

Thank you



Katell Le Goulven



Paolo Senes



Aysen Ergene



Jonathan De Jonck



Virginia Brumby



Joanne Schanté



Claire Wheeler



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Ebru Carter



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The INSEAD CIC Core Team



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