waga energy

wagaBOX®

The Ultimate Landfill Gas Upgrading Solution

February 2026

Who we are

Offices in the USA, France, Canada, Spain, UK, Brazil and Italy

Inventors of the WAGABOX®, a breakthrough technology in landfill gas upgrading

35 WAGABOX® facilities in operation, 19 more under construction *

300+ landfill gas to energy experts worldwide

Driven by an absolute dedication to the safety of our employees and partners

We are engineers, entrepreneurs, developers and environmentalists committed to mitigating climate change for future generations.

55

WAGABOX®
UNITS WORLDWIDE

36 already in **operation**

+300

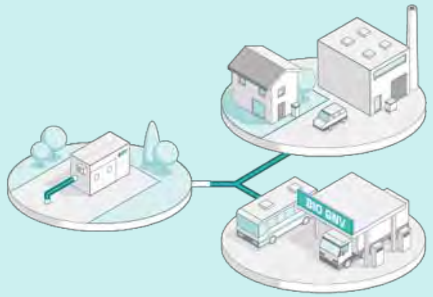
ENERGY EXPERTS

59M

EUROS REVENUE in 2025

6.5 MMBtu

RNG INJECTED
From date to year

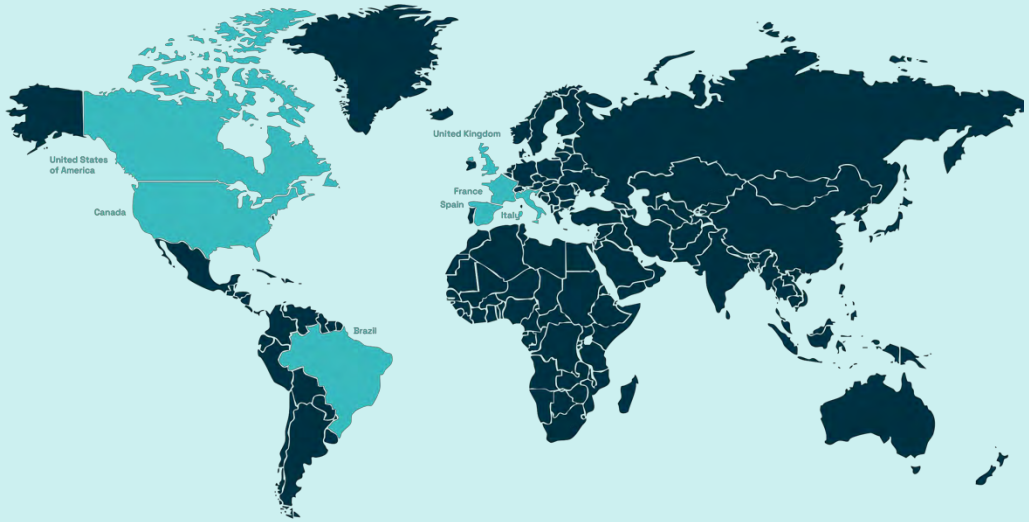


300 000 TONS

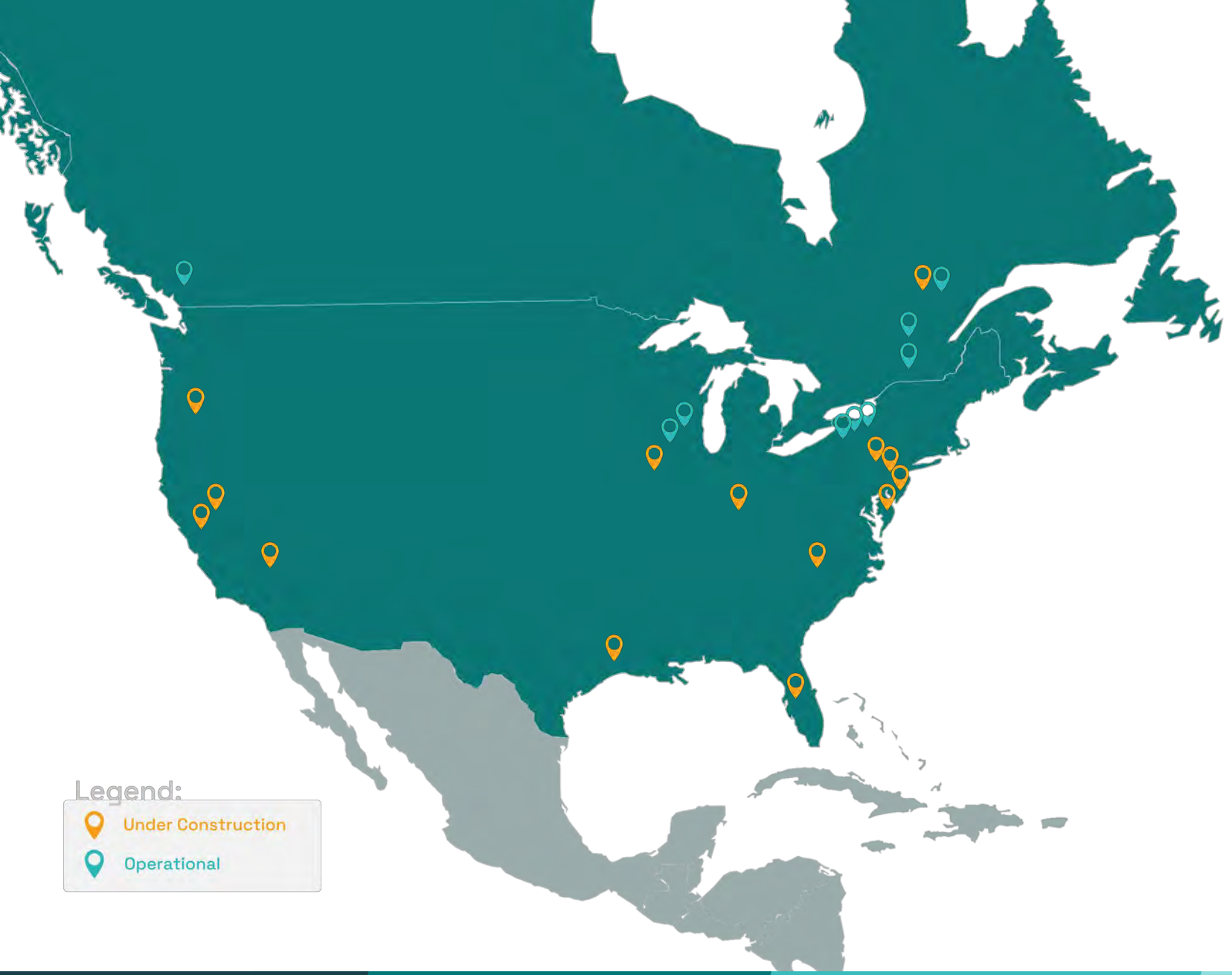
EQUIVALENT **AVOIDED**

7 COUNTRIES

Brazil
Canada
France
Italy
Spain
United States
United Kingdom



WAGABOX® units in North America



USA

- 5 units in production
- 13 units in construction

2 344 GWh/an installed capacity

or 8 M MMBtu/an installed capacity

Canada

- 4 units in production
- 1 units in construction

340 GWh/an installed capacity

or 1,2 M MMBtu/an installed capacity

OUR SOLUTION

Methane concentration in the atmosphere is at its highest level in the last 800,000 years

If methane emissions are not reduced, their continued accumulation will significantly accelerate global warming, contributing to more frequent extreme weather events, rising sea levels, and long-term disruption of ecosystems and agricultural systems worldwide

From landfill gas to renewable natural gas (RNG)

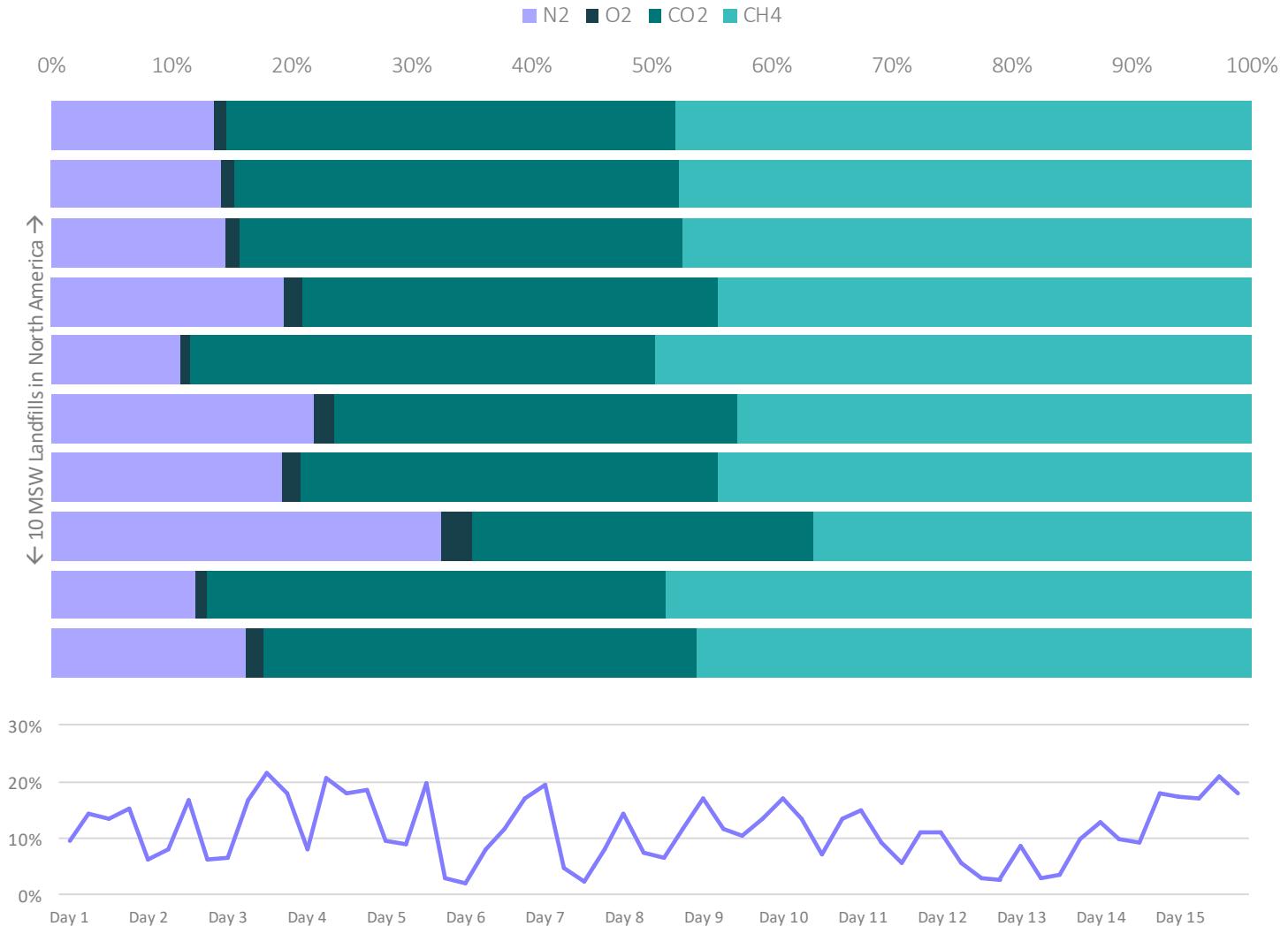
All over the world, landfills are **a major source of methane emissions** as well as an immediately available gas.

Leveraging 15+ years of R&D, **Waga Energy transforms landfill methane emissions into pure RNG and fight against climate change**

Landfill gas composition

Landfill gas is mainly composed of **CH_4**, **CO_2**, **N_2** and **O_2**

Its composition is unique to every site and varies over time depending
on waste type,
site operation
and atmospheric conditions



According to our studies on 10 landfills in North America. Source: WAGA ENERGY Inc

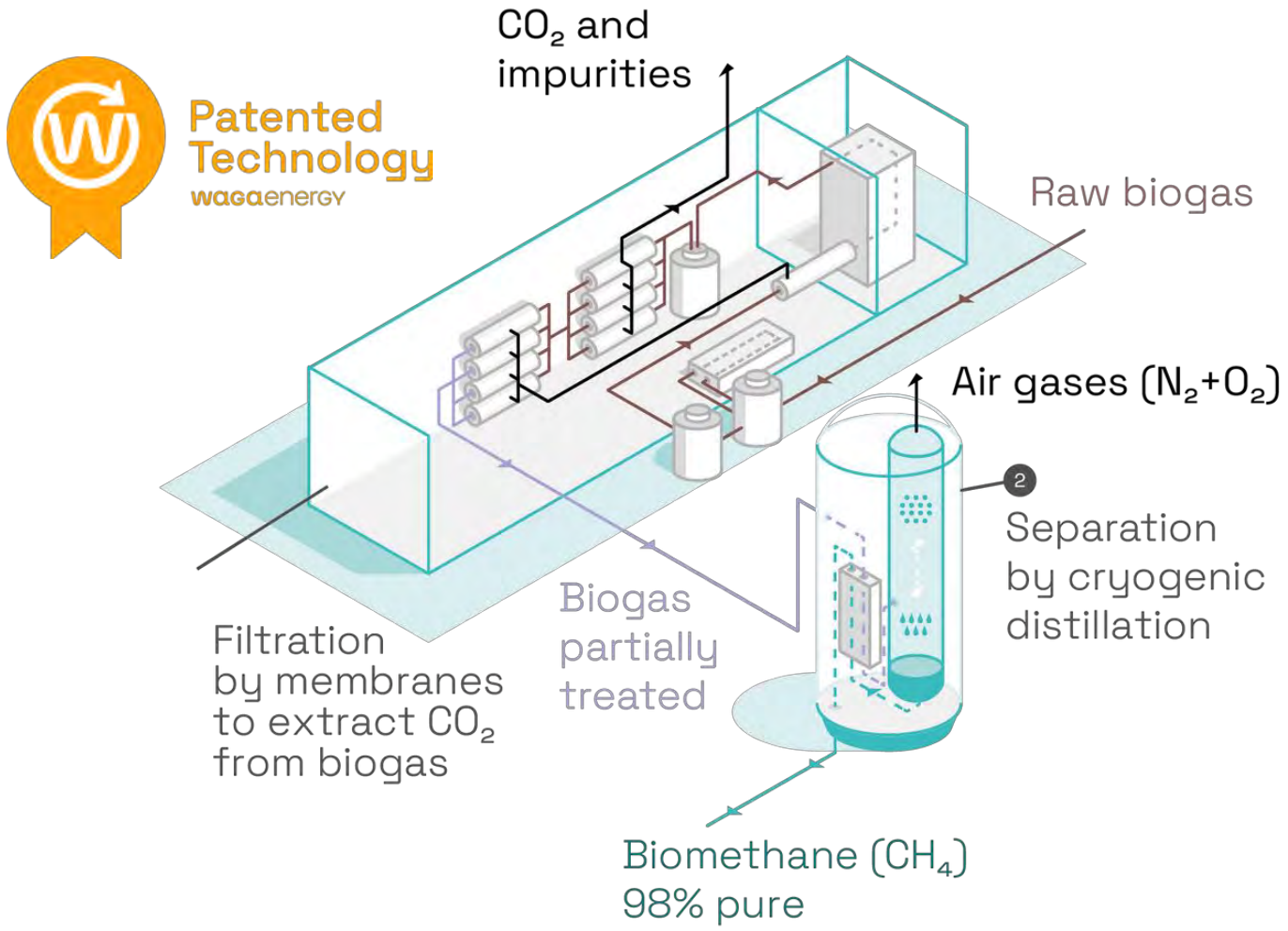
Efficient landfill gas upgrading solution: WAGABOX® technology

WAGABOX® Solution:

Unique combination
of **cryogenic distillation**
and **membrane filtration** producing
methane compliant
for grid injection

Results:

- Up to 30% nitrogen
  in the Landfill gas
- Over 95% availability
- Over 90% methane recovery
- Pipeline-compliant
  (> 98% methane content)

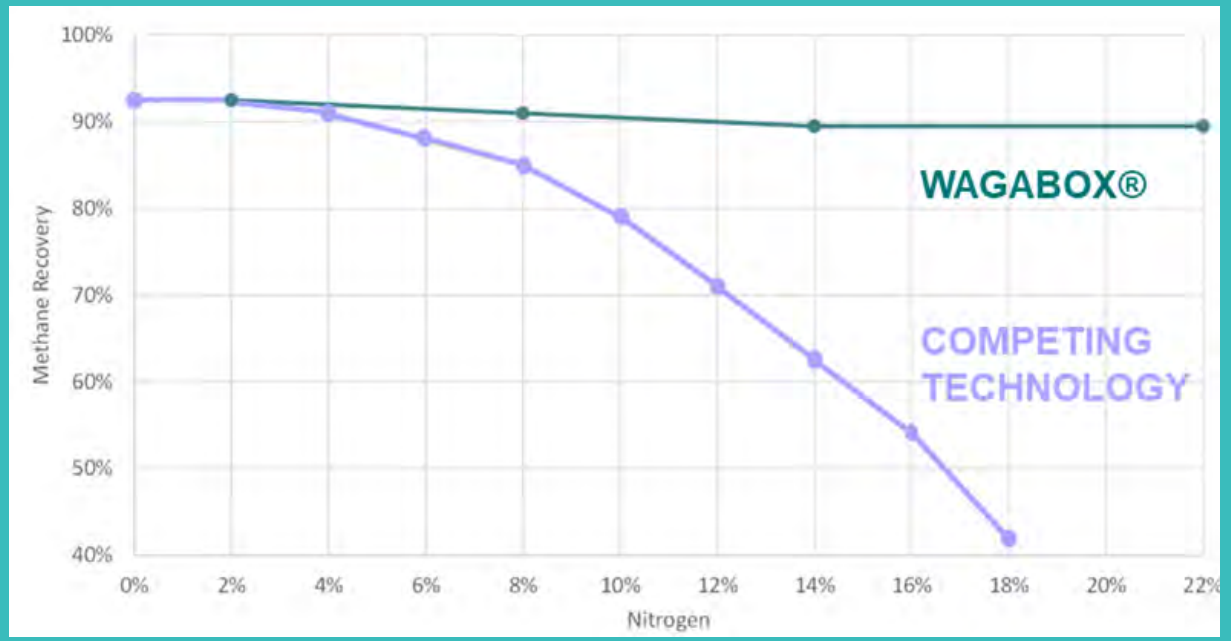


WAGABOX® technology:
the most efficient landfill gas upgrading solution

Limitations of other technologies:

- ✖ Reduced efficiency with high nitrogen content
- ✖ Technical limit: performance drops if biogas contains more than 10–15% nitrogen
- ✖ Limited gas capture to avoid air intake
- ✖ Risk of emissions and unpleasant odors

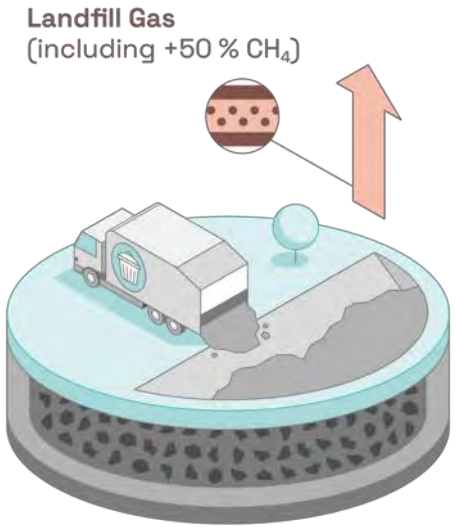
METHANE RECOVERY PERFORMANCE VS. NITROGEN



Source: WAGA ENERGY Inc

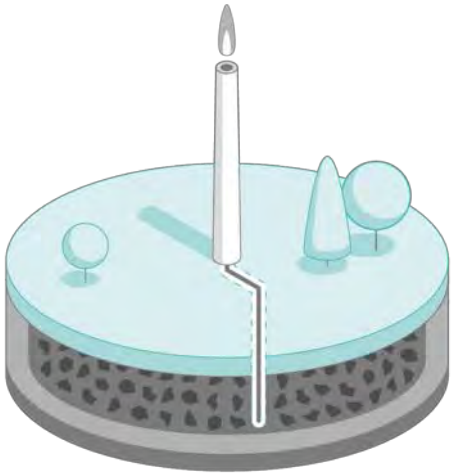
The WAGABOX® delivers the highest project energy recovery performance from waste to pipeline

OPEN STORAGE



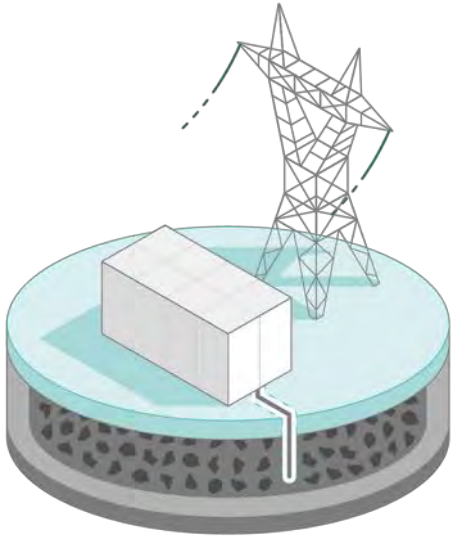
THREAT
TO THE ENVIRONMENT
Energy efficiency: 0 %

STORAGE IN LANDFILL SITES,
LANDFILL GAS CAPTURED AND FLARED



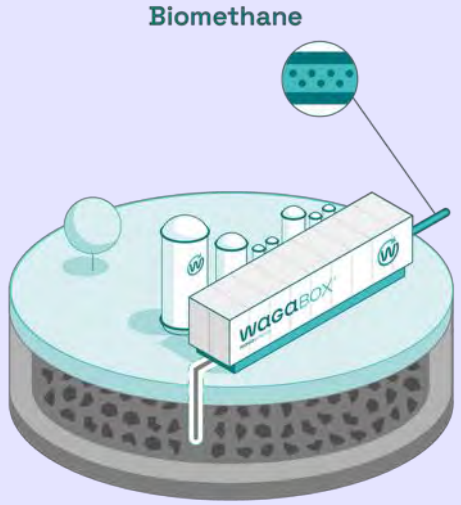
NO ENVIRONMENTAL
PERFORMANCE
Energy efficiency: 0 %

STORAGE IN LANDFILL SITES,
LANDFILL GAS CAPTURED
AND CONVERTED TO ELECTRICITY



LIMITED ENVIRONMENTAL
PERFORMANCE
Energy efficiency: 30 %

STORAGE IN LANDFILL SITES,
LANDFILL GAS CAPTURED AND PURIFIED
INTO BIOMETHANE WITH WAGABOX® TECHNOLOGY



OPTIMAL ENVIRONMENTAL
PERFORMANCE
Energy efficiency: 90 %

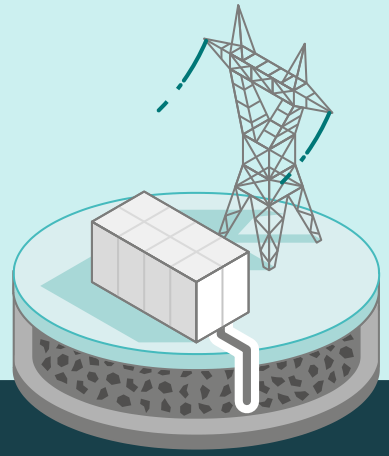
Best use of landfill gas

LANDFILL GAS UPGRADED INTO RNG USING WAGABOX® TECHNOLOGY

Energy efficiency: 90%
Optimal environmental performance

VS

LANDFILL GAS CONVERTED TO ELECTRICITY



Energy efficiency: 30%
Limited environmental performance

BEST SOLUTION: WAGABOX® TECHNOLOGY

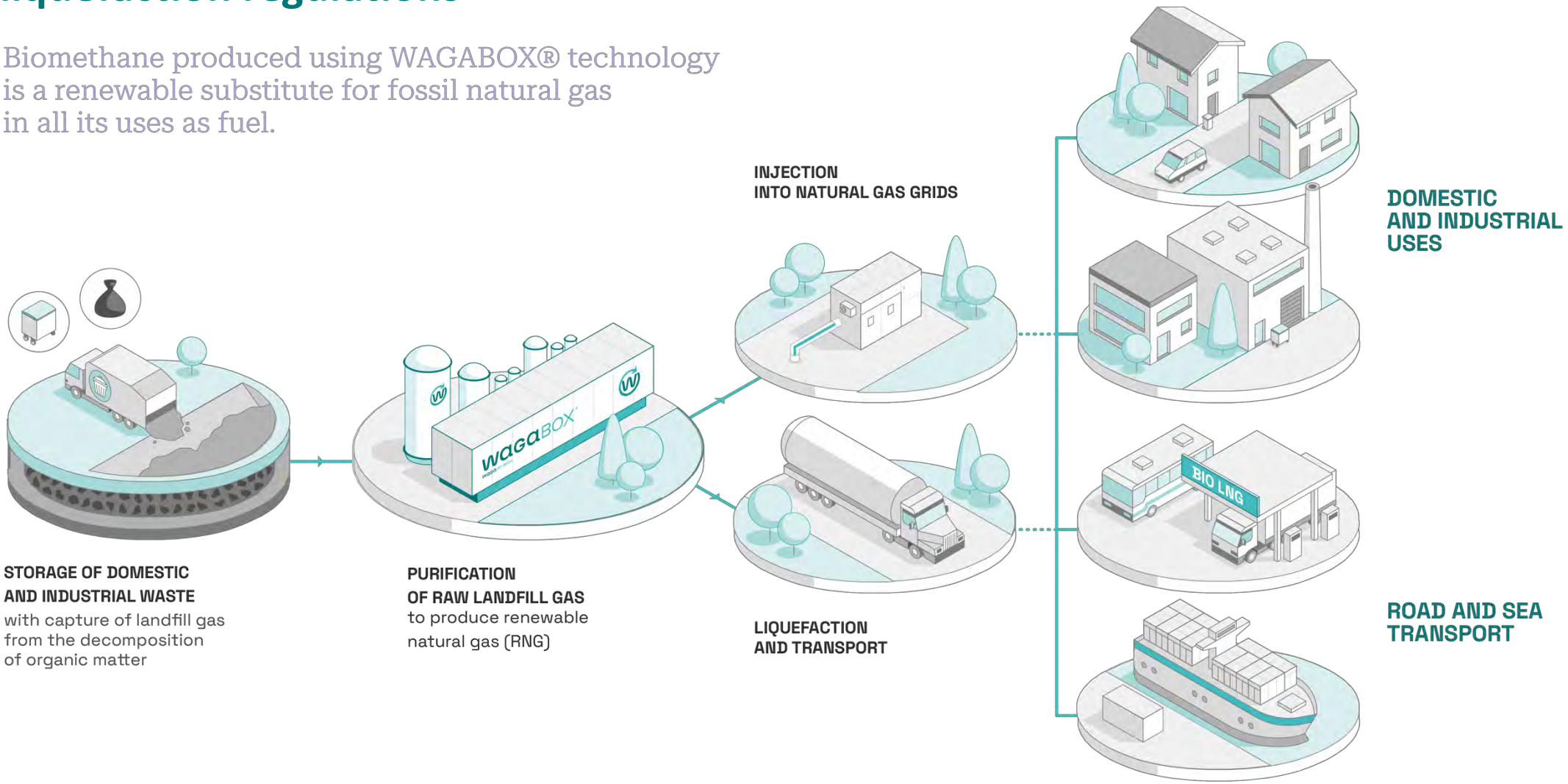
ENERGY DELIVERED **3x**
more renewable energy to market

CO_2 SAVINGS **2x**
more CO_2 savings per unit of energy

ENERGY WASTE **10%**
non-recoverable energy

The WAGABOX® unit produces methane compliant with the natural gas network and liquefaction regulations

Biomethane produced using WAGABOX® technology is a renewable substitute for fossil natural gas in all its uses as fuel.

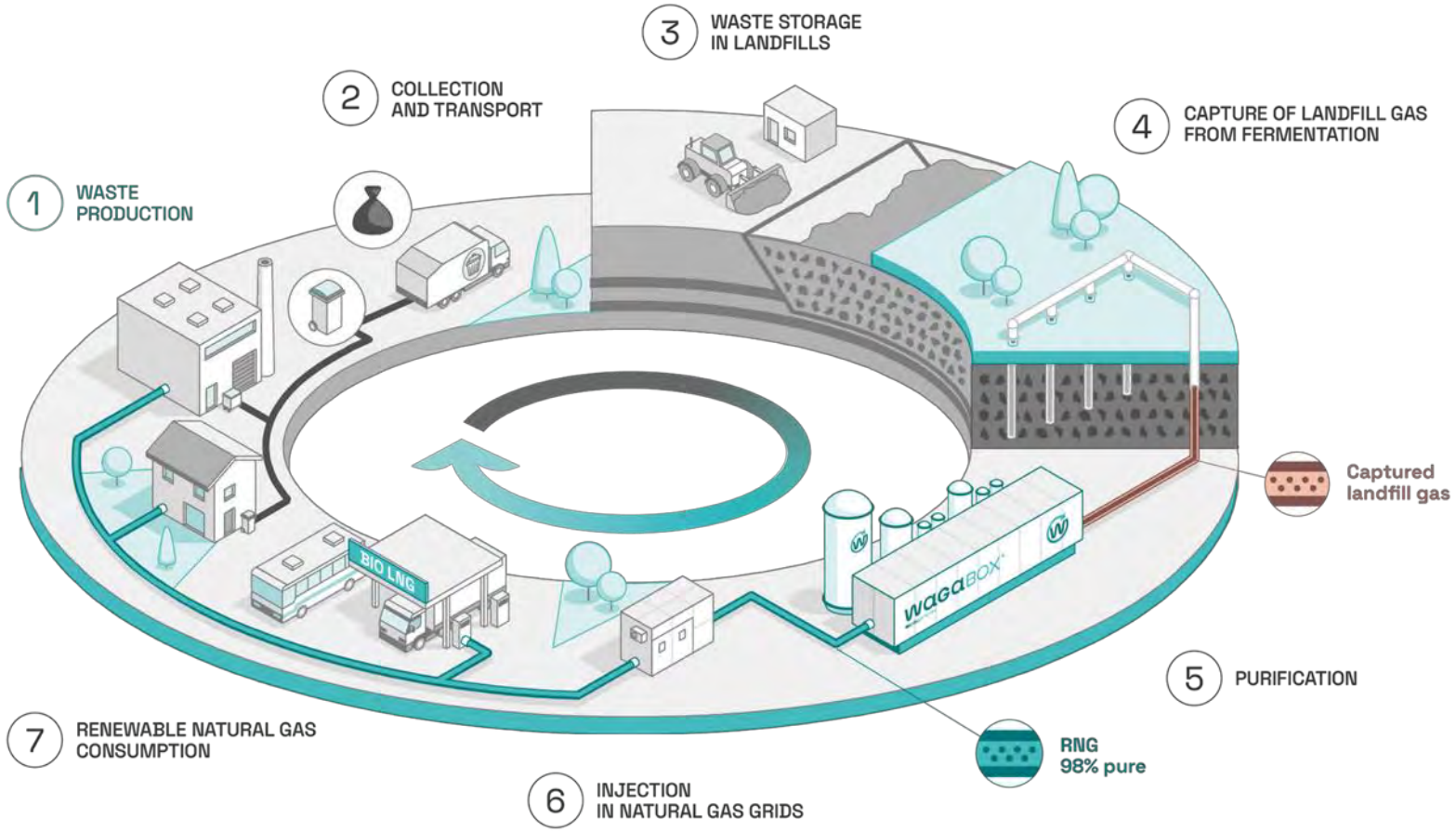


STORAGE OF DOMESTIC AND INDUSTRIAL WASTE
with capture of landfill gas from the decomposition of organic matter

PURIFICATION OF RAW LANDFILL GAS
to produce renewable natural gas (RNG)

WAGABOX® technology:
A circular economy solution advancing the energy transition

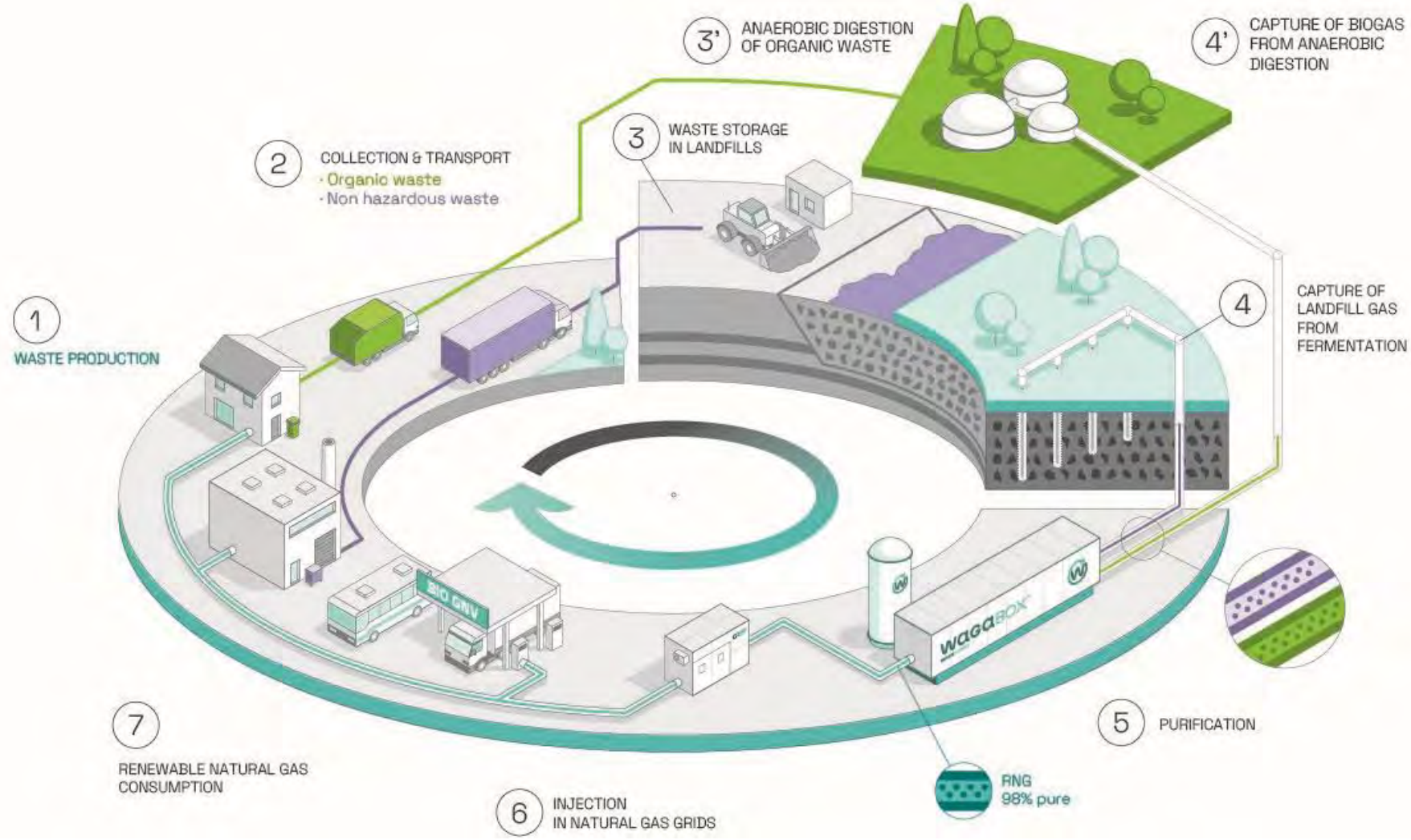
Producing Renewable Natural Gas at landfills, is a sustainable and value-creating virtuous circle



WAGABOX® technology:
A circular economy solution advancing the energy transition

Anaerobic digestion added to the process allows to go further

When blended with landfill gas, it improves the biogas by increasing its methane content and overall energy efficiency



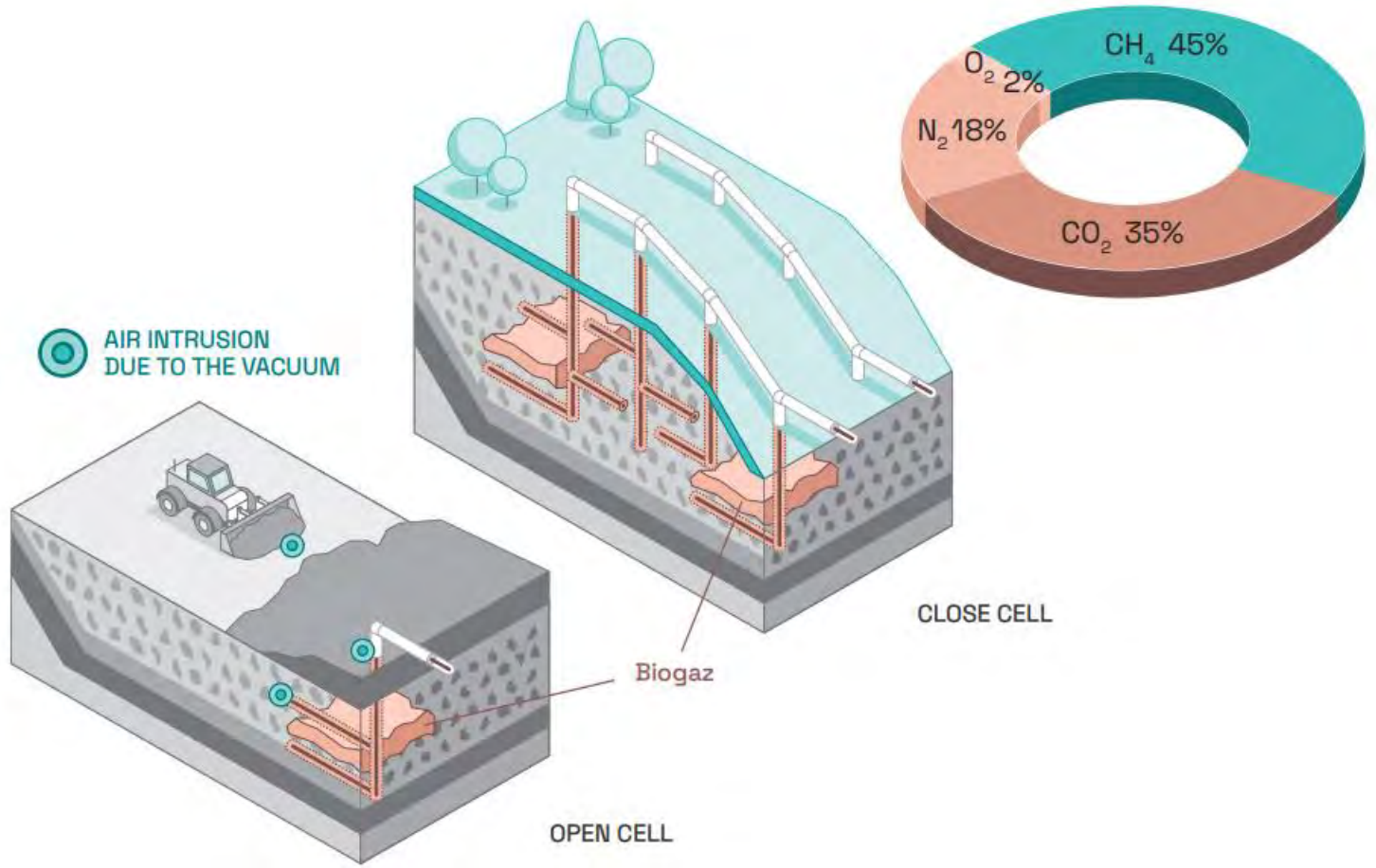
HARTLAND PROJECT FOCUS

Upgrading landfill gas into RNG is a technological challenge

Upgrading landfill gas is a challenge due to the presence of air because of the collection system.

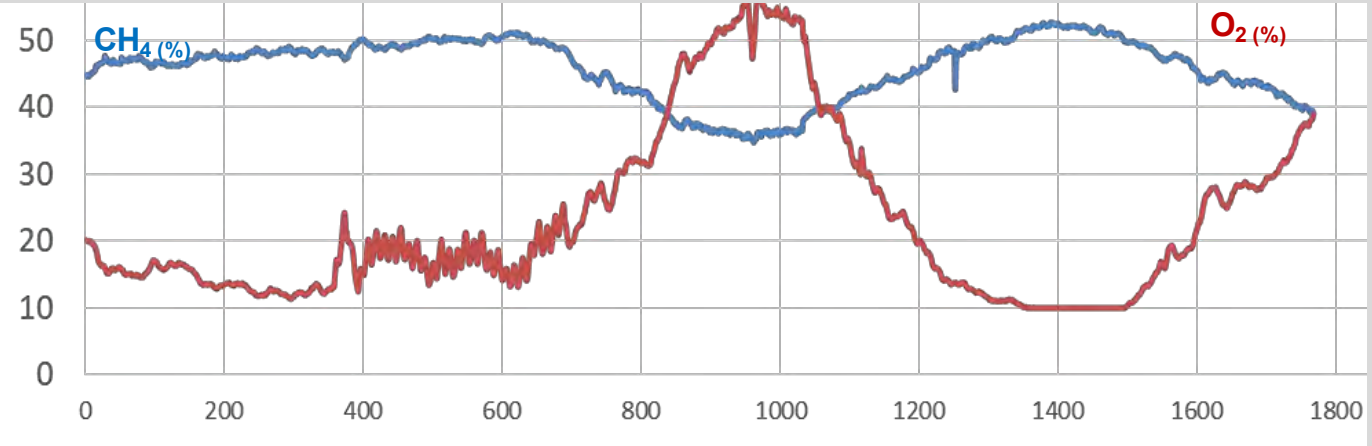
Reducing the air will result in:

- Risk of odor complaints
- Possible surface emissions
- Lost of biogas and energy recover
- Higher investment in maintenance



The WAGABOX® delivers pipeline-quality RNG regardless of air variations in the landfill gas

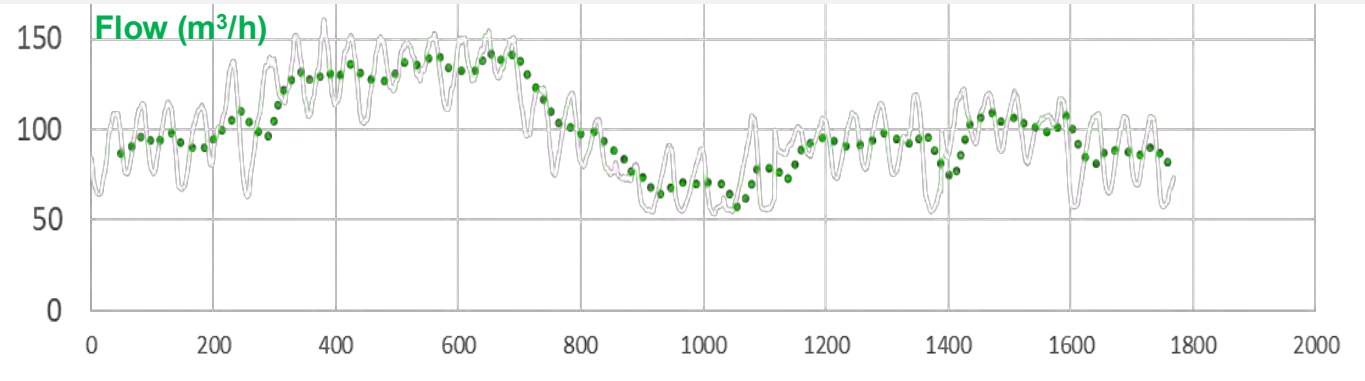
Landfill gas composition variation



Unpredictable landfill gas production over time:

- O_2 variation:
  - Air intakes in the wellfield
  - Odor management constraints
- CH_4 and landfill gas flow variations:
  - Atmospheric condition fluctuations (biologically sensitive)
  - Low producing cells

RNG injected into the natural gas pipeline



The WAGABOX® technology continuously delivers pipeline-quality RNG:

- Only technology able to upgrade LFG containing up to 30% N_2
- Less sensitive to flow and quality variation than other technologies, due to the physical separation of N_2 & O_2 through the process of cryogenic distillation

Source: actual data measured over a 30-hour period on a WAGABOX® site

Hartland Landfill Gas Utilization – The History

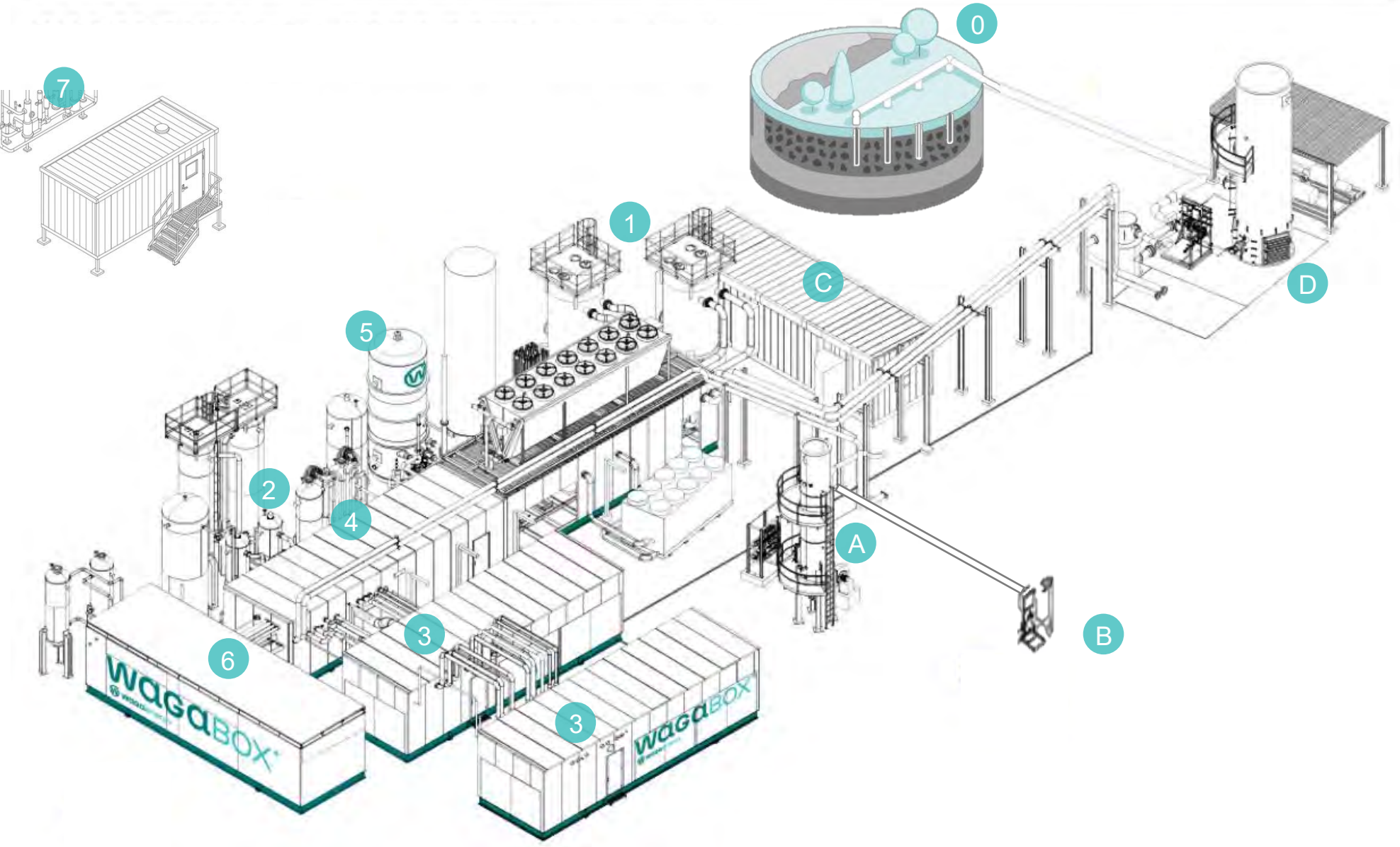
The History :

- **1995** – first gas wells installed at Hartland
- **2004** – Hartland powerplant – Maxim Power
- **2013** – CRD acquires Hartland powerplant
- **2017** – CRD decides to pursue RNG facility instead of powerplant replacement in 2024
- **2021** – CRD negotiates RNG purchase / FEI facilities requirements with FortisBC… subject to a new RNG facility
- **2022** – Hartland RNG facility design, build, operate agreement signed with WAGA consortium
- **2025** – Hartland RNG / Fortis facilities commissioned – Hartland project injects RNG into Fortis pipeline

Key figures

- First RNG facility in the Vancouver Island's,
- RNG Production 360,000 gigajoules (341.214 MMBtu) annually,
- Reducing greenhouse gas emissions by up to 475,000 tons of CO2 over the next 25 years, (105,000 homes),
- Production during more than 95% of the time and up to 765 SCFM of pure RNG,
- Project duration : 2,5 years after the Project Agreement signature.

WAGABOX® 2000 at the Hartland Landfill BC, Canada

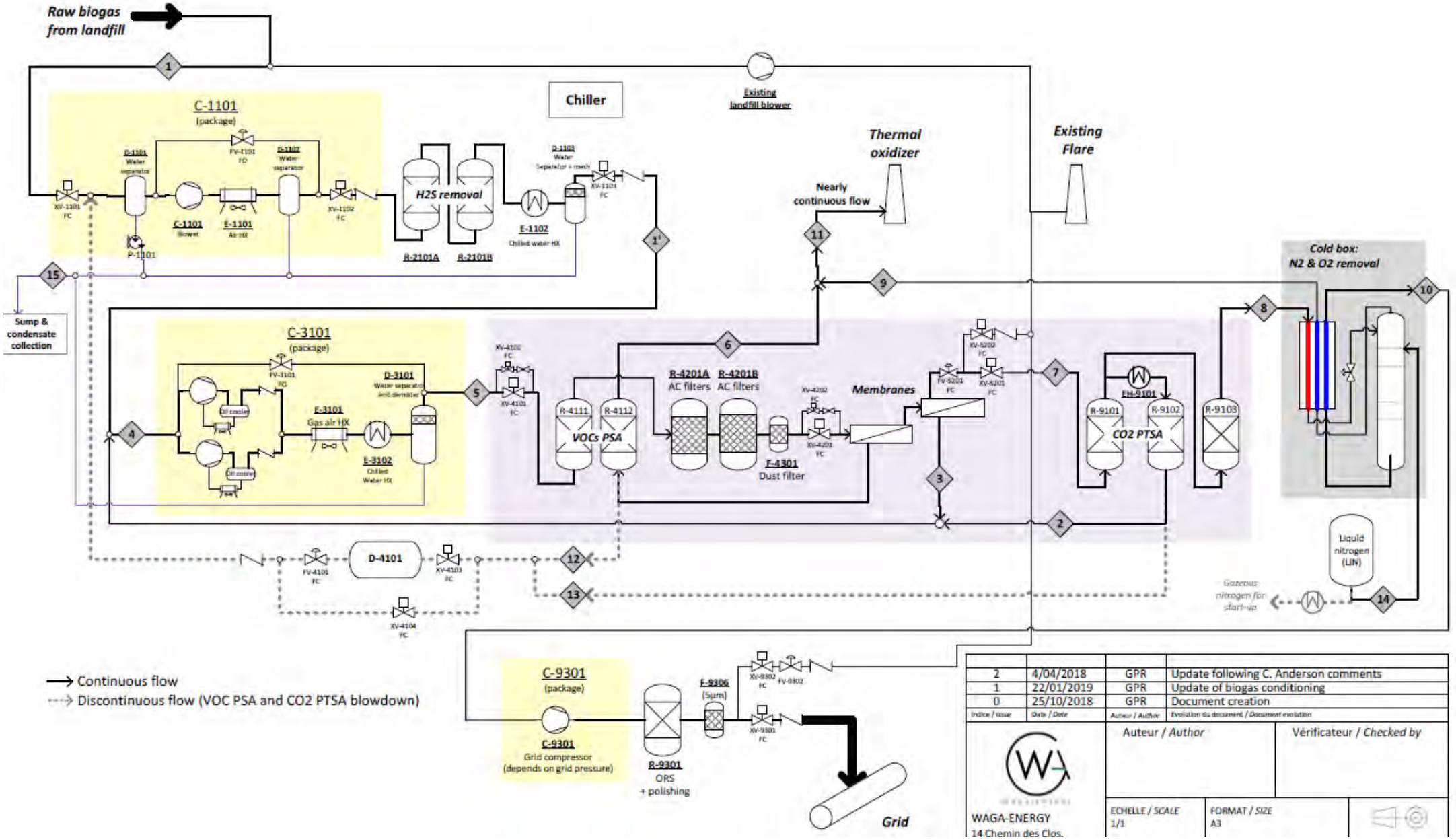


ITEM LIST

0. Landfill
1. H2S removal
2. VOC removal
3. CO2 separation
4. CO2 polishing
5. N2 and O2 removal
6. Sales gas compression
7. RNG injection

A. Thermal oxidizer
B. Back-up flare
C. Electrical room
D. Main flare

WAGABOX® Process Flow Diagram



WAGABOX® 2000SCFM at the Hartland Landfill BC, Canada

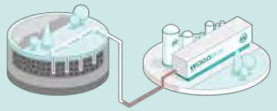
ITEM LIST

0. Landfill
1. H2S removal
2. VOC removal
3. CO2 separation
4. CO2 polishing
5. N2 and O2 removal
6. Sales gas compression
7. RNG injection

A. Thermal oxidizer
B. Back-up flare
C. Electrical room
D. Main flare

Making a difference...together

The Project



Deploy a high-performance solution for the valorization of biogas into RNG, from initial structuring to operation, based on a two-step DBOM model allowing optimized risk and value management.

Main project activities

- Structuring of the business case: comparison of the DBOM model with the sale of raw biogas (LFG)
- Design and engineering: adaptation of landfill biogas to RNG requirements
- Construction and implementation: management of interfaces, risks and project complexity
- Commissioning and performance testing: technical validation, system reliability and regulatory compliance
- Operations and optimization: performance monitoring, resolution of operational issues and continuous improvement

Standardization and key success factors

Clear up-to-date alignment of roles and risk sharing, close collaboration between site, engineering and technology to ensure faster deployment, consistent quality and optimized performance

Operational performance

Faster execution & Unit Installation

Greater **adaptability** of the unit and **synergy** with the landfill

Structured & phased approach to commissioning

Rapid integration of operating returns to **optimize initial performance**

Design choices focused on **reliability, operability, and long-term performance**

Industrial excellence

Better **quality control** & **Cost Reduction**

Focus on real added value: **innovation and improvement**

Une méthodologie de développement de projet qui assure le succès de nos partenaires

wagaBOX® MÉTHODOLOGIE DE DÉVELOPPEMENT DE PROJETS

Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
					
Sélection des sites	**Lettre d'intention**	**Diligence raisonnable**	**Développement des droits sur le gaz**	**Exécution du projet**	**Opérations commerciales**
				18 – 24 mois	20+ années
Analyse initiale du site d'enfouissement et offre indicative.	Alignement sur les objectifs du projet et les termes commerciaux clés.	Examen détaillé des prévisions du LFG, de la disposition du site et de la solution d'interconnexion.	Des droits à long terme sur le gaz d'enfouissement et des accords de location de site ont été développés.	Permis et d'ingénierie, d'approvisionnement, de construction et de vente de GNR.	Le GNR est injecté dans le réseau et le projet génèrent maintenant des revenus

Tailored projects driven by experts

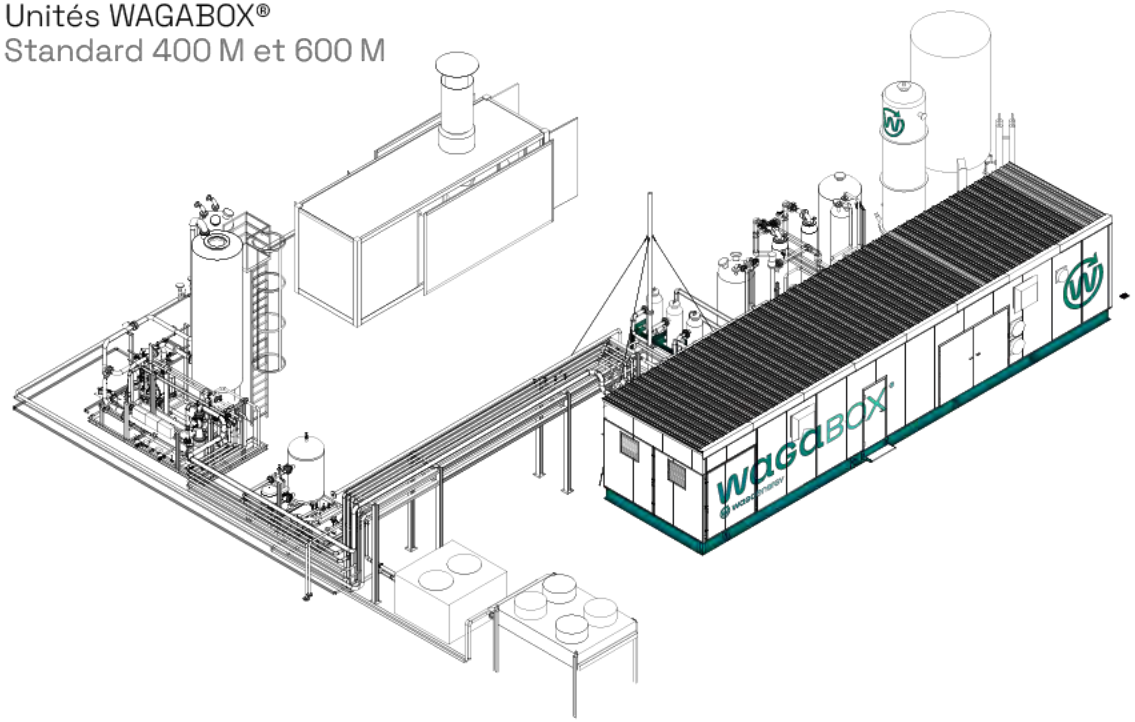
GAS FORECAST & RECOMMENDATION	PROJECT DEVELOPMENT	PROJECT FINANCING	CONSTRUCTION & COMMISSIONING	OPERATION & MAINTENANCE	RNG SALES

What makes the difference for waste management companies

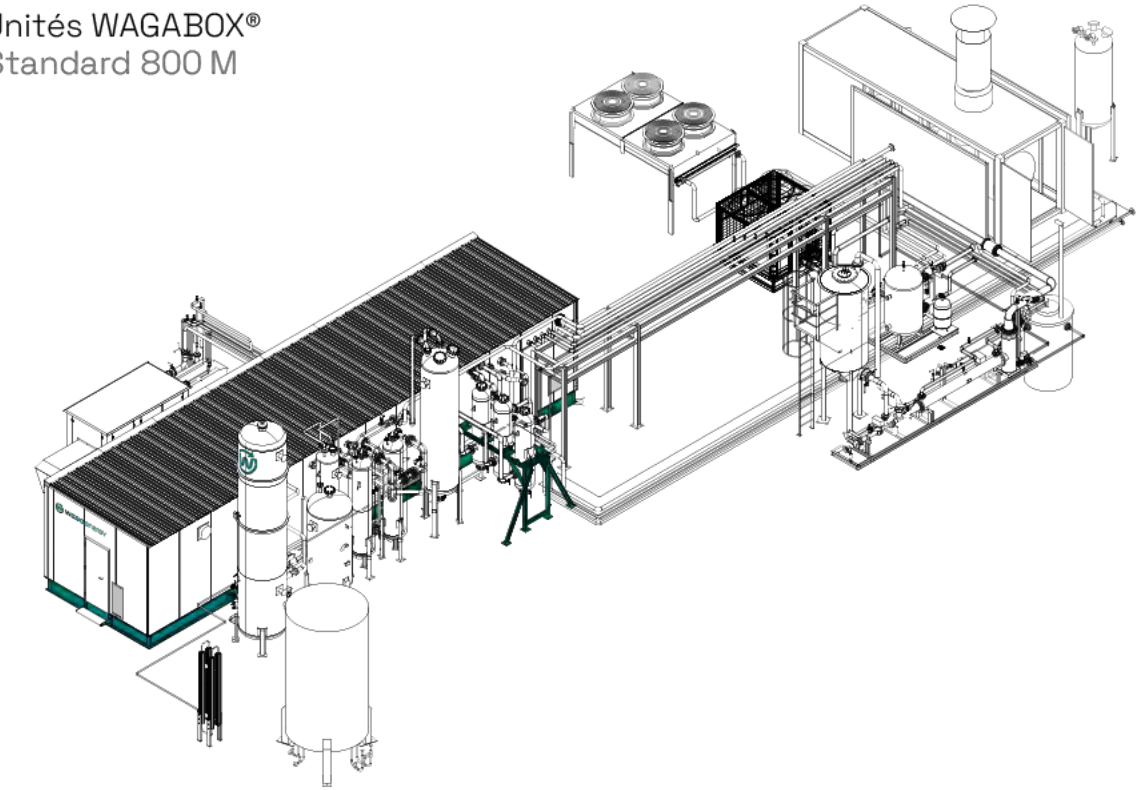
1. Easy deployment across all types of landfills
2. Optimization of energy & environmental performance
3. Guaranteed long term incomes
4. Circular solution for decarbonization & local energy independence
5. Cost-efficient turnkey solution generating maximum royalties
6. Guaranteed service continuity & 24/7 assistance

Standardization of models

Unités WAGABOX®
Standard 400 M et 600 M

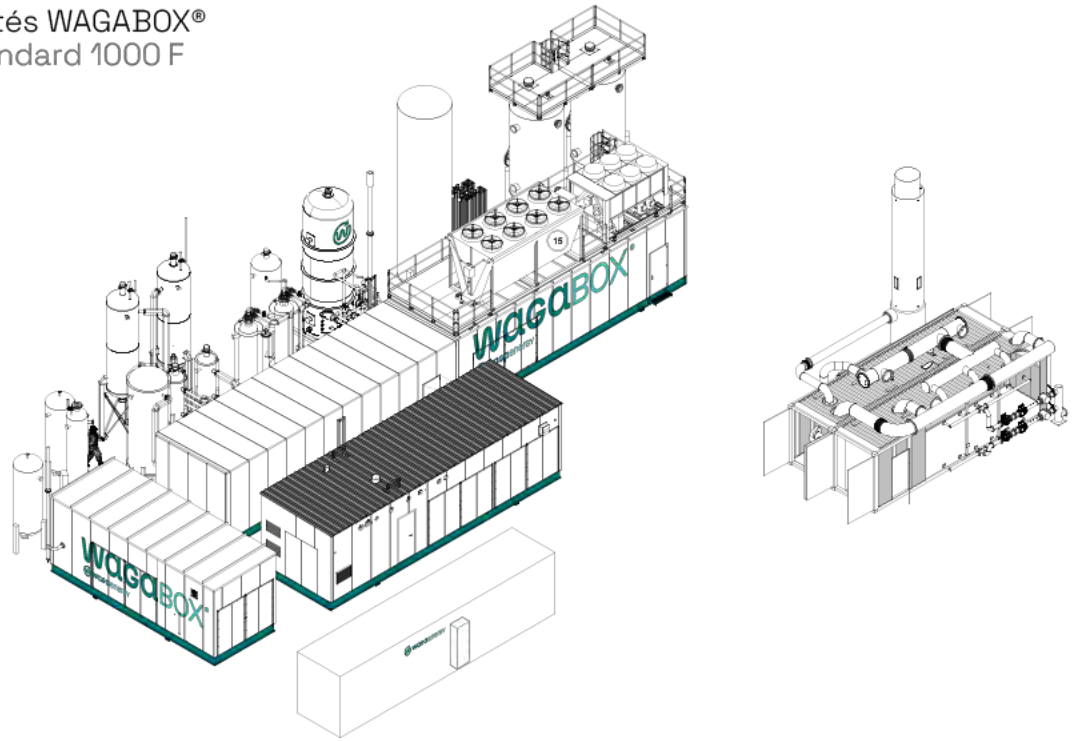


Unités WAGABOX®
Standard 800 M

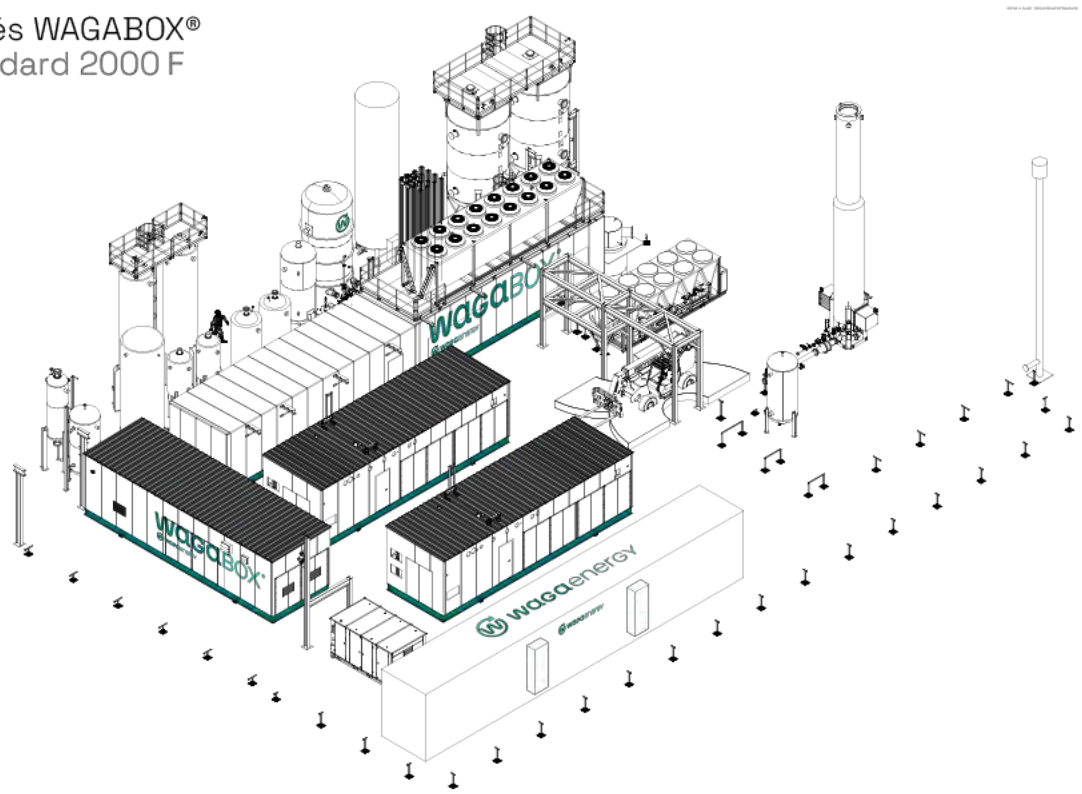


Standardization of models

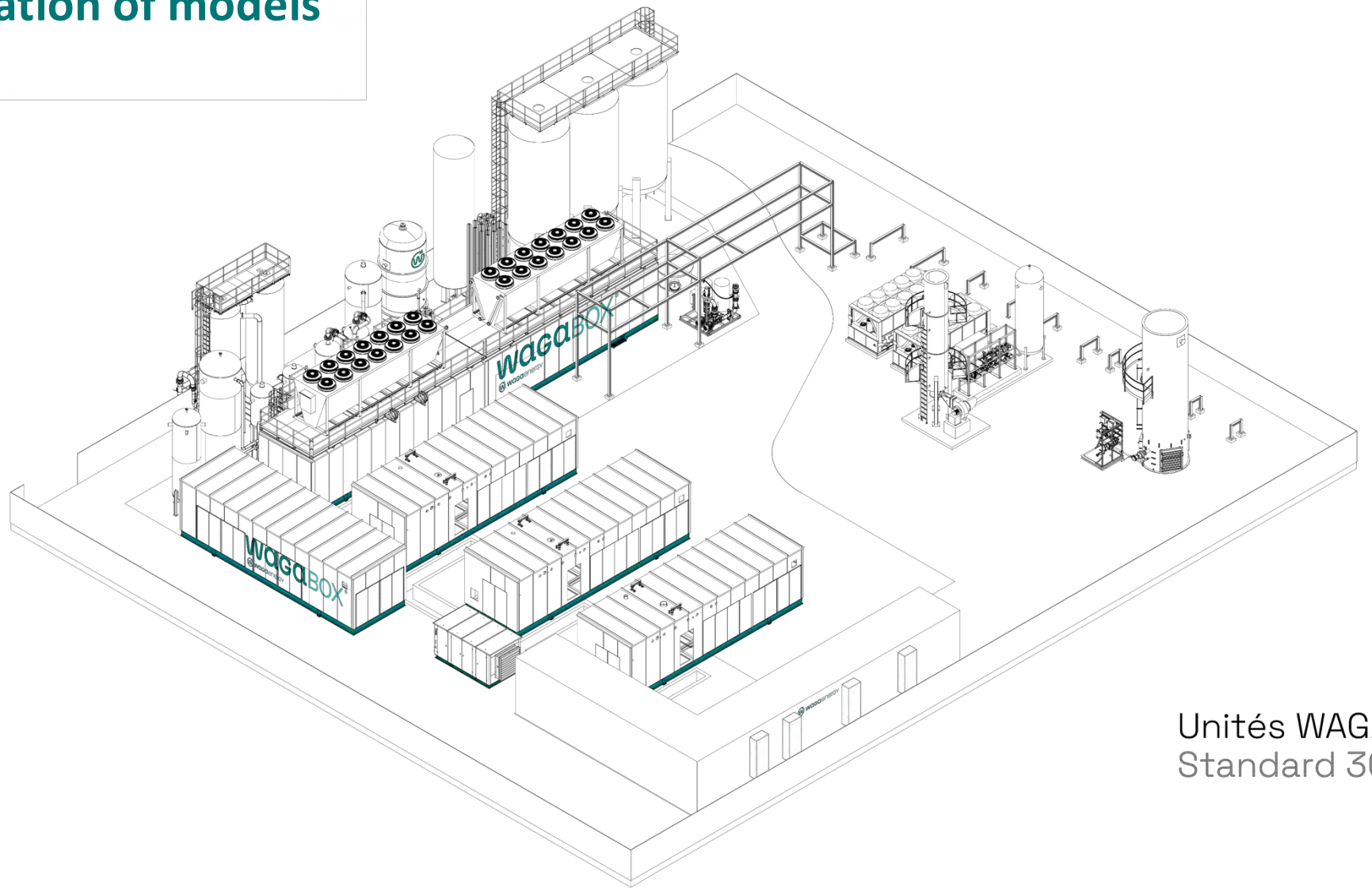
Unités WAGABOX®
Standard 1000 F



Unités WAGABOX®
Standard 2000 F



Standardization of models



Unités WAGABOX®
Standard 3000 F

Carbon Intensity / Carbon credit

ECCC Certified on WBC1 similar unit 11,63 g CO_2e / MJ (vs 78 for NG)

Environment and

Strong system for CI certification (instrumentation & maintenance)

-Capture of a high-impact climate gas
-Avoids fugitive emissions from landfills
-Direct reduction of global warming

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