

An experiment with a Closed Cannabis Supply Chain in the Netherlands

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Drogenreferat, Der Stadt Frankfurt am Main
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EUROPE

Highlights from the Dutch coffeeshop policy history

1960s



Amendment of the Dutch Opium Act

Distinguishing between soft (e.g. cannabis) and hard drugs (e.g. cocaine) on the basis of harm reduction

Birth of the toleration policy (“*gedoogbeleid*”): with the front door regulated, leaving the back door unregulated. But cannabis formally remains an illegal substance.

1976



Coffeeshop criteria

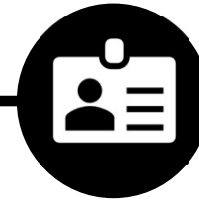
**No
hard drugs**



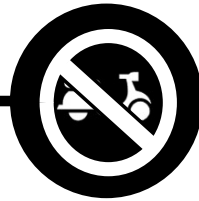
**No
minors**



**Only
residents**



**No
deliveries**



**No
advertising**



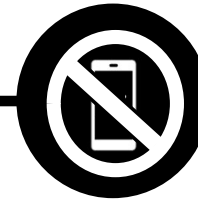
**No
nuisance**



**No
large
quantities**



**No
online
sales**



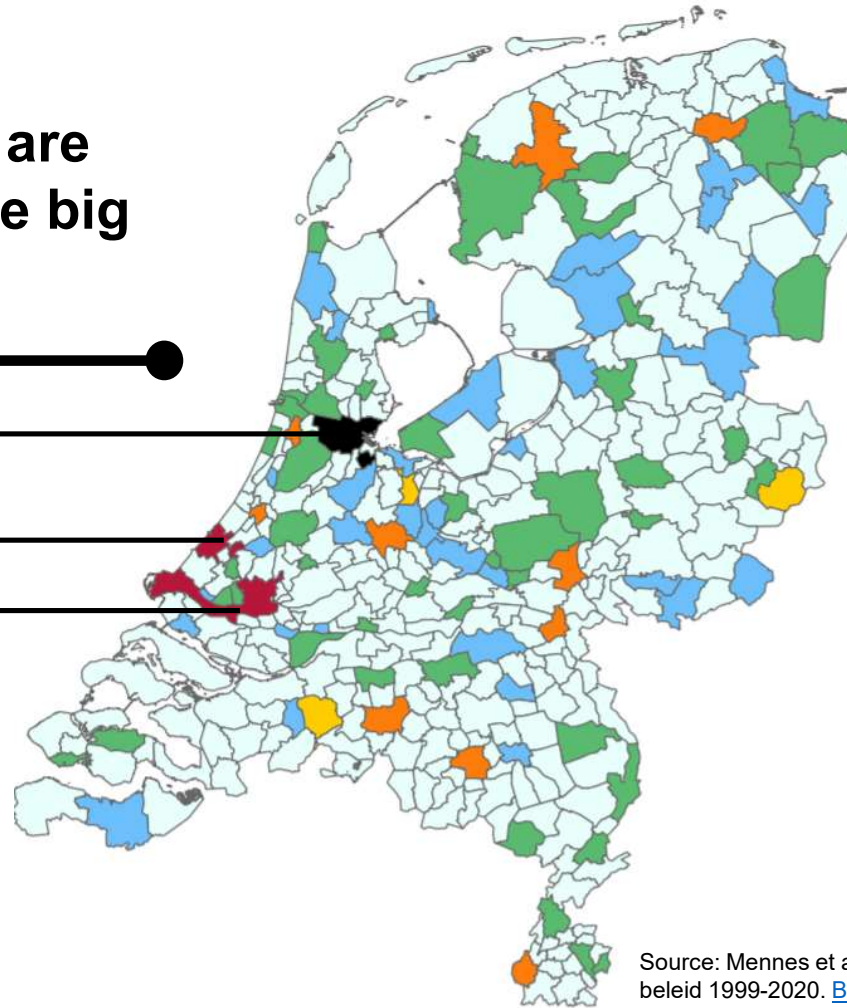
There are 564 coffeeshops in the Netherlands

Half of those are situated in the big cities

Amsterdam: 148

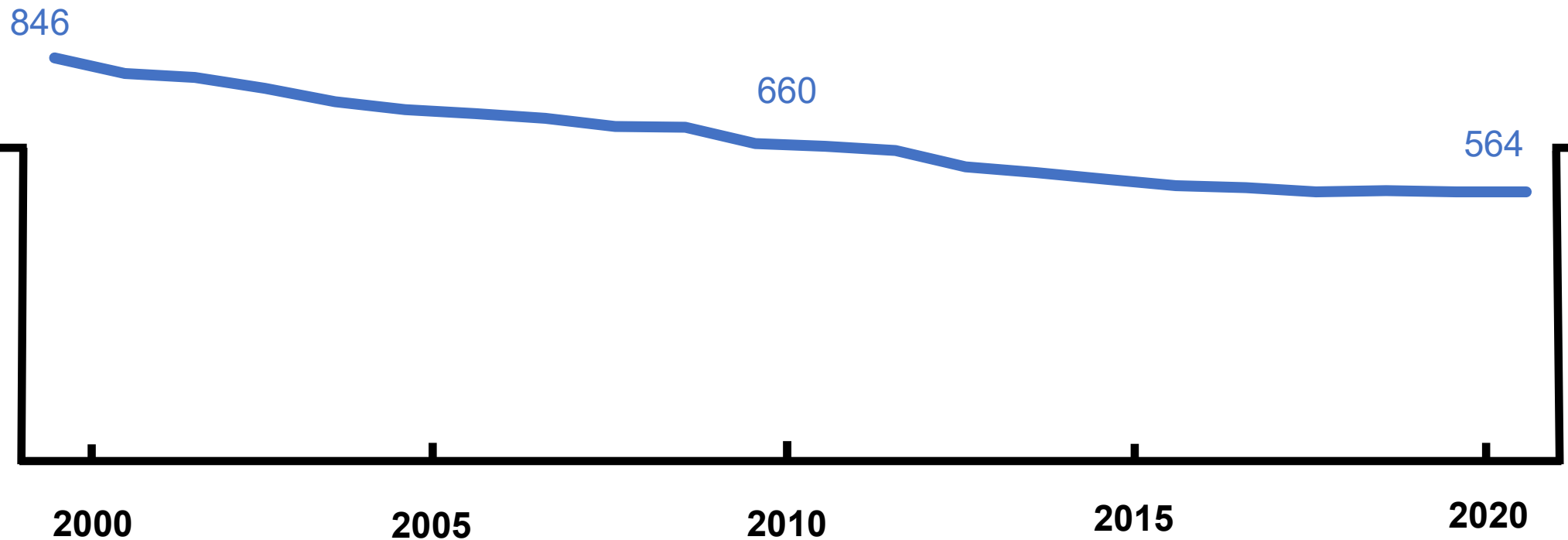
Den Haag: 36

Rotterdam: 38



Source: Mennes et al. (2021) Coffeeshops in Nederland 2020 - Aantallen coffeeshops en gemeentelijk beleid 1999-2020. [Breuer en IntraVal](#).

But the total number has decreased in recent years

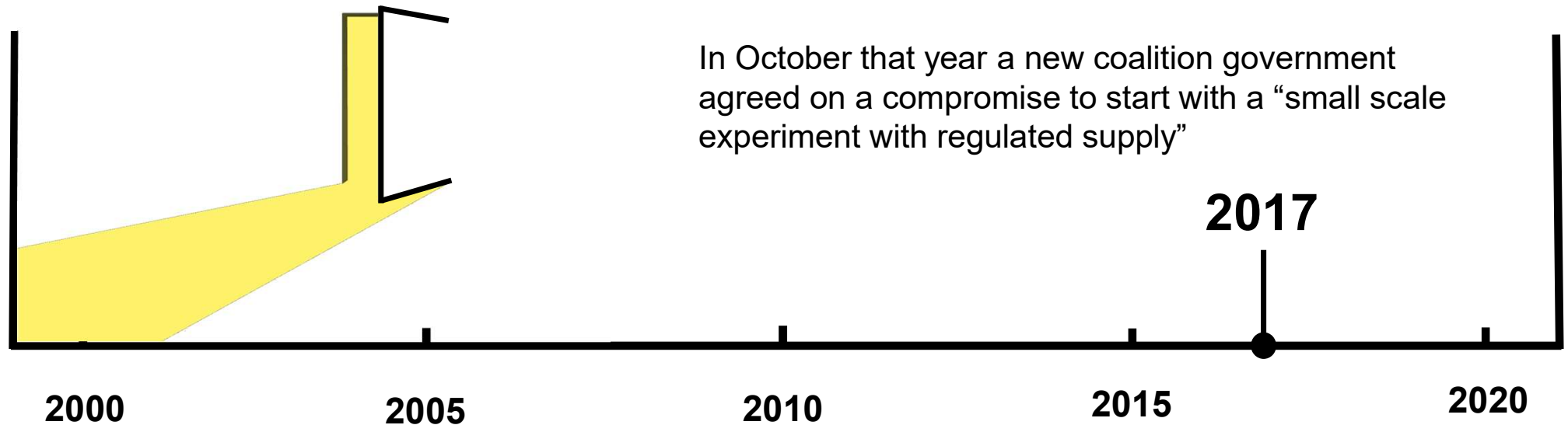


Source: Mennes et al. (2021) Coffeeshops in Nederland 2020 - Aantallen coffeeshops en gemeentelijk beleid 1999-2020. [Breuer en IntraVal](#).

Fourty years of coffeeshop policy had created a 'backdoor problem'

In 2017, a majority in parliament voted for a law that would address the backdoor problem by regulating the coffeeshop supply chain, but majority in the Senate was unlikely.

In October that year a new coalition government agreed on a compromise to start with a "small scale experiment with regulated supply"



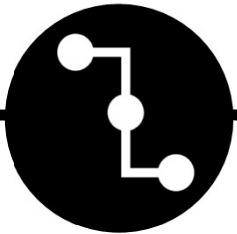
Enter:

**The experiment with a controlled
cannabis supply chain**

or

#wietexperiment

Primary objective



Assess whether it would be possible to create, maintain and enforce a closed coffeeshop supply chain

Secondary objectives

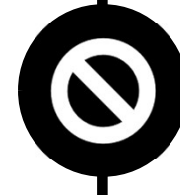
Public health and safety



Public disorder and nuisance



Illegal market and displacement



10 growers



10 cities



75 coffeeshops



10 cities



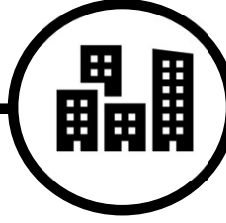
Experimental group
10 Intervention cities

Total population	1,67 million
Avg. population	167 thousand
# of coffeeshops	75
# of border cities	3
Population/coffeeshop	37.6 thousand

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10 growers

10 cities

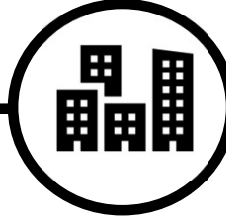


- **6500 kilograms per year**
- **Quality controlled**
- **No extracts**
- **Only raw-made edibles**
- **Neutral packaging**
- **Clear labelling**
- **Track & Trace system**
- **No pricing or THC rules**

10 growers



10 cities



76 coffeeshops



Coffeeshop criteria maintained

Only residents in the Netherlands allowed

Only cannabis from licensed growers

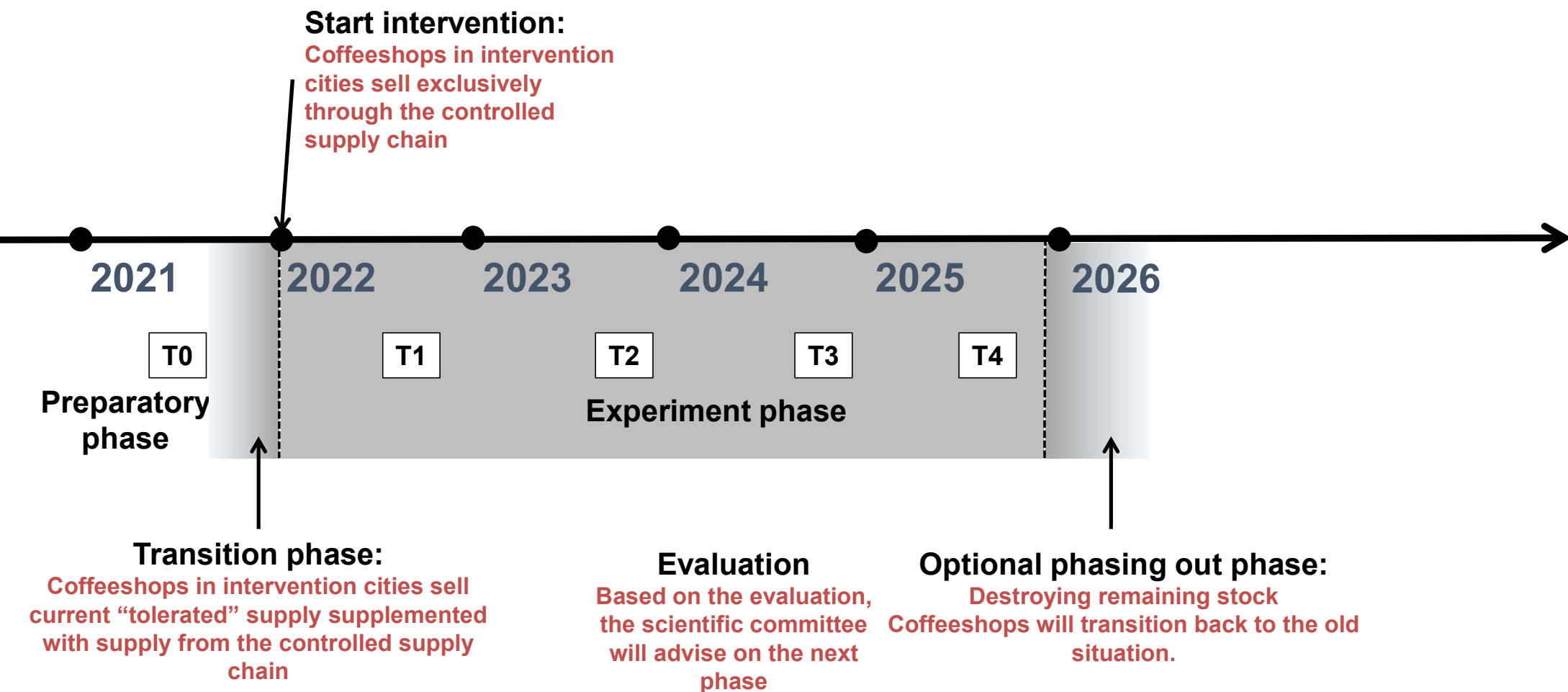
Sealed packaging

Prevention brochures and training

Weekly turnover in stock

No pricing rules

Original timeframe of the experiment



But there have been considerable delays



Lottery



**Probity
screening**



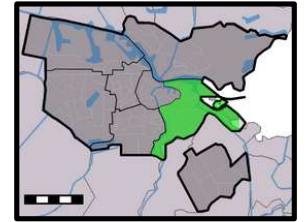
**Mortgages
and
banking**



**Construction
and permits**

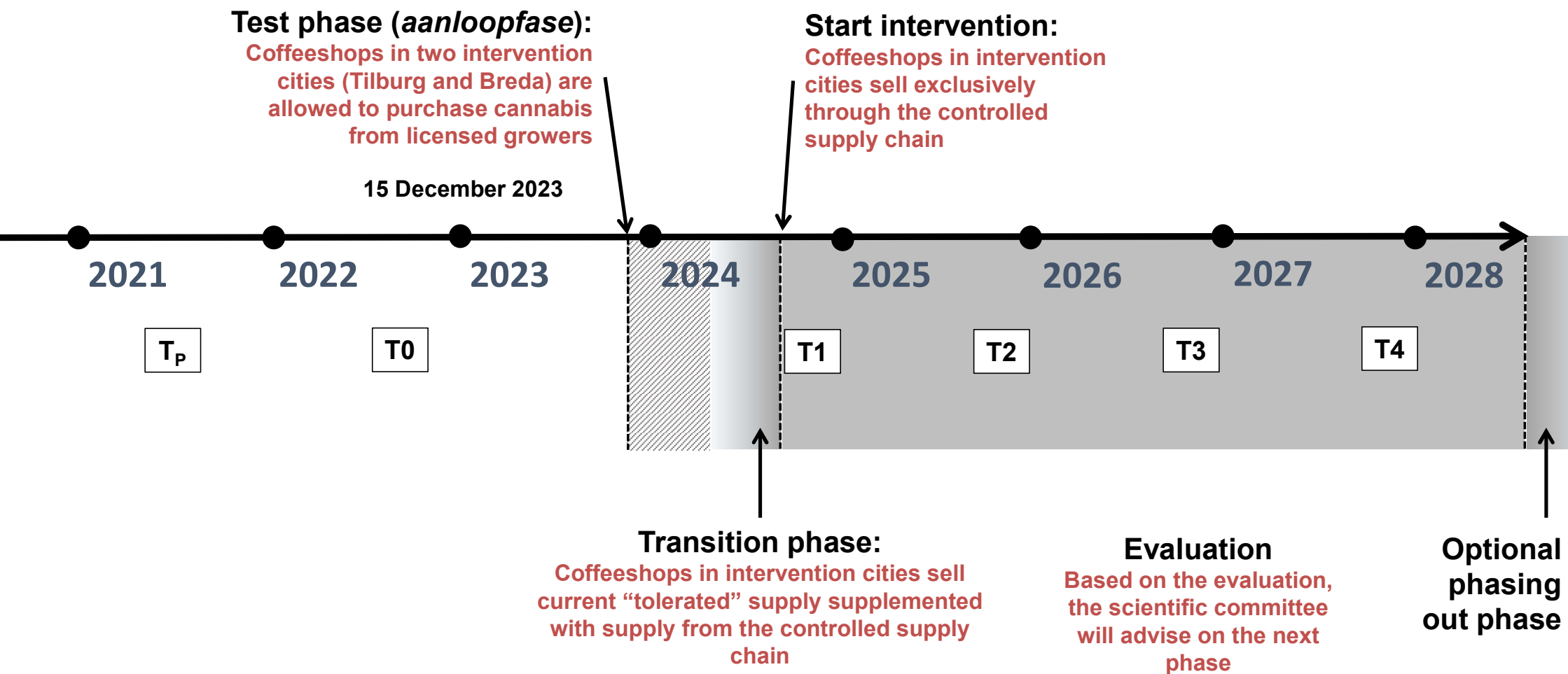


**Growing
sufficient
stock**



**Political
dynamics**

Current timeframe of the experiment



Quasi experimental design

Comparison at group level:

Experimental group vs control group



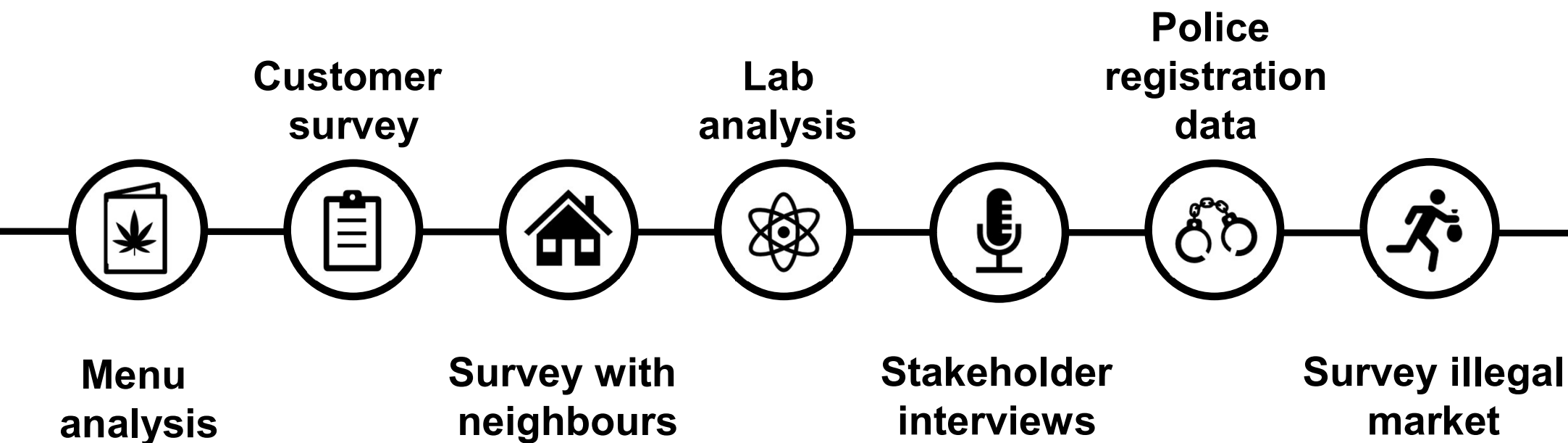
Experimental group
10 Intervention cities

Control group
10 Comparison cities

Total population	1,67 million	1,28 million
Avg. population	167 thousand	128 thousand
# of coffeeshops	75	71
# of border cities	3	2
Population/coffeeshop	37.6 thousand	31.7 thousand

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We used a series of methodologies to monitor developments



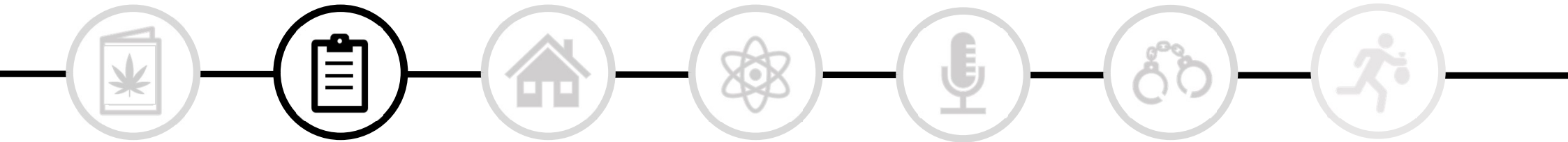
Key findings first baseline



https://www.rand.org/pubs/research_reports/RRA2735-1.html

Let's zoom in on two aspects

**Customer
survey**



Cross-sectional survey among coffeeshop visitors

- Recruitment of respondents in or close to coffeeshops in intervention and comparison municipalities
 - 809 respondents in 122 coffeeshops (n=6-7 per shop)
- Inclusion criteria: age 18+, Dutch resident, having purchased cannabis in the coffeeshop
- Data collection: September 2021 – April 2022
- Topics: Buying behaviour, cannabis preference & satisfaction, use patterns, health indicators, illegal market

Characteristics of coffeeshop visitors

- Average 32 years (range 18 – 79 years)
- 81% male
- Majority (61%) had paid job; 22% were students
- Level of education: low (22%), middle (46%), high (32%)

- 75% had just bought cannabis flower (recent transaction)
- 20% just bought hashish
- 5% bought both

Reasons to buy cannabis at coffeeshop

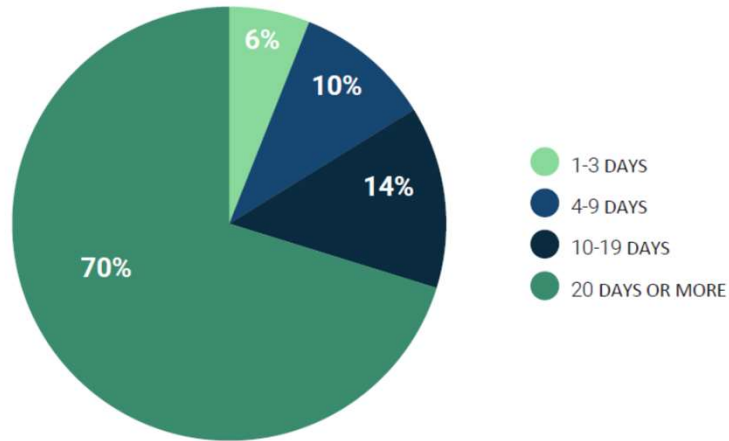
	Marihuana		Hashish	
• Convenient location & easily accessible	257	43%	101	50%
• Sale of high quality cannabis	208	35%	71	35%
• Good atmosphere/hospitality/friendly staff	207	35%	59	29%
• Quality of cannabis is constant and reliable	54	9%	16	8%
• Good price-quality ratio	48	8%	12	6%
• Familiar with coffeeshop/ habit/routine	30	5%	4	2%
• Varied assortment of cannabis	27	5%	6	3%
• Presence of consumption room	22	4%	8	4%
• Only available shop nearby	20	3%	8	4%
• Good service	13	2%	5	2%
• Nice interior	7	1%	0	0%
• Favourable opening hours	5	1%	3	1%
• Good reputation	5	1%	0	0%
• Offers anonymity	1	0%	2	1%

Consumer satisfaction

- Most respondents (89%) said they were (very) satisfied with the cannabis products from the shop they just visited
- **Respondents' satisfaction** was mainly associated with:
 - The perceived high quality of cannabis (51%)
 - The desired effects of the cannabis product (23%)
 - Consistent quality/strength/quantity of the cannabis product (12%)
- **Dissatisfied respondents** cited:
 - Varying quality/strength/ quantity of the cannabis product (36%)
 - Limited quality (24%)
 - Poor price/quality ratio of the cannabis product (24%)

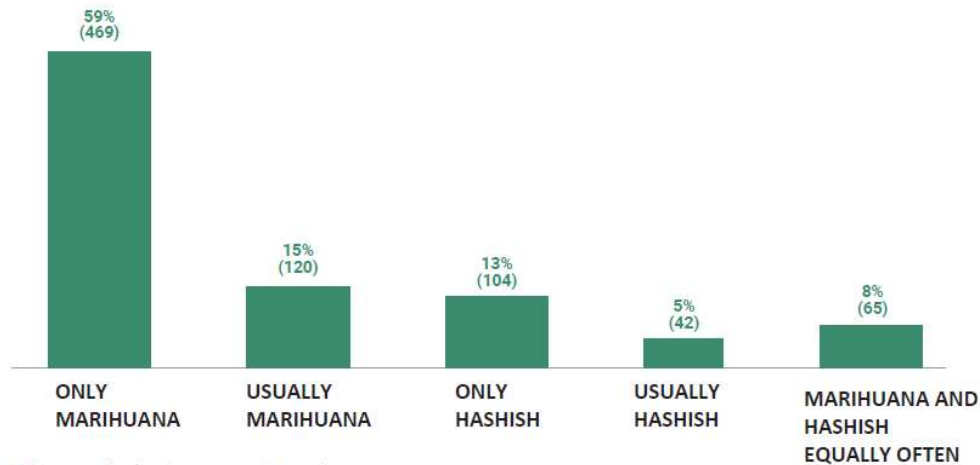
Patterns of cannabis use

FREQUENCY OF USE (#DAYS) IN THE PAST 30 DAYS, n=784

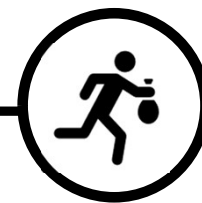
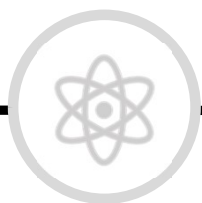


- **70% are (almost) daily cannabis users**
- **On average respondents smoke 3 joints (with tobacco) per typical use day**
- **Motivations for use: Mostly recreational, but almost a quarter used (also) for medical purposes (almost never on prescription)**

USE BY TYPE OF CANNABIS IN THE PAST 30 DAYS, n=800



Let's zoom in on two aspects



**Survey illegal
market**

Tracking the illicit market: data collection via online crowdsourcing survey

International literature shows potential of this approach:

- **Statistics Canada:** price developments around legalisation in **Canada**
- **PriceofWeed.com:** developments around legalisation in US states (Caulkins et al. 2012; Thies 2012; Davis et al. 2016), Canada (Office of the Parliamentary Budget Officer 2016) **United Kingdom** (Giommoni et al. 2018)
- **Street Rx:** Consequences of changes in cannabis laws on illegal market **Washington DC** (Meinhofer & Rubli, 2021)
- **High Times:** Effects of changes in cannabis policy on illegal market in **United States** (Anderson et al. 2013)

Simple short closed questionnaire



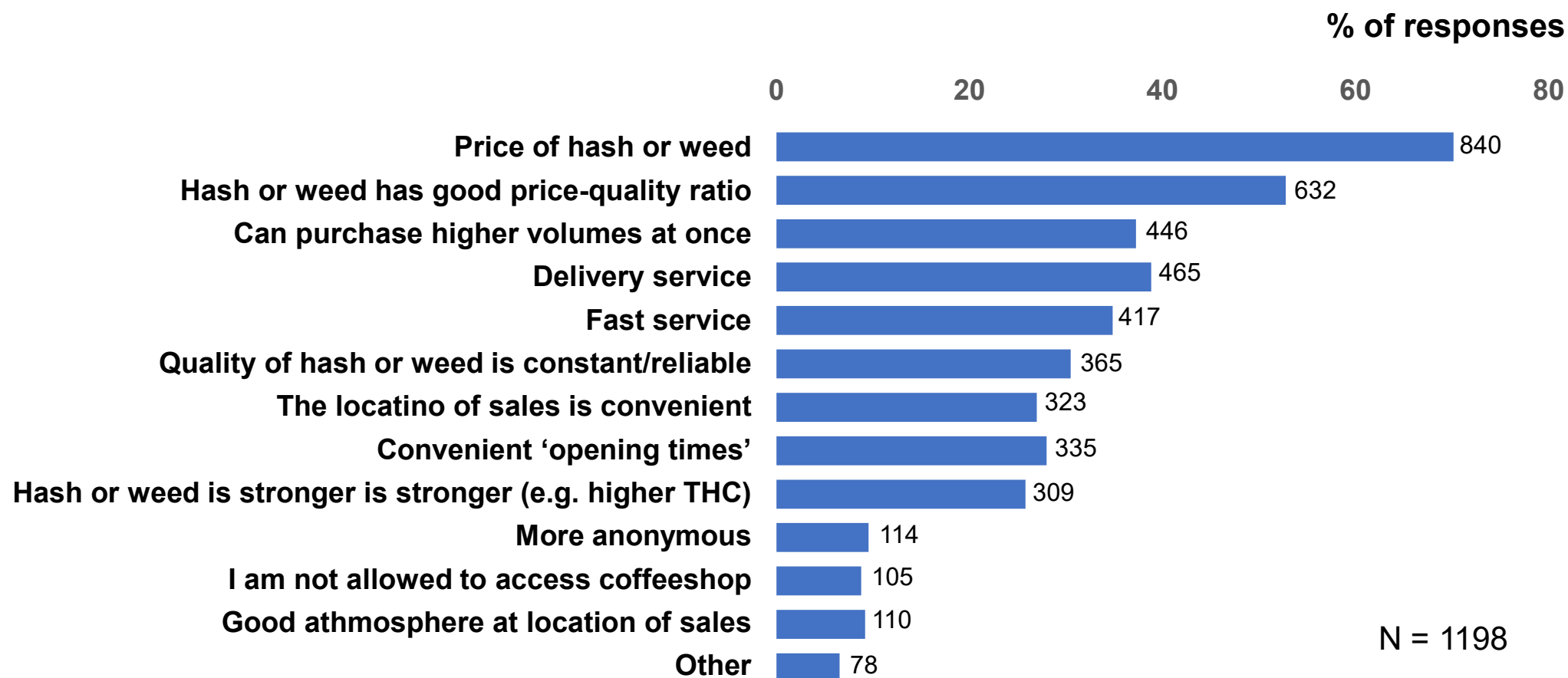
Bedankt voor je interesse in ons onderzoek naar de aankoop van cannabis buiten de coffeeshop.

Kies je taal

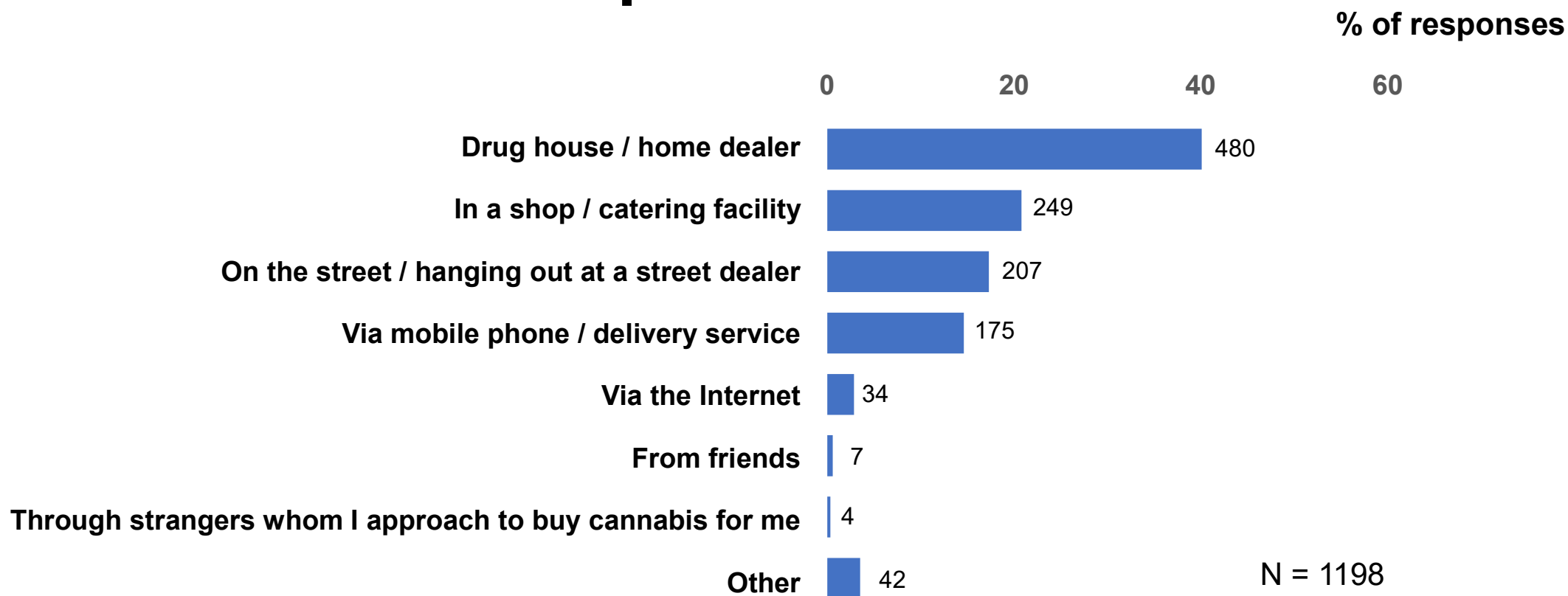
[Nederlands](#)

[English](#)

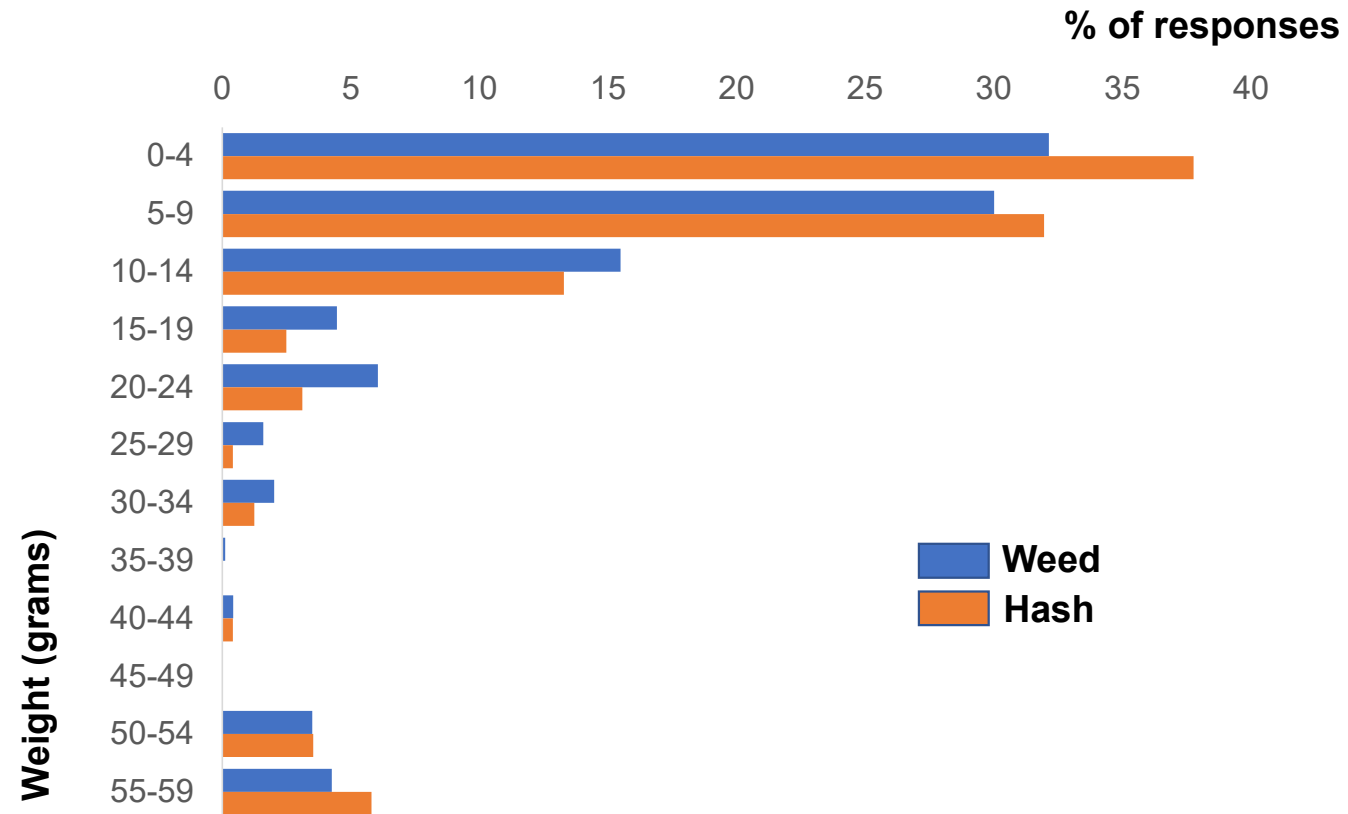
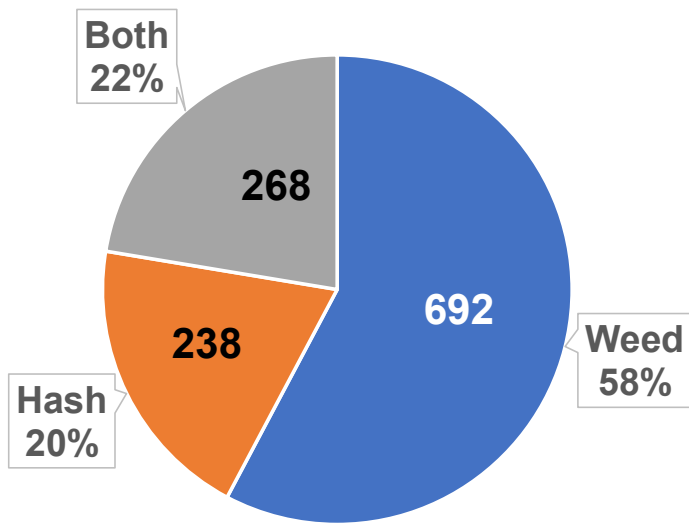
Most important reasons to purchase cannabis outside coffeeshops



Main sources of cannabis purchases outside coffeeshops



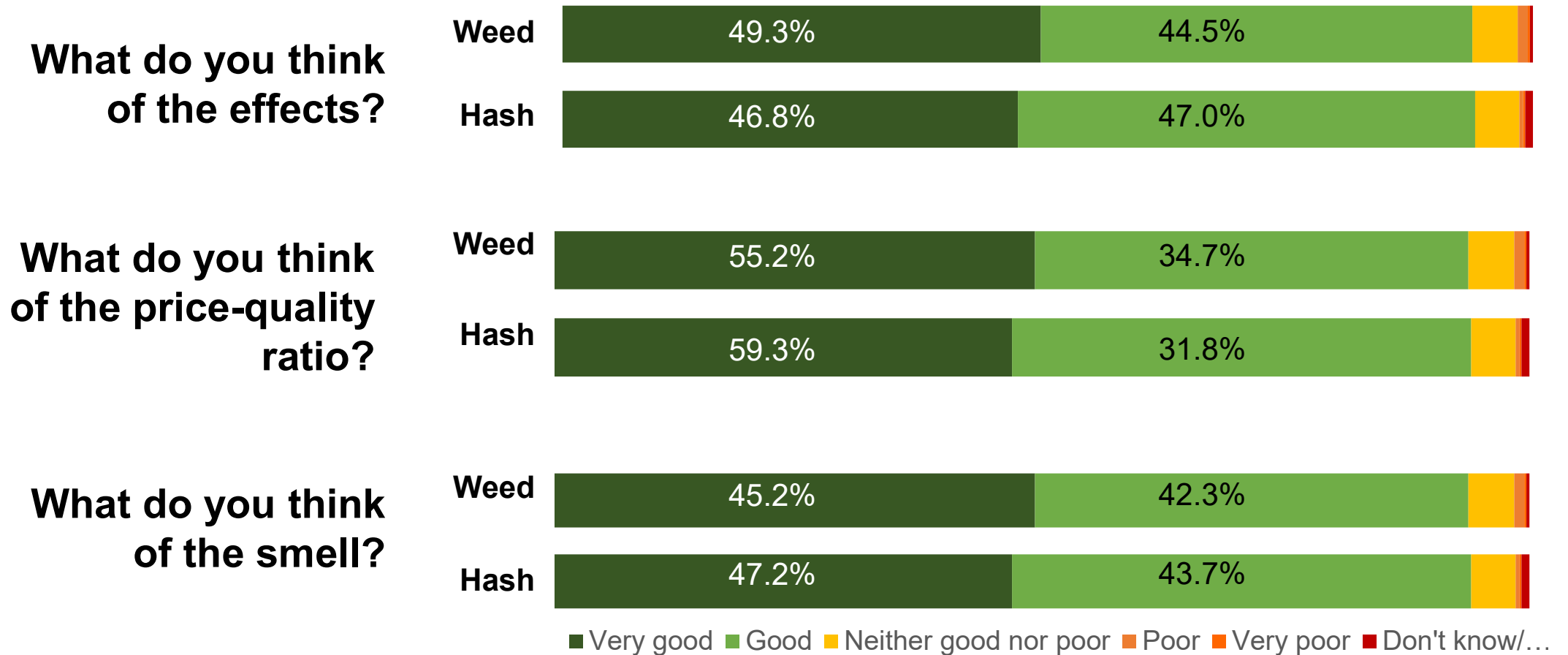
Majority of purchases below 10 grams



Price drops for larger quantities purchased

Weight per transaction	Weed		Hash	
	Mean price (SD)*	Number of observations	Mean price (SD)	Number of observations
5 grams or less	€7,57 (2,28)	525	€6,90 (2,28)	305
Between 5 and 10 grams	€6,25 (1,72)	192	€5,71 (1,65)	80
Between 10 and 50 grams	€5,13 (2,26)	181	€4,17 (1,58)	59
More than 50 grams	€4,32 (1,52)	38	€3,45 (1,39)	27

Consumers on the illegal market generally have a positive user experience



Why is this important for the experiment?

- Customers visit coffeeshops for the convenient location, the atmosphere and good quality cannabis
- Consumers are attracted to the illegal market by a lower price (weed: €7 per gram, hash: €6 per gram)
- Buyers on the illegal market typically purchase amounts less than 10 grams, but because sellers are not constrained by a 5-gram limit, some buy large amounts
- Ordering online and delivery service are attractive services on the illegal cannabis that the coffeeshops cannot offer
- In order for the experiment to succeed, coffeeshops should be able to compete with the illegal market

Thank you

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 @stijnhoorens

More information on RAND Europe's work on drug policy:

<https://www.rand.org/randeurope/research/drugs-policing-criminal-justice/drugs-illicit-markets.html>

More information on Controlled Cannabis Supply Chain Experiment:

<https://www.government.nl/topics/drugs/controlled-cannabis-supply-chain-experiment>



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