Food waste reduction in public catering

FW in quick service restaurants

Technologické centrum AV ČR

Objective of the presentation

- To show results of measuring food waste
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- To explain causes of food losses/waste
- To offer solutions
- To consider favourable conditions and barriers

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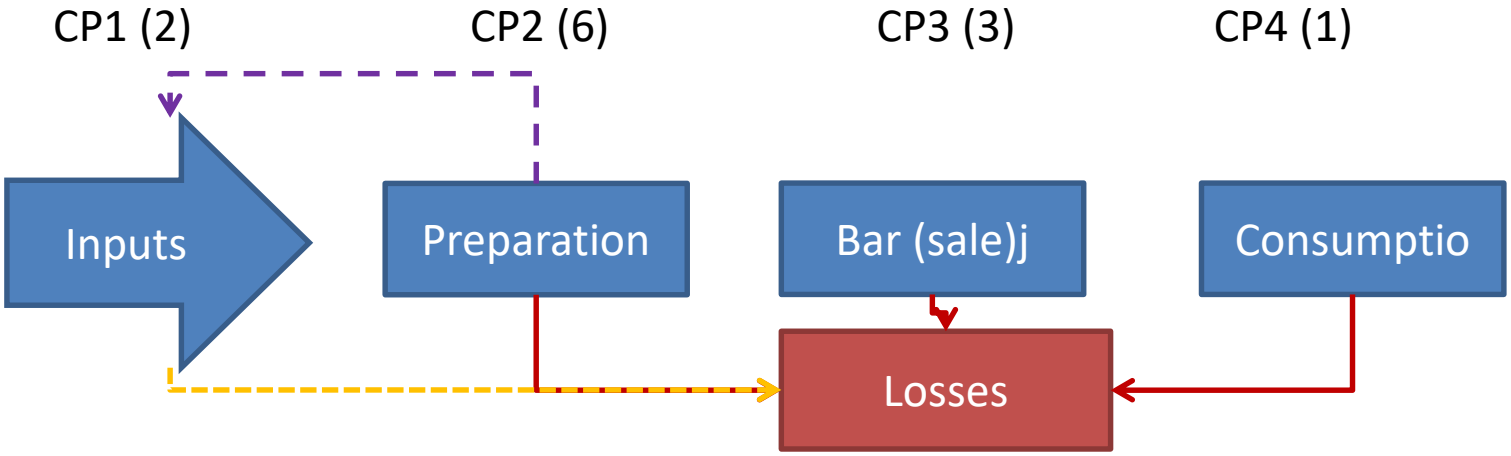
Actors' views

Design of the research

- Survey of losses (4 Critical Points)



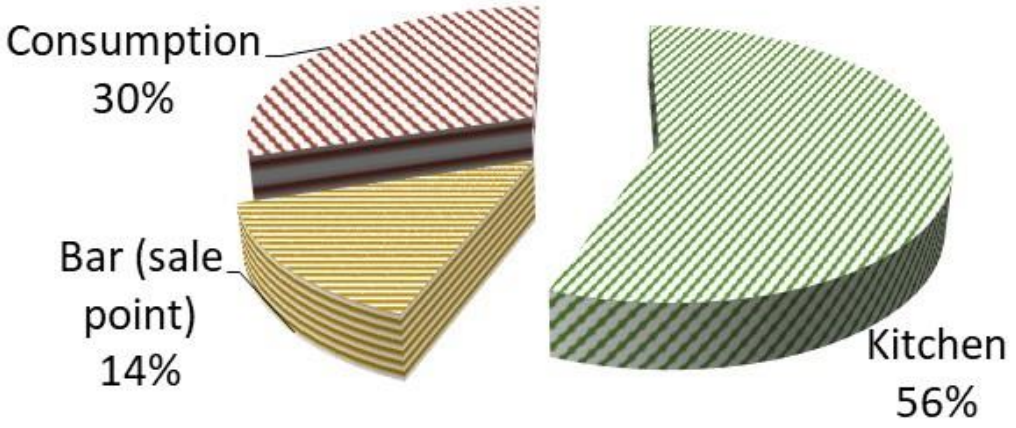
- Round tables with the management and employees of the selected QSR chains
- Stakeholder conference with workshops
- ➔ guidelines for food waste prevention

Measuring food waste

- Scope: Quick service restaurants (QSR)
- Autumn 2018
- 3 QSR chains, 4 outlets each
- 6 outlets in Prague, 5 out of Prague – various locations
- 4 to 7 days = 63 days of surveying food waste
- Done by outsiders – volunteers (students) hired by the project

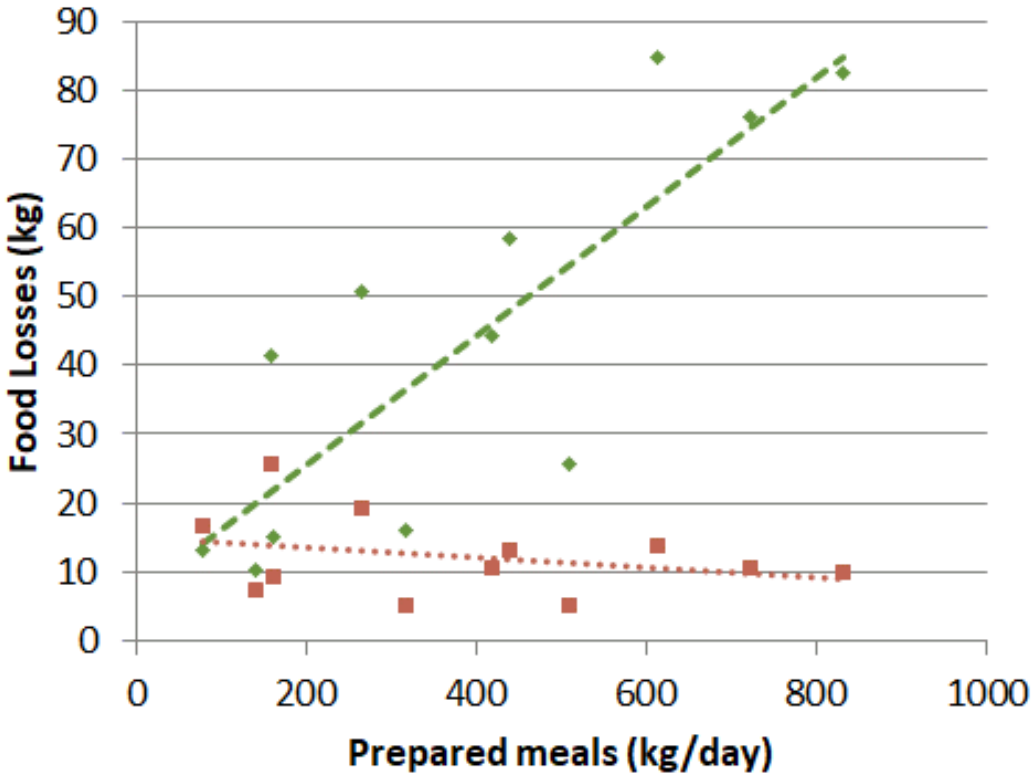
Overall results

- During the survey: prepared 37.4 t of meals (25,7 t without drinks) for 70 thousand customers
  - 381 kg of prepared food without drinks a day
- Monitored almost 3 t of food losses/waste
  - 45.5 kg per outlet and day
  - 11.1 kg per 100kg of prepared meals without drink
  - Suitable for donation between 1.8 to 24 kg per the outlet and day



Prezentace výsledků šetření

FW relationship to the outlet size

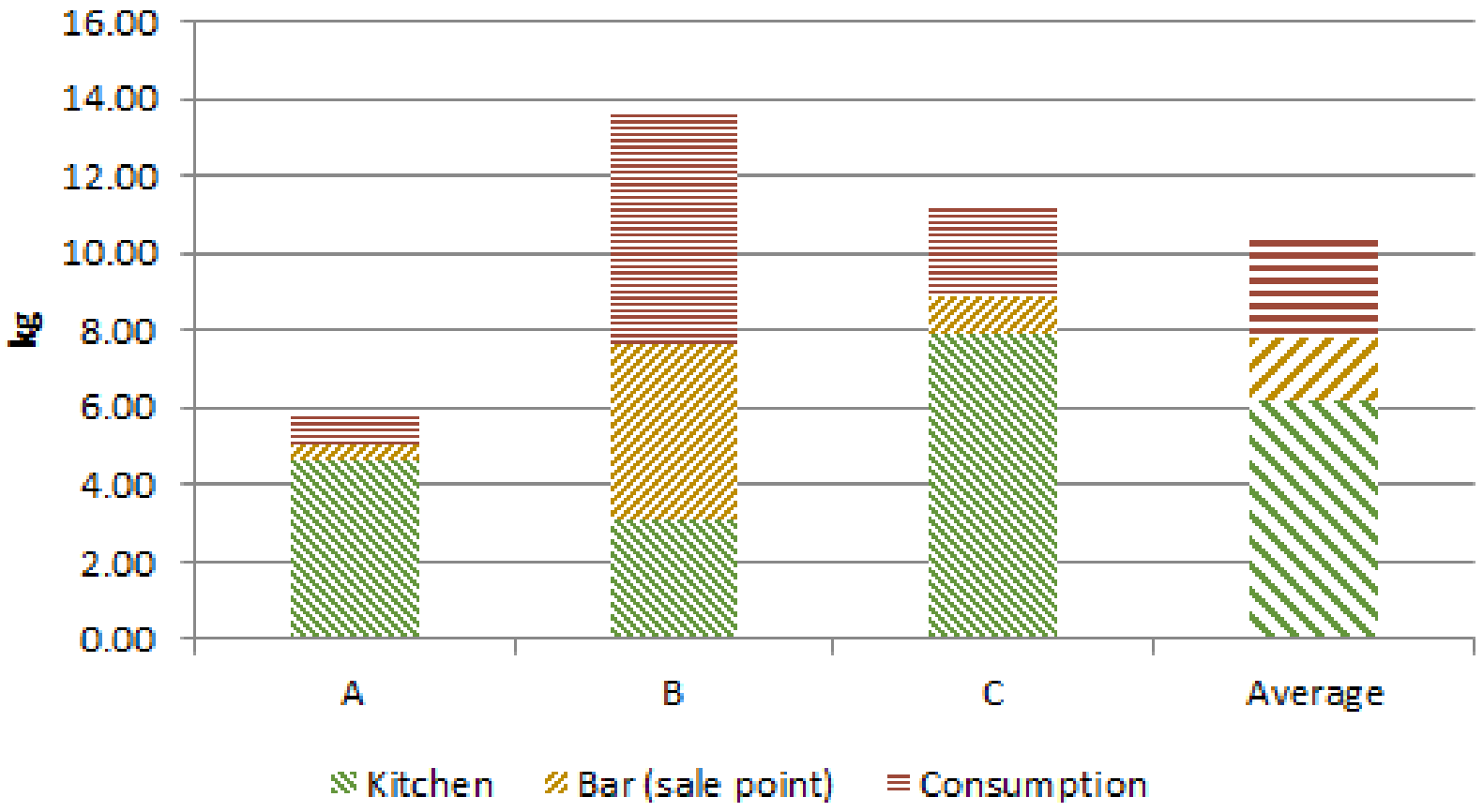


12.04.2019

Prezentace výsledků šetření

Differentiated picture of FW

WF in kg/100per kg of cooked food



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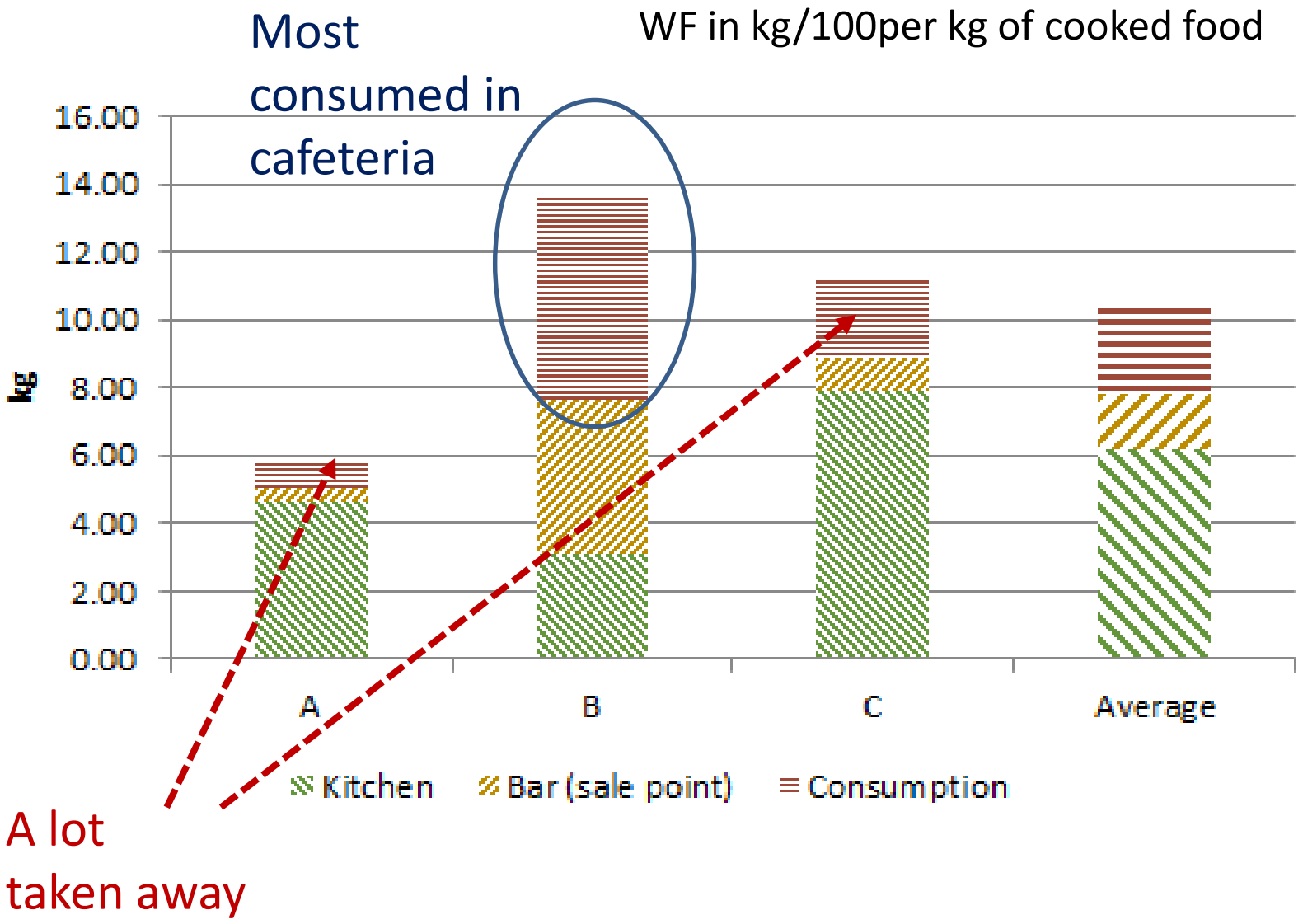

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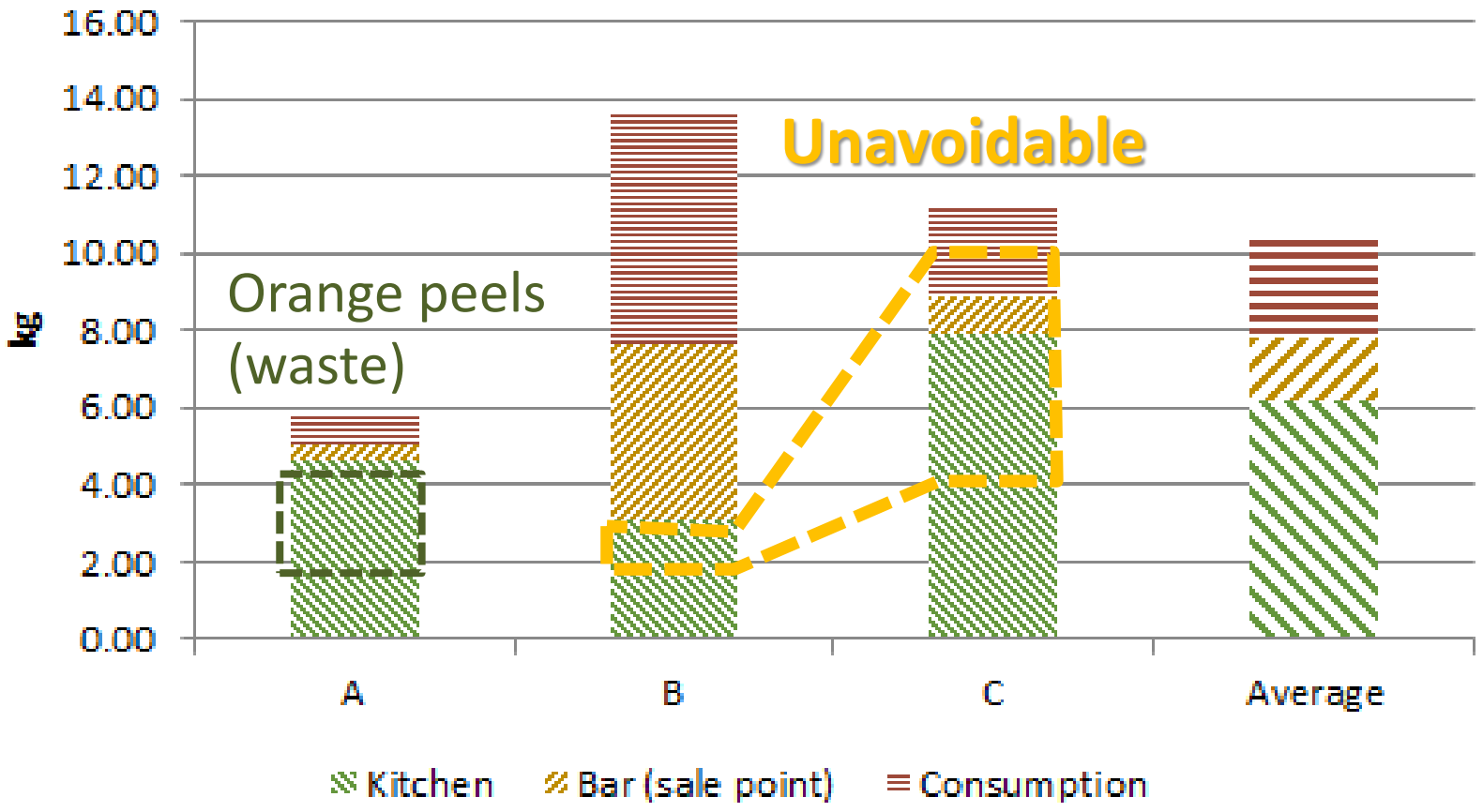

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Prezentace výsledků šetření

Unavoidable food waste

Def	Most narrow	Extended 1	Extended 2
	Tea bags Coffee dregs Bones Eggshells Cobs of corn Waste fryer grease Waste fryer oil	**The most narrow +** Skins and scraps of vegetables and fruits Orange peels (wastes)	**Extended 1 +** Flour for breading
Chain	**Amount in kg per 100 kg of cooked meals without drinks**		
A	0.68	2.39	2.39
B	0.52	1.10	1.10
C	4.91	4.91	6.89
Chain	**The share of unavoidable waste on the total food losses/waste**		
A	12%	41%	41%
B	4%	8%	8%
C	44%	44%	62%

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Prezentace výsledků šetření

Upscaling

		A	B	C
Survey → year	kg	263	40599	73268
The share of survey on chain sales		16%	2.50%	5.93%
The chain losses (waste)	t	2	1624	1236

Upscaling to the QSR sectors

Sectors		Fast food	Cafeterias
Sales	mil. EUR	1 740	365
Food waste	t	18338	8473
The share of food waste on sales		2.05%	4.51%

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Round tables

Causes

Internal actors

Possible solutions

Conditions/ barriers

Round tables

Possible solutions

Causes

Fast food restaurants

Cafeterias

1. Failure of humans + the rate of pre-processing and quality of inputs

2. Internal standards

   Terms of contracts + meal size + regulation

3. Irresponsible consumer

4. Technology

Round tables

Causes

Fast food restaurants

Cafeterias

1. Failure of humans + the rate of pre-processing and quality of inputs
2. Internal standards
3. Irresponsible consumer
4. Technology

Possible solutions

- Training of employees
- Motivation of employees
- Pre-processing of inputs
- Revision of the contract
- Terms of contracts + meal size + regulation
- Provision of information
- Education of consumers

Round tables

Causes

Fast food restaurants

Cafeterias

1.

2.

3.

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Failure of humans + the rate of pre-processing and quality of inputs

Food safety

Internal standards

Terms of contracts + meal size + regulation

Irresponsible consumer

Technology

Possible solutions

Training of employees

Motivation of employees

Pre-processing of inputs

Donation /discount

Revision of the contract

Provision of information

Education of consumers

Investing in technologies

Round tables

Causes

Fast food restaurants

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Failure of humans + the rate of pre-processing and quality of inputs

Internal standards

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Food safety

Irresponsible consumer

Technology

Possible solutions

Training of employees

Motivation of employees

Labour market

Pre-processing of inputs

Donation /discount

Revision of the contract

The civil society role

Provision of information

Education of consumers

Investing in technologies

The will of QSR to change something

Conclusions – input in the debate

- Food losses are not big but also not negligible
- Level of unavoidable waste determines space for reduction
  - If the unavoidable high - should not be reconsider the system?
- Appeal on consumers
  - They need information
  - Consumption options
  - "Social contract-agreement"
- Responsibility of firms