



Action Plan Hoboken

Current state of affairs and future perspective

March 2021

Agenda 11 maart 2021

1. Environmental results: recent figures lead, arsenic, cadmium
2. Results lead in blood
3. Emission reduction improvement projects
4. House purchases: state of affairs
5. Spatial planning plans



Environmental Results

Legal limits and target values

	Coarse dust ($\mu\text{g}/\text{m}^2\cdot\text{day}$)			Fine (PM10) dust (ng/m^3)		
	lead	cadmium	arsenic	lead	cadmium	arsenic
Legal limit	3000			500		
Target Value	250	20			5	6



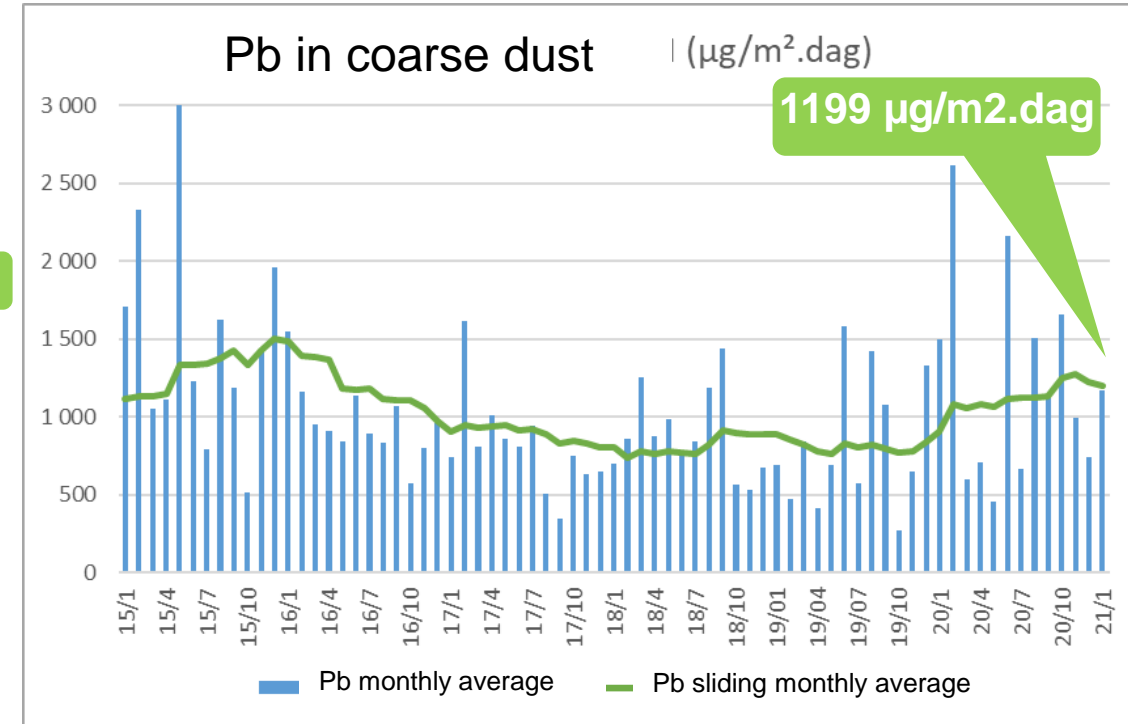
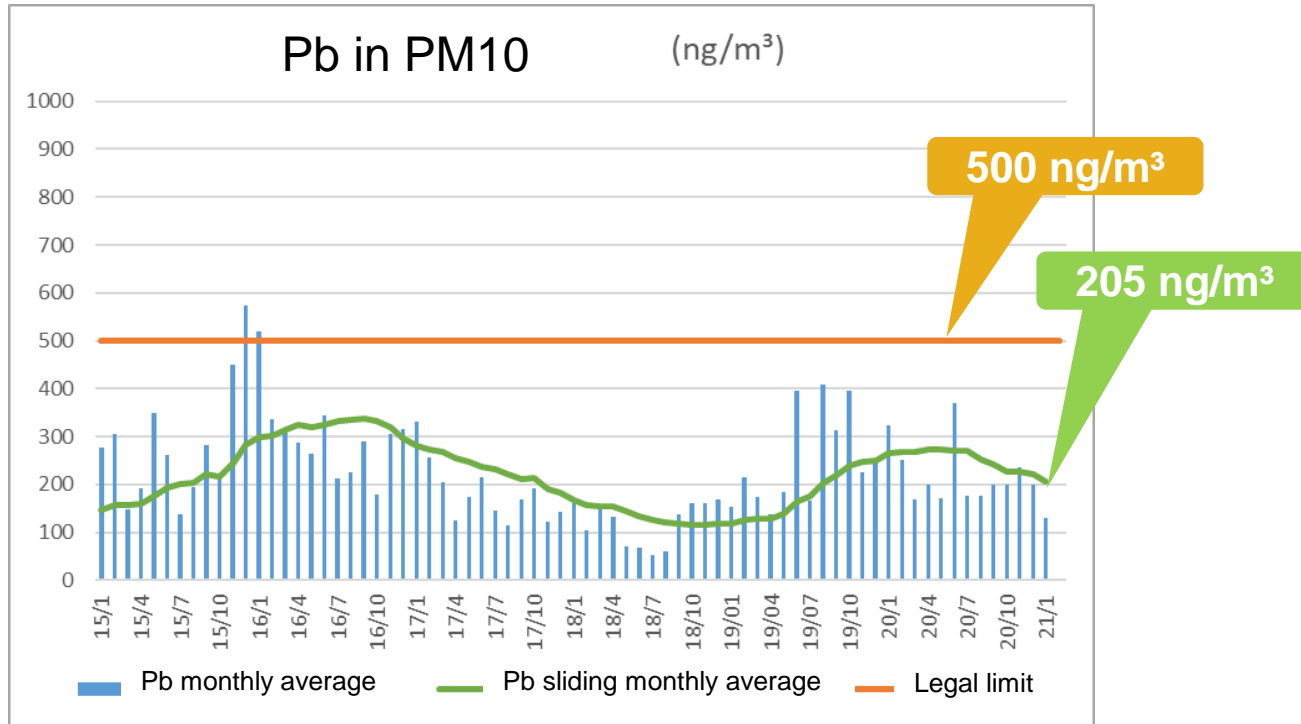
1 μg is one millionth of a gram

1 ng is one billionth of a gram

Legal limit: concentration limit which must be observed
Target value: value improvements aim to achieve

Lead in fine and coarse particles

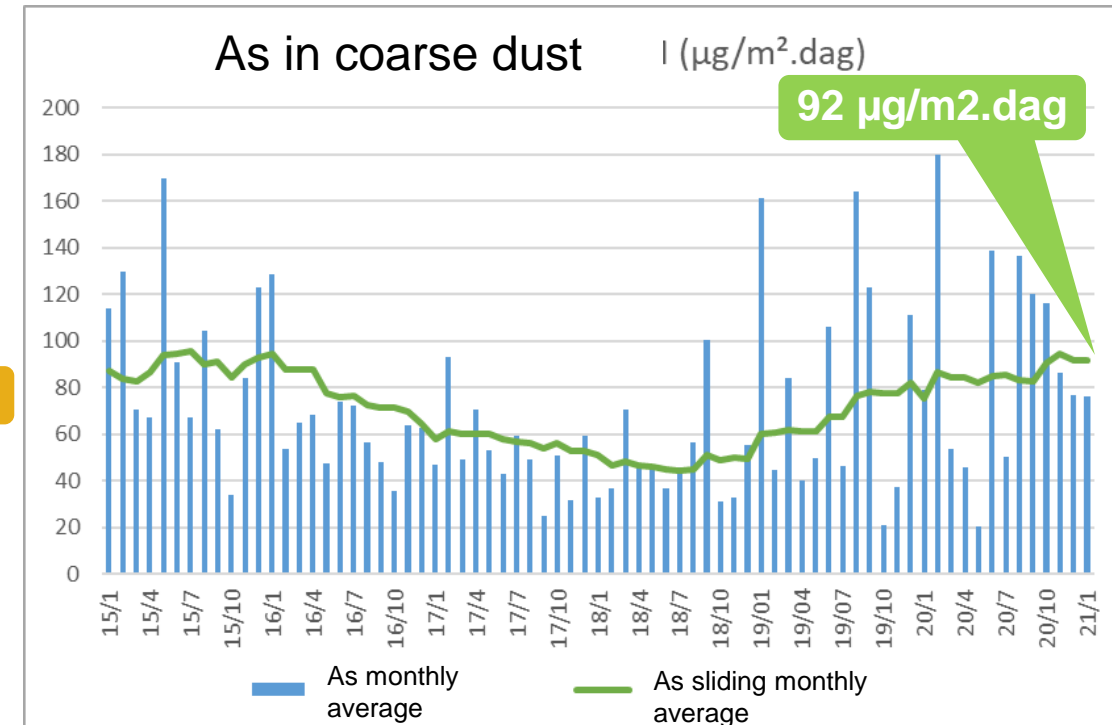
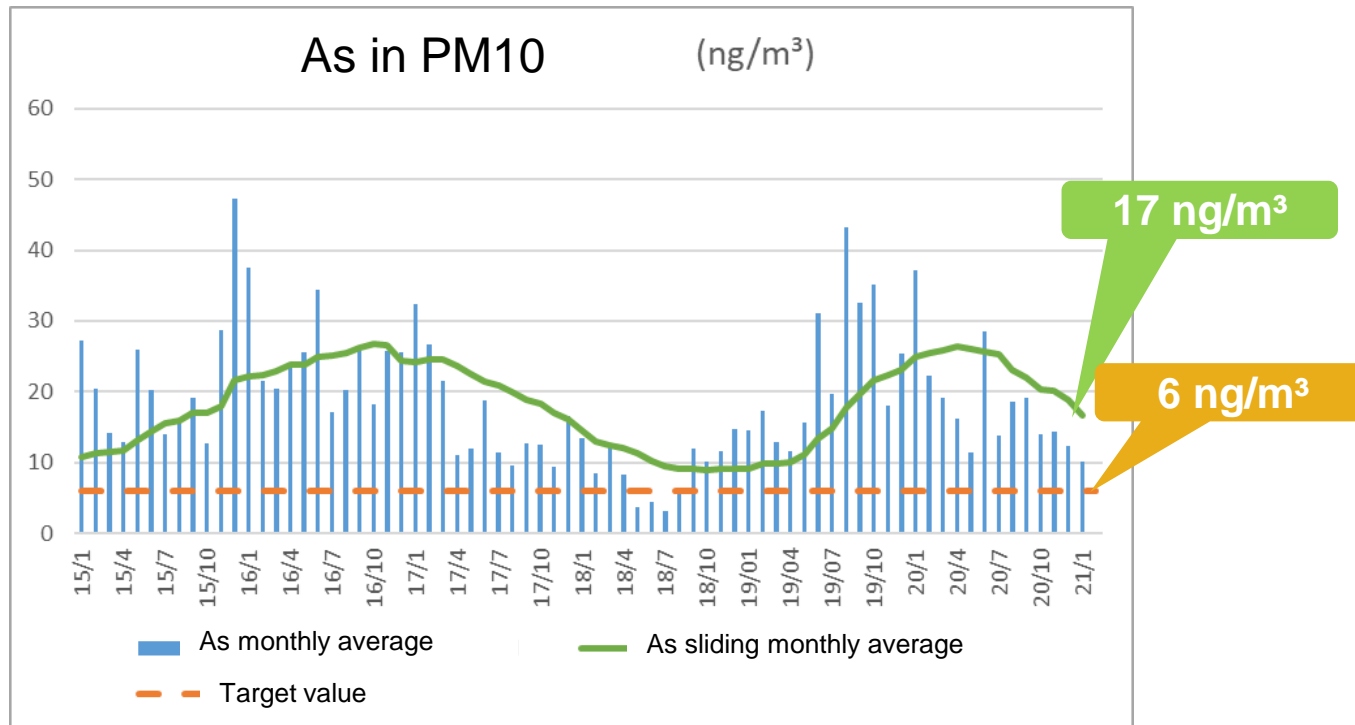
The standard for fine particles is amply met



Monitoring location – Constatin Meunierplein

Arsenic in fine and coarse particles

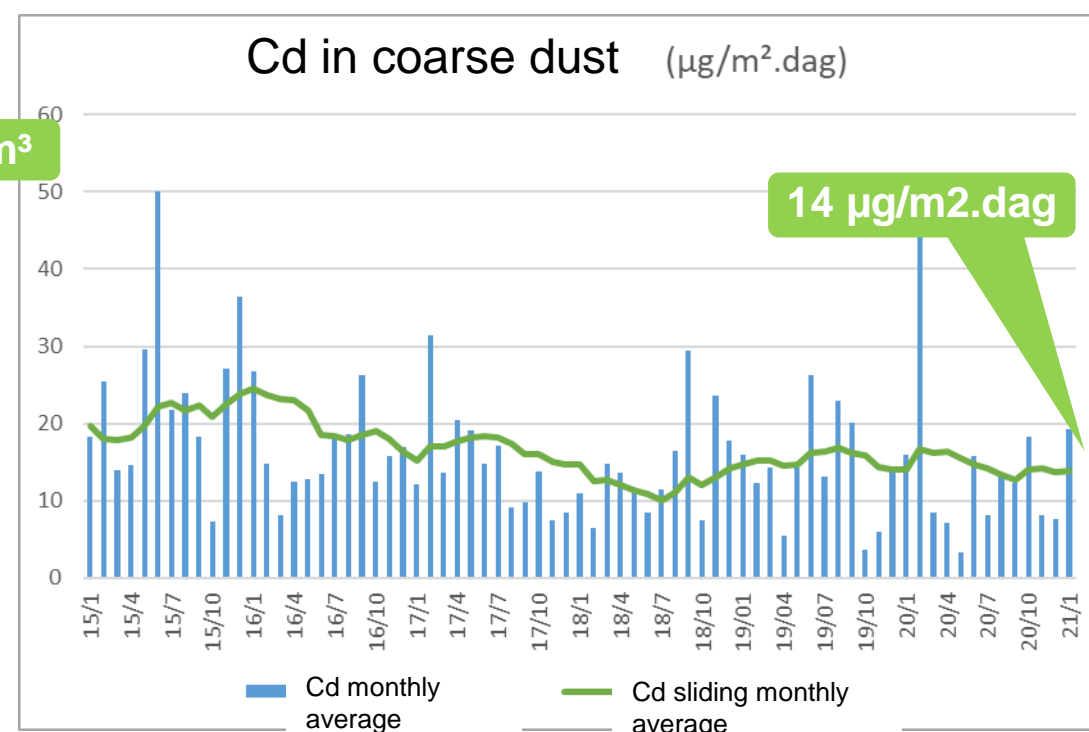
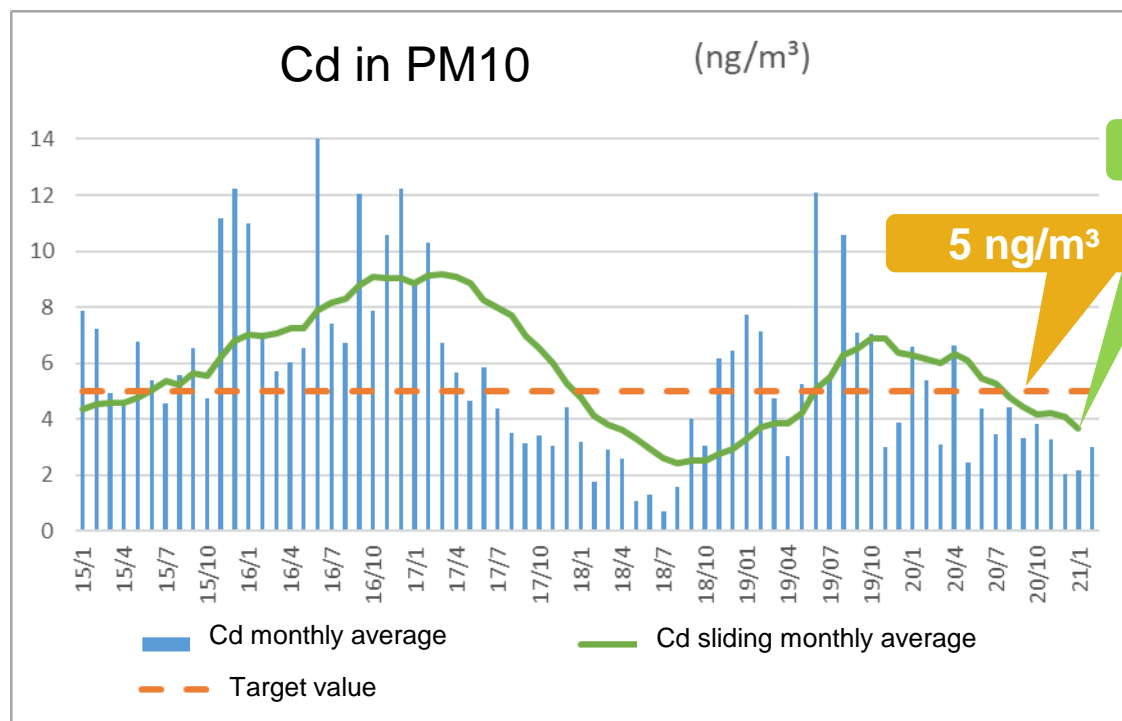
The target value has not been achieved yet, trend not stable



Monitoring location – Constatin Meunierplein

Cadmium in fine and coarse particles

The target value has been achieved again following fluctuating trend in '19-'20



Monitoring location – Constatin Meunierplein

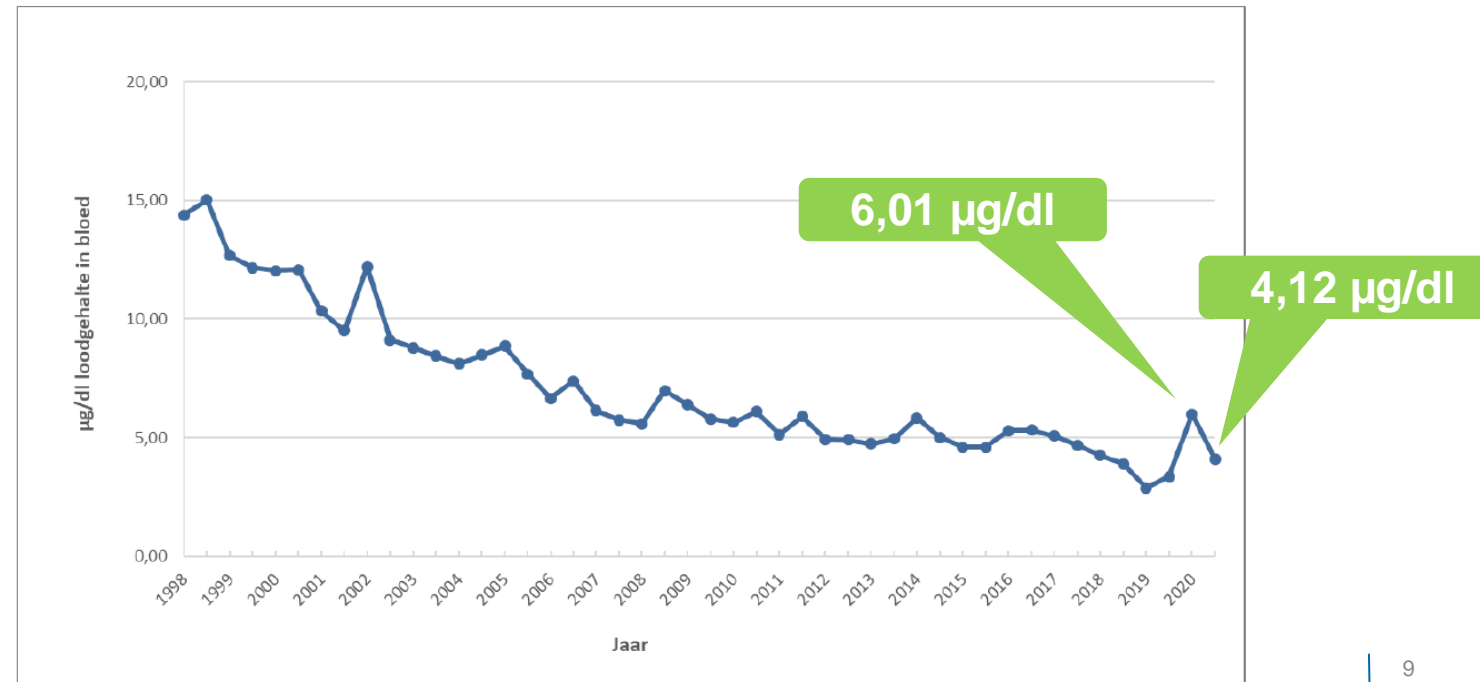
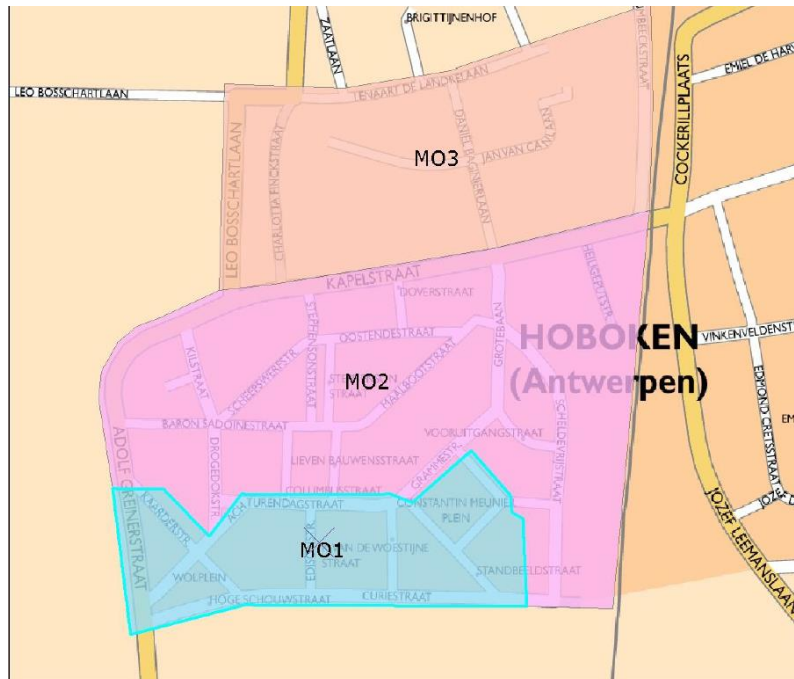


Results lead in blood

Values lead in blood

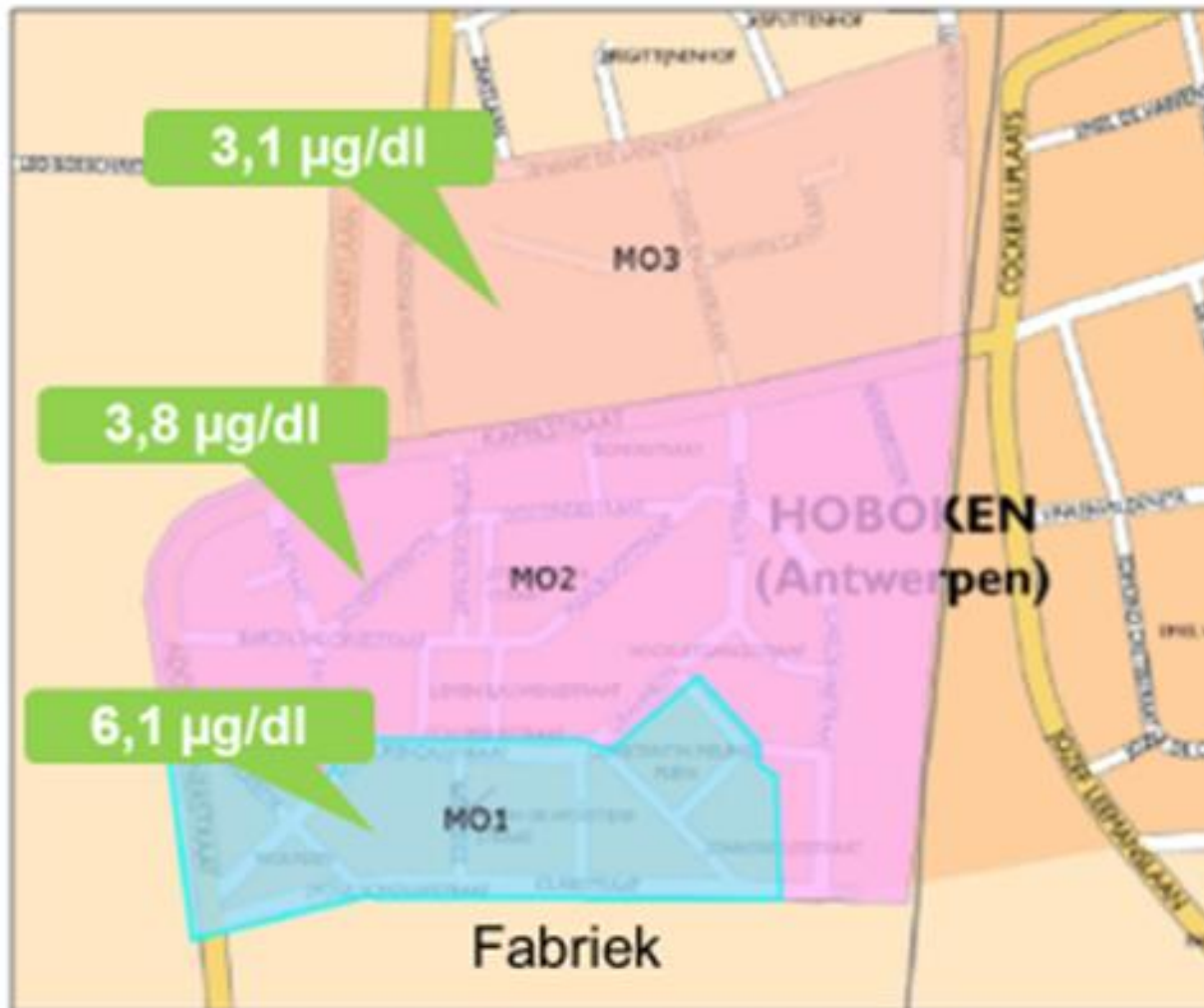
Higher values in spring 2020 improved again in autumn

- 2020: much higher results spring campaign; results down in autumn 2020
- 26% of the children still have lead in their blood > reference value of 5 µg/dl; in zone MO1, this is still 59%
- 2021: spring campaign to start in schools this month and in the community in April (organisation via PIH)



Values lead in blood

Clear link to distance from factory



Figuur 3 – Opdeling in woonzones van de wijk Moretusburg-Hertogvelden



Improvement projects

Umicore invests €25M per year on environmental improvement measures



Lead refinery

- Hermetically seal production zone with extraction and gas treatment facility
- Covered storage of all materials





Smelter

- New breaking area with intensive sprinkling and 7-metre-high wind shields
- Roof over smelter mixing zone
- Expansion of fixed sprinkling



Blast furnace

- Seal off loading zone
- Improve efficiency of gas treatment facility
- Optimise manipulation of fly-ash



Water treatment
Expand sprinkling and
extinguishing capacity



Storage of raw materials
Build covered storage areas

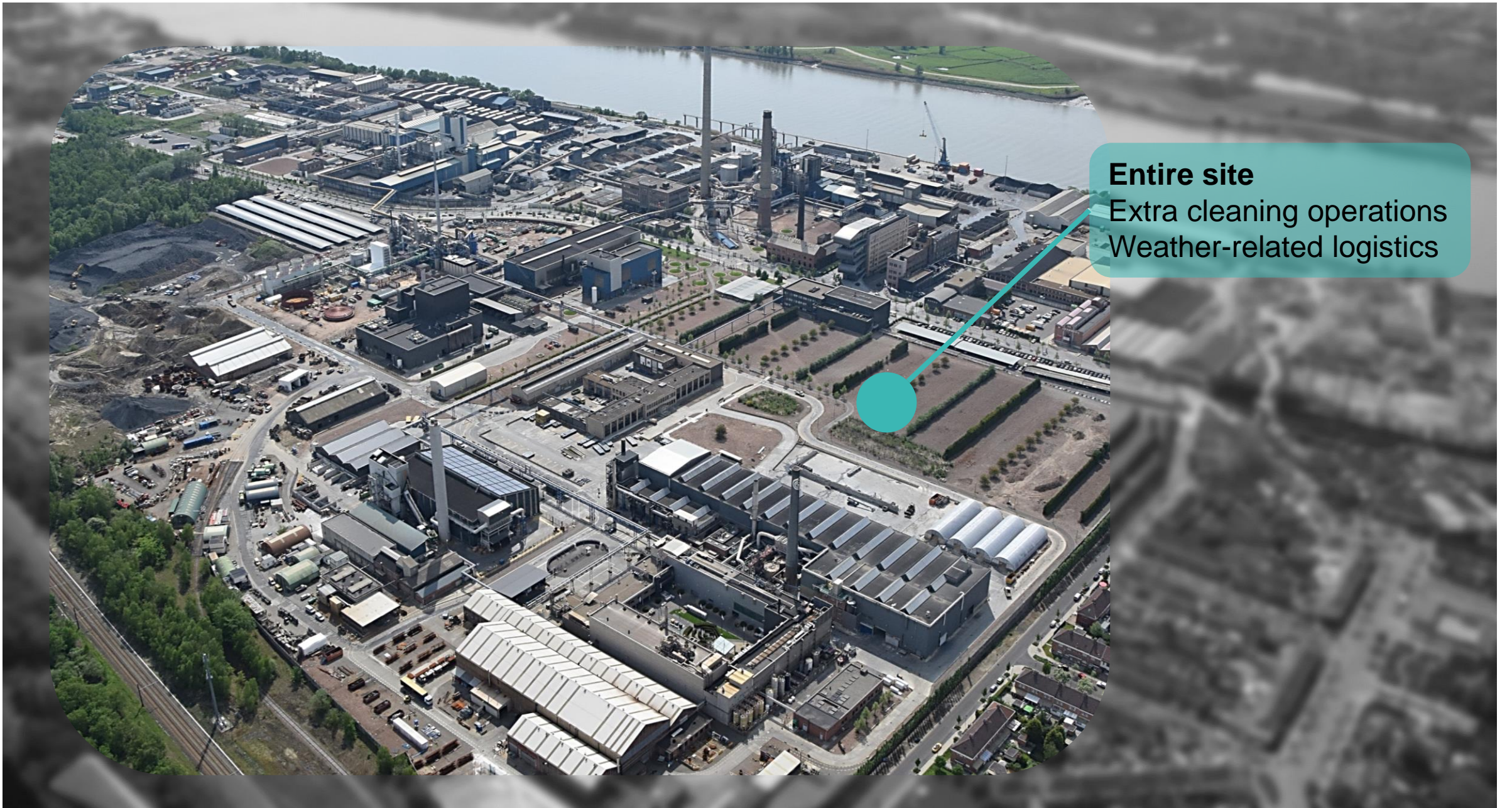
Improvement projects: covered halls

Storage and treatment of raw materials, in use in 2021





Internal logistics
Dust-free unloading of
materials



Entire site
Extra cleaning operations
Weather-related logistics

Improvement projects

Weather-related logistics

In progress:

- Weather-dependent adaptation of 'logistics' based on wind speeds
- More intensive use of encrusting agents for bulk materials
- Expanded sprinkling
- Ongoing study concerning optimisation of logistics and definition of extra measures and investments, including via external benchmarks

Longer term: implementation of further improvement and investment projects based on the conclusions of the ongoing study



Moretusburg

- Extra cleaning operations

Environmental permit amendments

Entirely in line with our focus

- On the advice of the Government of Flanders, the Provincial Government recently opened a permit file to request amendments to the conditions of Umicore's current environmental permit
- The improvements Umicore is implementing or has planned and are under examination are entirely in line with the changes proposed by the Provincial Government

Human Biomonitoring study initiative

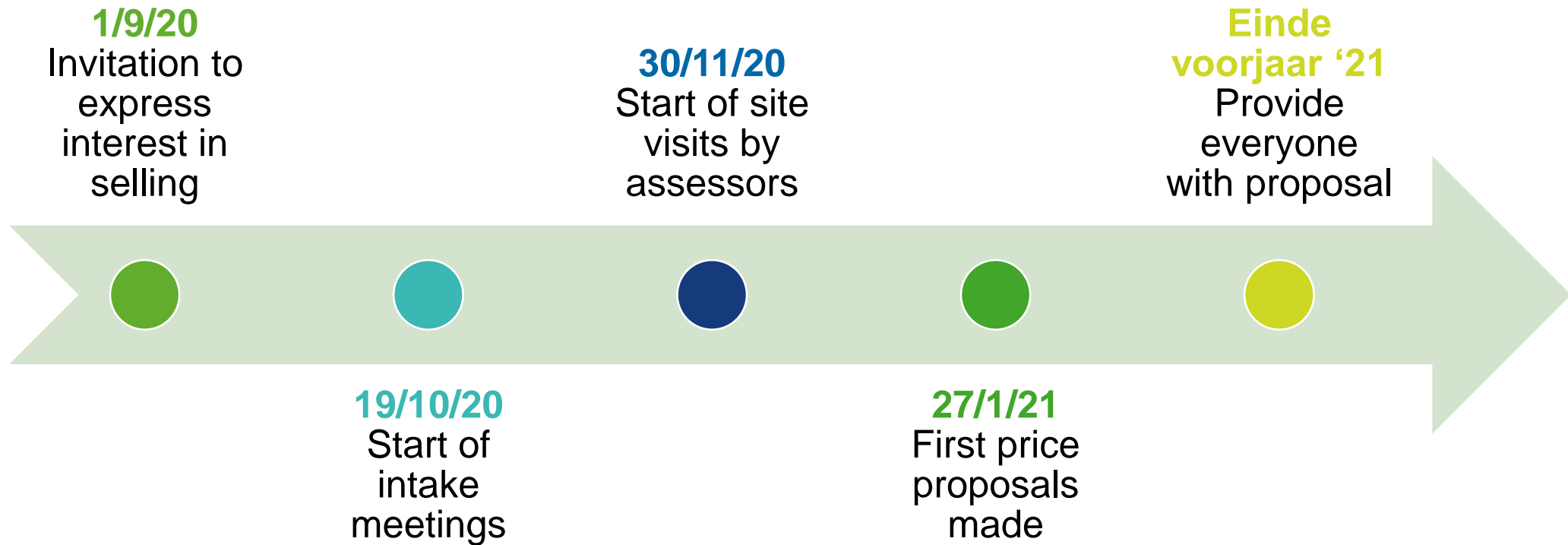
Discussions with authorities are ongoing

- Cooperation between the Agency for Care and Health, the City of Antwerp, the Province of Antwerp, the Department of Environment, Flanders Environment Agency (VMM) and Umicore in preparation
- More extensive health study in the vicinity of the factory into the exposure of young people to lead and other metals such as arsenic and cadmium, to gain a better overall insight into the health impact of heavy metals
- Umicore is partner to this study. The results will enable better, science-based risk management
- Umicore has always supported scientific research that contributes to a better living environment and a safer environment in the vicinity of its industrial sites



Actions in the neighbourhood

Purchase of houses Moretusburg



Purchase of houses Moretusburg

Late February:
147 houses for
sale

Today: 170
houses for
sale

99 site visits
completed

> 60 homes
assessed

Proposal
received by 58
owners

Proposal
accepted by
37 owners

Update

Zone 1 (in green)

- 98 owners interested in selling
- 88% of young children (under 12)
- City of Antwerp will sell social housing and houses used by the Public Centre for Social Welfare (OCMW) to Umicore via Woonhaven
- 127 houses or 68% of total number of houses

Zone 2

- 72 owners interested and meet requirements
- 61% of young children



Relocation to zone 2 as possible solution for social housing tenants

- The City of Antwerp is exploring the possibility of relocating social housing tenants living in zone 1 to one of the houses purchased by Umicore in zone 2
- This will enable social housing tenants to stay in Moretusburg if they wish so
- The homes in zone 2 will be re-let

Green buffer in zone 1

Zone most prone to exposure to dust from the factory

Buffer to reduce exposure to dust for the remaining residents

Favourable effect on the concentration and deposit of dust in the rest of the neighbourhood

Visual barrier to the factory

More than 5 hectares of green

What might this green zone look like? Also on the Umicore site



What might this green zone look like?

Construction will be phased



Plans for closure of Greinerstraat and construction of new road on Umicore territory



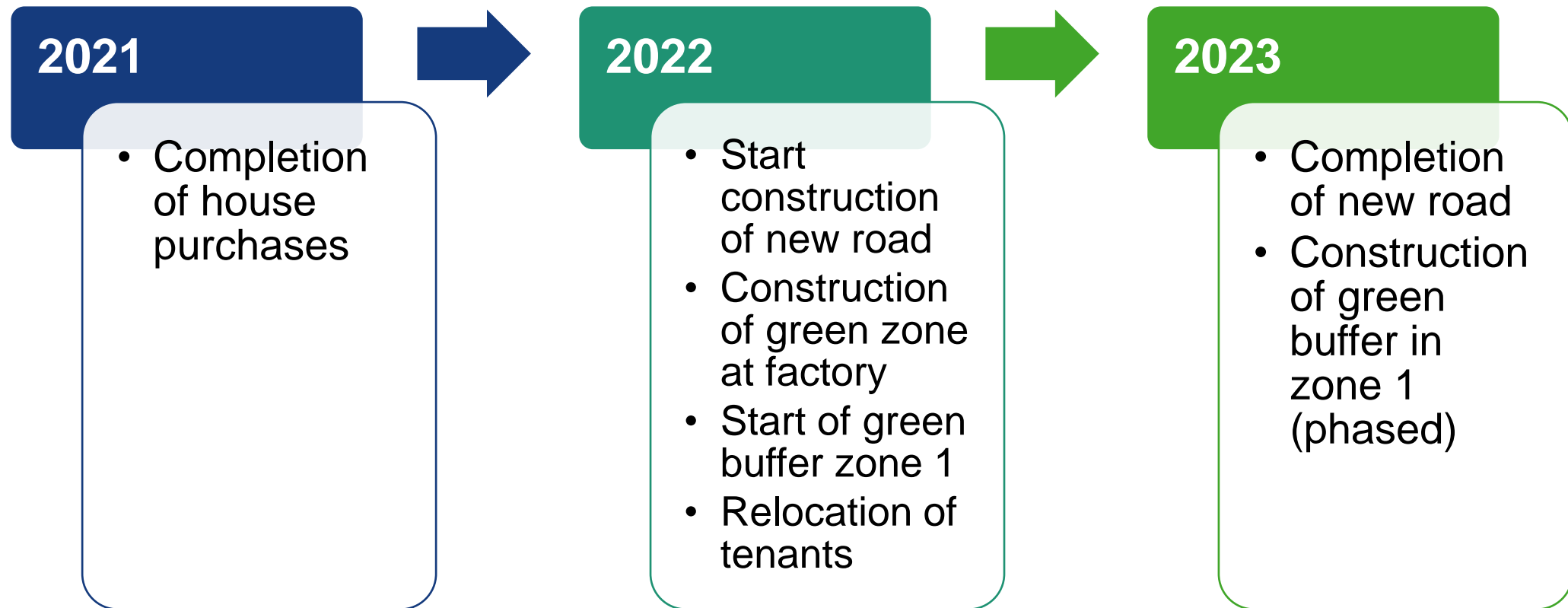
- Umicore has agreed with the City of Antwerp that Umicore may purchase Greinerstraat and close it to through traffic subject to the construction of a new route.
- This new route will be entirely on Umicore territory and constructed at Umicore's own expense.
- Closure of Greinerstraat will make the factory sites safer.
- It will also help reduce the amount of dust blown about by through traffic, thus benefiting the neighbourhood.
- The government has recommended integrating Greinerstraat into the factory since 1978. The primary focus, however, was the remediation of the factory and neighbourhood. The City examined this matter again in 2008.
- A preliminary design is now complete, which we would like to propose and which could be integrated with the changes in the Moretusburg neighbourhood.

New route





Provisional planning



New perspectives for the future

- Greening of the site, together with a green buffer in Moretusburg, will greatly improve the living quality in Moretusburg
- A barrier of 5 ha of woodland between the factory and the residential district will benefit the health situation for children
- A new road with a safe cycle path will ensure good and safe accessibility, benefiting both local and through traffic
- Umicore remains committed to reducing its impact on the environment and on the health of the neighbourhood by continuing to invest in improvements and protective measures on the site

umicore[®]

materials for a better life