

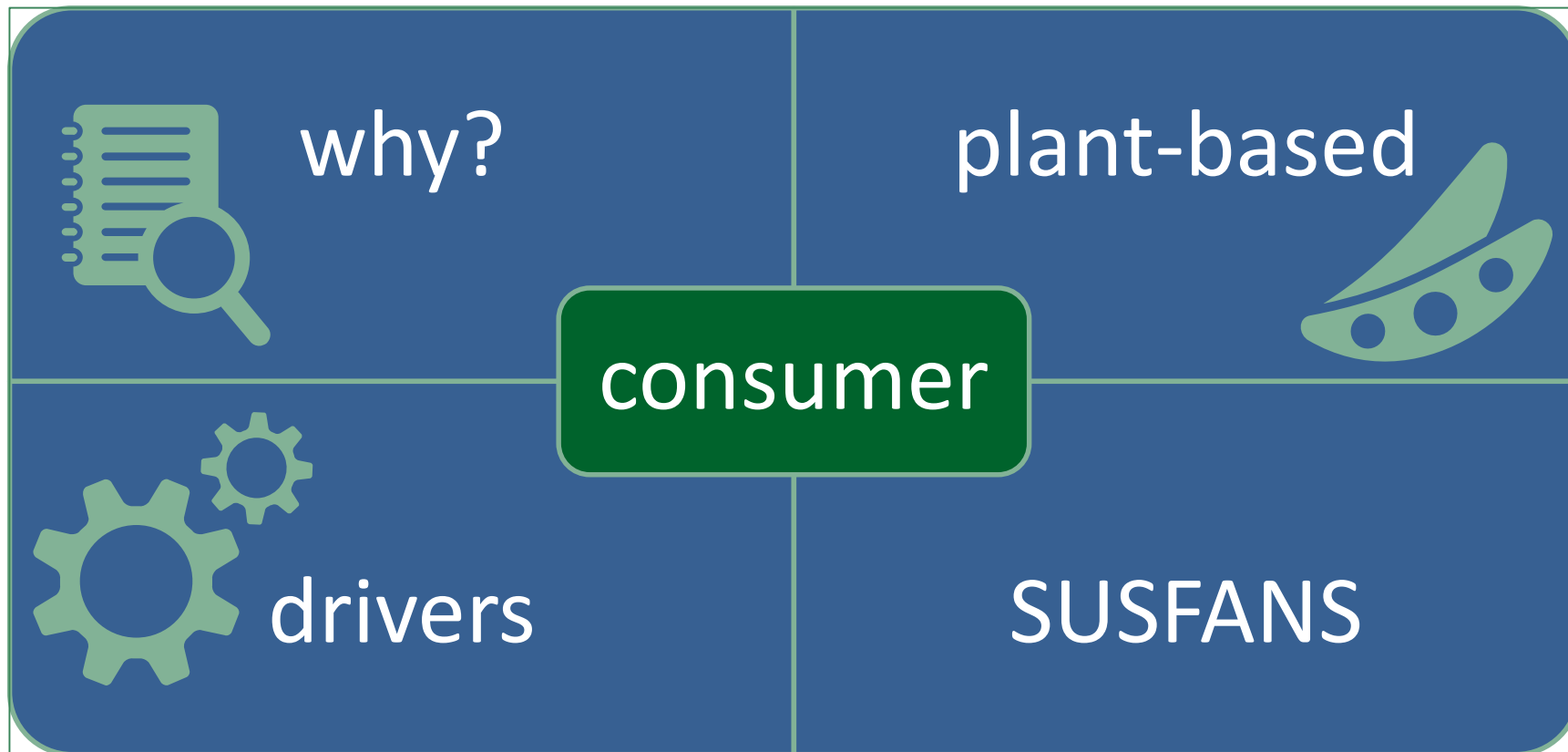


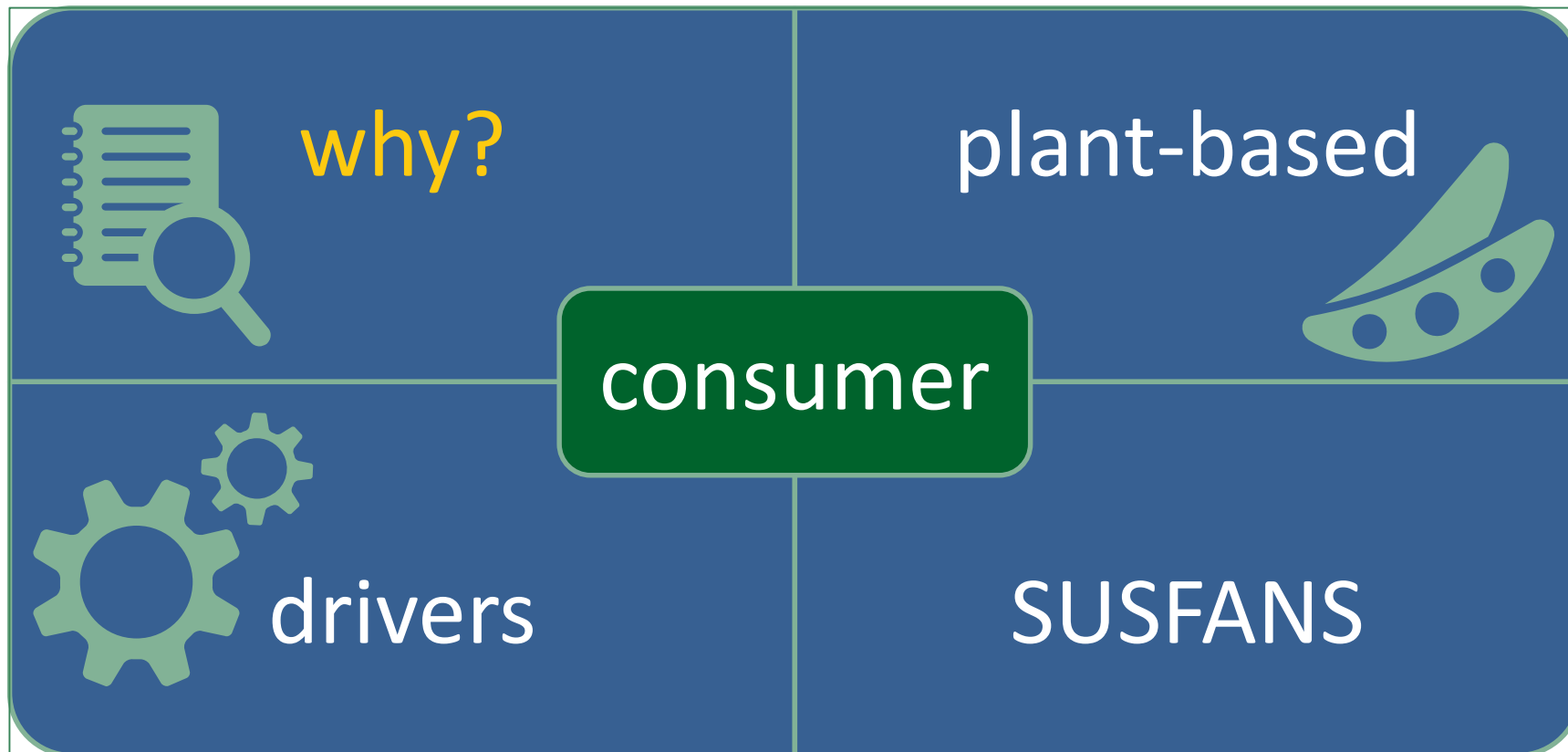
Meet the consumer

Introduction to consumer research in
SUSFANS

Harriëtte Snoek and Siet Sijtsema







Background



Fast changing world
3 scenario's for agriculture (SCAR 2015)

- High tech
- Self-organisation
- Collapse





Find Veggies
The Farmers Market - Delivered



Farm to Fork
— NC —
CELEBRATING LOCAL FOOD
& LOCAL FARMS

Challenges

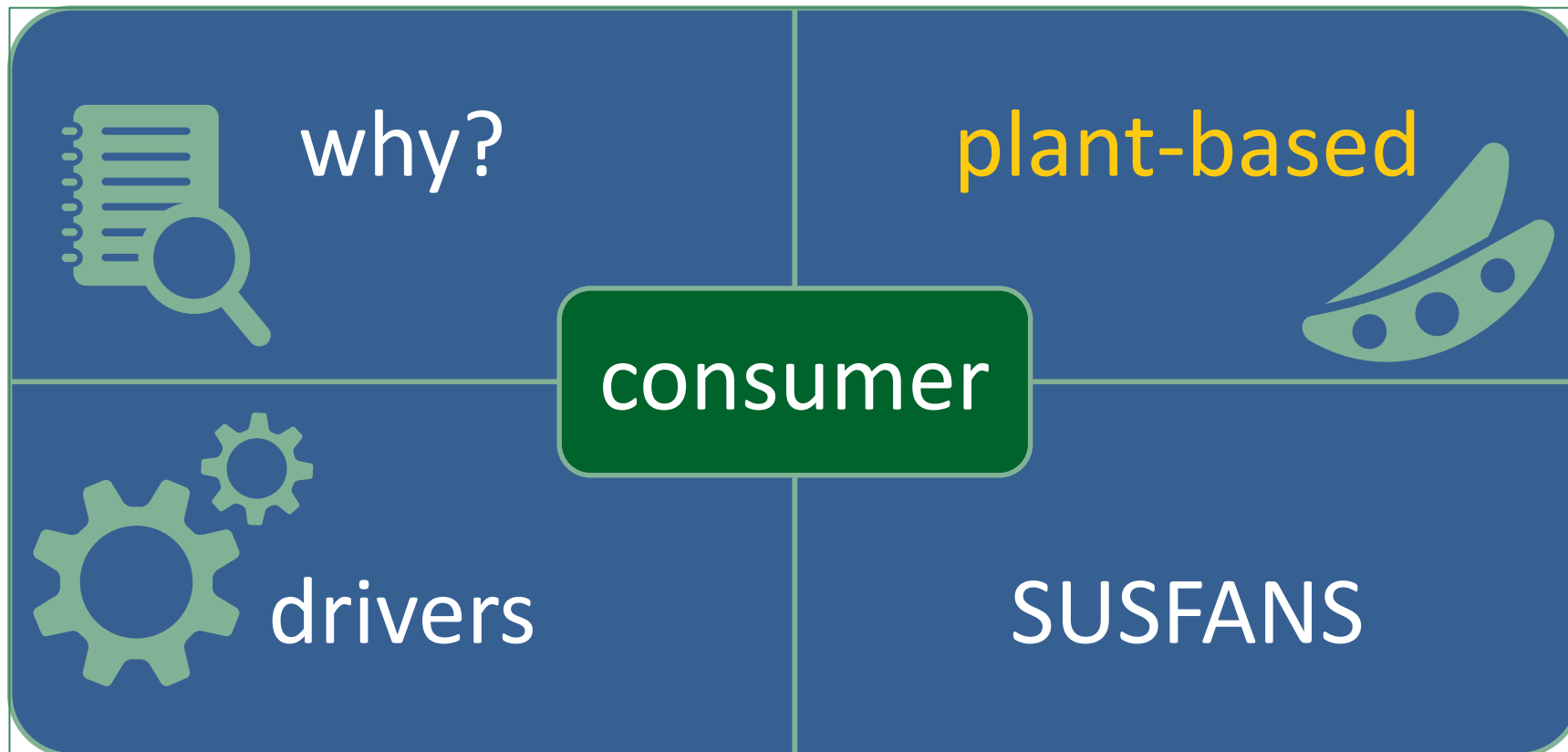
Health	Sustainability
	
<ul style="list-style-type: none"> • Diet-related chronic diseases <ul style="list-style-type: none"> • Overweight and obesity • Diet/health inequities 	<ul style="list-style-type: none"> • Climate changes <ul style="list-style-type: none"> • Increasing demands for food • Scarce resources, waste
<ul style="list-style-type: none"> • In SUSFANS combined 	

Rutten, Martine, et al. "Metrics, models and foresight for European sustainable food and nutrition security: The vision of the SUSFANS project." *Agricultural Systems* (2016).

Four overarching policy objectives

- Balanced and sufficient diet for EU citizens;
- reduction of environmental impacts;
- competitiveness of EU agri-food business;
- equitable outcomes and conditions

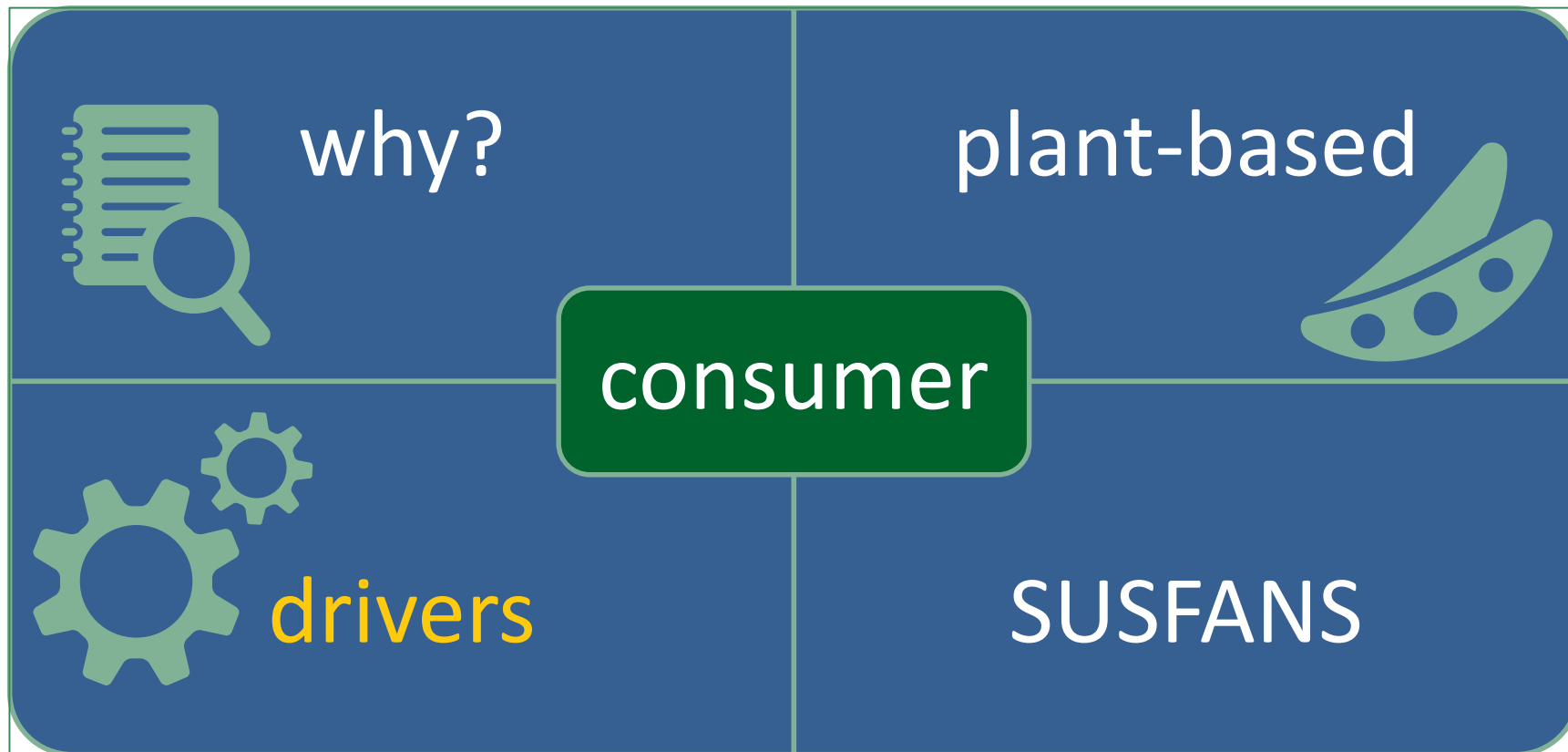
-> Understand consumer behaviour within the context of the food system



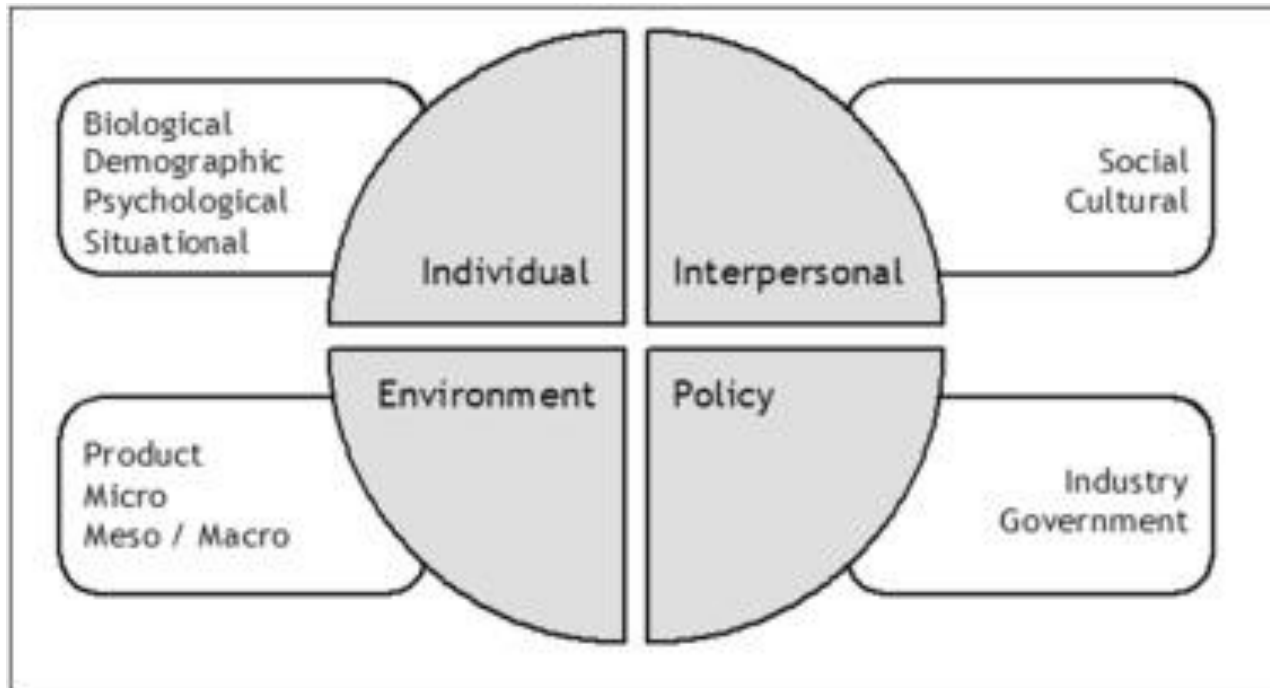
Focus on plant-based diet



Picture from Dagevos, Hans. "Flexibility in the frequency of meat consumption—empirical evidence from the Netherlands." *EuroChoices* 13.2 (2014): 40-45.



What drives the consumer - DONE model



Simplified representation of main levels (grey) and stem-categories (white) in the DONE framework. (Copied from Symmank et al., 2017).

DONE framework: categorization structure

		Stem-categories	Leaf-categories									
Main levels	Individual	Biological	01: Brain Function	02: Oral Function	03: Food-Related Physiology	04: Anthropometrics	05: Sensory Perception	06: Physical Health	07: Sleep Characteristics			
		Demographic	08: Biological Demographics	09: Cultural Characteristics	10: Situational Demographics	11: Personal Socio-Economic Status						
		Psychological	12: Personality	13: Mood And Emotions	14: Self-Regulation	15: Health Cognitions	16: Food Knowledge, Skills And Abilities	17: Food Beliefs	18: Food Habits	19: Eating Regulation	20: Weight Control Cognitions And Behaviors	
		Situational	21: Hunger	22: Related Health Behaviors	23: Situational And Time Constraints							
	Interpersonal	Social	24: Family Structure	25: Family Food Culture	26: Household Socio-Economic Status	27: Social Influence	28: Social Support	29: Parental Resources And Risk Factors	30: Parental Attitudes And Beliefs	31: Parental Behaviors	32: Parental Feeding Styles	
		Cultural	33: Cultural Cognitions	34: Cultural Behaviors								
	Environment	Product	35: Intrinsic Product Attributes	36: Extrinsic Product Attributes								
		Micro	37: Portion Size	38: Home Food Availability And Accessibility	39: Eating Environment							
		Meso / Macro	40: Natural Conditions	41: Characteristics Of Living Area	42: Environment Food Availability And Accessibility	43: Food Outlet Density	44: Exposure To Food Promotion	45: Market Prices	46: Societal Initiatives			
	Policy	Industry	47: Industry Regulations	48: Industry Influence								
Government		49: Governmental Regulations	50: Campaigns	51: Broader Governmental Policies								

Stok FM, Hoffmann S, Volkert D, Boeing H, Ensenaue R, et al. (2017) The DONE framework: Creation, evaluation, and updating of an interdisciplinary, dynamic framework 2.0 of determinants of nutrition and eating. PLOS ONE 12(2): e0171077.
<https://doi.org/10.1371/journal.pone.0171077>
<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0171077>

Individual	Biological	01: Brain Function	02: Oral Function	03: Food-Related Physiology	04: Anthropometrics	05: Sensory Perception	06: Physical Health	07: Sleep Characteristics	
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Level; stem-category	Leaf-category	Explanation	Examples of determinants
Individual; Biological	Brain Function	brain and brain functionality	dementia, orbito-frontal cortex volume
	Oral Function	oral system and oral functionality	chewing problems, wearing dentures
	Food-Related Physiology	physiological characteristics especially relevant for diet and nutrition that are not covered in the previous categories	food allergies, obesity-associated genes
	Anthropometrics	physical size and shape	BMI, birth weight
	Sensory Perception	sensory system and sensory perception	fat liking, taste preferences
	Physical Health	physical health status	medication use, chronic diseases
	Sleep Characteristics	sleep and sleeping patterns	chronotype, sleep duration
Individual; Demographic	Biological Demographics	(usually) innate demography	age, gender
	Cultural Characteristics	culturally-defined demography	nationality, ethnicity
	Situational Demographics	situationally defined demography	living arrangement, urban or rural dweller
	Personal Socio-Economic Status	socio-economic aspects of the individual	income, education
Individual; Psychological	Personality	personality traits and styles	self-esteem, personal values
	Mood And Emotions	affective states and stable moods	depressive symptomatology, positive emotions
	Self-Regulation	individual-difference traits concerned with controlling the self	impulsivity, self-control
	Health Cognitions	personal ideas and goals concerned with being healthy and eating healthily	health consciousness, healthy eating motivation
	Food Knowledge, Skills, and Abilities	personal resources relevant for diet and eating	nutrition knowledge, cooking skills
	Food Beliefs	personal thoughts and beliefs about food and eating	food ethics, trust in the food industry
	Food Habits	habits and routines around food consumption	habitual eating, willingness-to-pay
	Eating Regulation	psychological strategies for regulation of consumption	external eating, mindful eating
	Weight Control Cognitions And Behaviors	psychological aspects of weight control	body dissatisfaction, cognitive constraint
Individual; Situational	Hunger	situational occurrence of feeling hungry	hunger, food deprivation
	Related Health Behaviors	engagement in other health behaviors related to eating	alcohol consumption, television viewing
	Situational And Time Constraints	situational occurrences that impose constraints on consumption	access to a car, workload

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Interpersonal	Social	24: Family Structure	25: Family Food Culture	26: Household Socio-Economic Status	27: Social Influence	28: Social Support	29: Parental Resources And Risk Factors	30: Parental Attitudes And Beliefs	31: Parental Behaviors	32: Parental Feeding Styles
	Cultural	33: Cultural Cognitions	34: Cultural Behaviors							

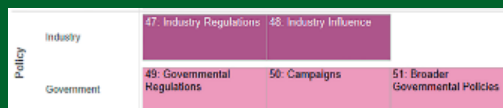
Level; stem-category	Leaf-category	Explanation	Examples of determinants
Interpersonal; Social	Family Structure	composition and cohesion of the family / household	household size, family cohesion
	Family Food Culture	food culture existing in the family / household	household food processing, family food preferences
	Household Socio-Economic Status	socio-economic aspects of the family / household	household food security, household budget constraints
	Social Influence	diet- and eating-related influences from others in the environment	peer modeling, social norms
	Social Support	diet- and eating-related support from others in the environment	social ties, community recommendations
	Parental Resources And Risk Factors	parental resources and constraints relevant for diet and eating	parental time constraints, parental nutrition knowledge
	Parental Attitudes And Beliefs	parental thoughts and beliefs about food and eating	parental food risk aversion, parental trust in food distribution
	Parental Behaviors	parental food- and eating-related behaviors	parental food habits, parental frugality
	Parental Feeding Styles	how parents go about feeding their children	parental food restriction, parental pressure-to-eat
Interpersonal; Cultural	Cultural Cognitions	thoughts and beliefs related to one's cultural background	cultural values, social role of food
	Cultural Behaviors	behaviors related to one's cultural background	cultural food customs, religious rituals

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Level; stem-category	Leaf-category	Explanation	Examples of determinants
Environmental; Product	Intrinsic Product Attributes	attributes intrinsic to the food product itself	product flavor, product texture
	Extrinsic Product Attributes	attributes extrinsic to the food product itself	product appearance, product price
Environmental; Micro	Portion Size	size of a food portion	portion size, visual cues to portion size
	Home Food Availability And Accessibility	availability and accessibility of food within the home	product visibility, food availability
	Eating Environment	the environment in which food is consumed	meal environment, enhanced eating environment
Environmental; Meso-Macro	Natural Conditions	natural conditions at the living location	weather, season
	Characteristics Of Living Area	the living environment	area deprivation, size of municipality
	Environment Food Availability And Accessibility	availability and accessibility in the environment	spatial distance food-consumer, neighborhood healthy food availability
	Food Outlet Density	density of food outlets in the environment	fast food outlet density, supermarket density
	Exposure To Food Promotion	presence of food promotion in the environment	exposure to food adverts, purchase prompts and food outlet
	Market Prices	cost of food	market prices, cost of a healthier basket
	Societal Initiatives	food- and eating-related social initiatives in the environment	community-supported agriculture programs, food-related NGO activity

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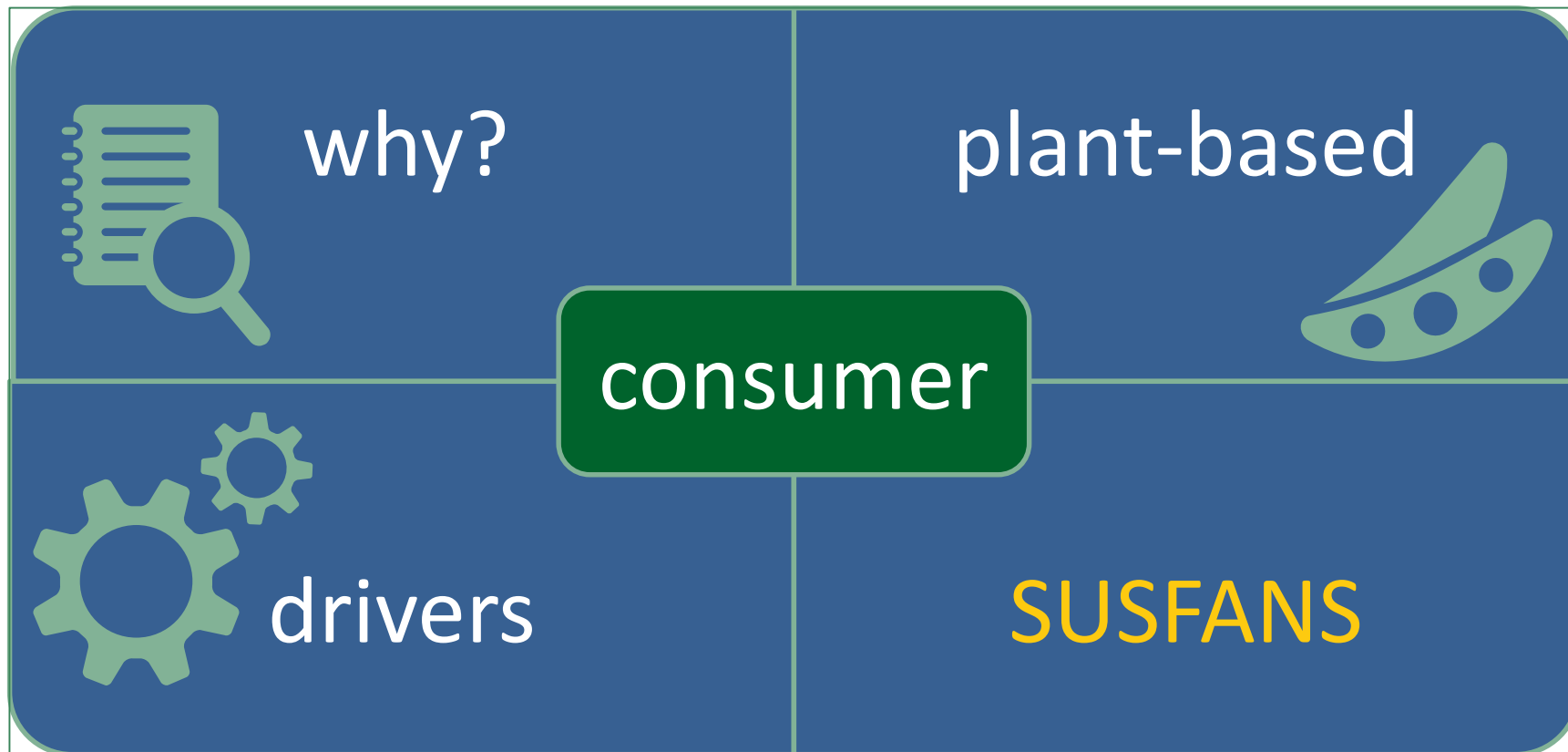
Level; stem-category	Leaf-category	Explanation	Examples of determinants
Policy; Industry	Industry Regulations	guidelines and regulations for the food industry	nutritional composition regulations, portion-size regulations
	Industry Influence	exertion of influence by the food industry	Lobbying
Policy; Government	Governmental Regulations	food- and eating-related policies and regulations imposed by the government	food advertisement bans, subsidies for healthy food
	Campaigns	food- and eating-related governmental campaigns	educational campaigns for healthy foods, programs discouraging unhealthy eating
	Broader Governmental Policies	other relevant policies and regulations imposed by the government	immigrant-related policy, governmental health awareness

doi:10.1371/journal.pone.0171077.t002

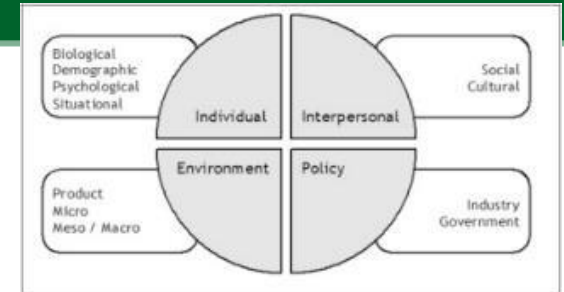
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Beyond determinants

- DONE model shows the diversity of factors and provides a structuring but does not explain why and how behaviour occurs
- Consumer research: also mechanisms and pathways



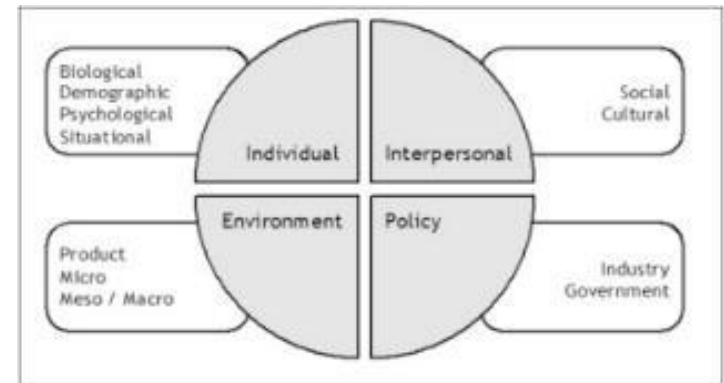
SUSFANS consumer research



- Consumer research
 - Impact of different types of information on willingness-to-pay and quantity choices -> Stephan
 - Consumer perceptions of sustainability and drivers of change -> Muriel
 - Consumer sensitivity to health and sustainability information -> Emily

SUSFANS consumer research

- Case studies
 - Innovation pathways livestock-fish supply chain (production perspective)
 - Innovation pathways fruits and vegetables -> Siet



Thank you

