Kanadevia INOVA

KOMPOGAS SLO

Meeting Organics Diversion Goals through High Solids AD since 2018

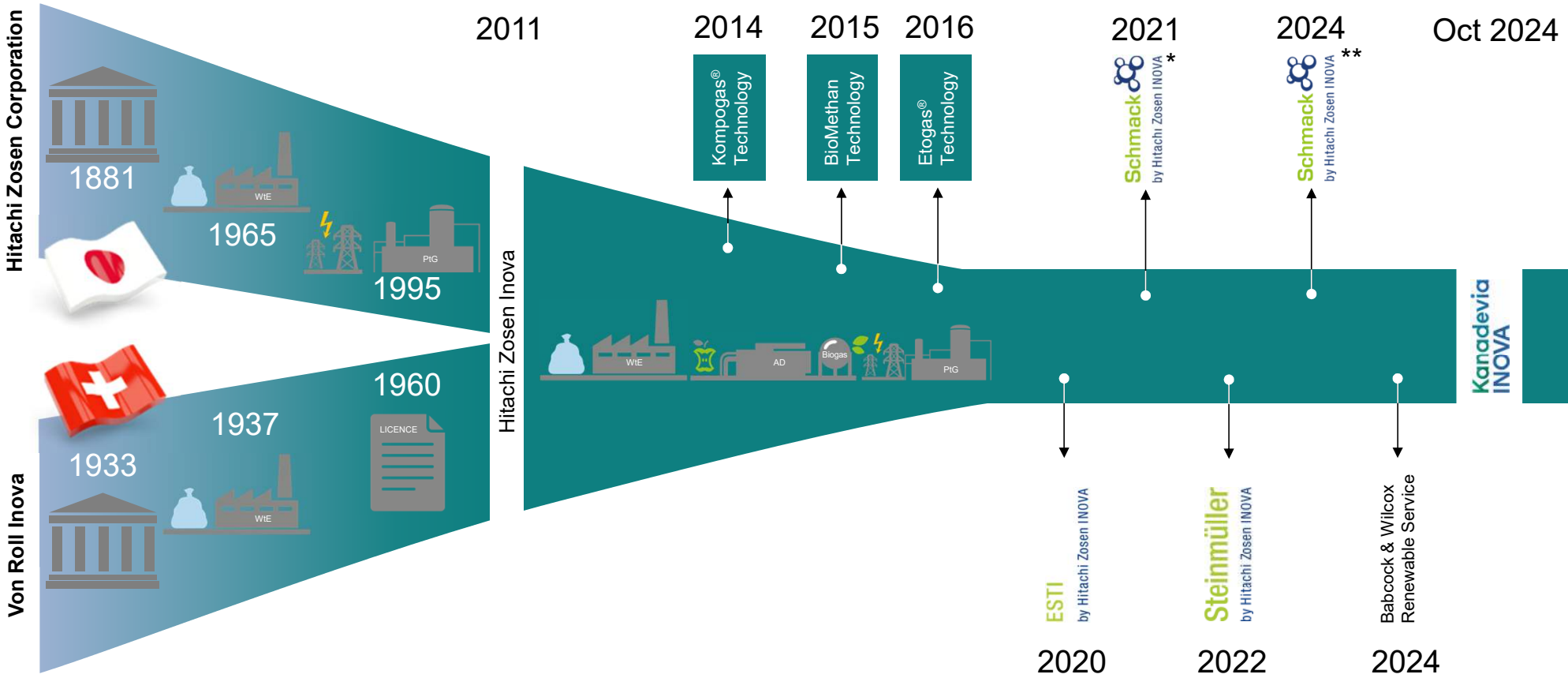
Presented to: Los Angeles County Public Works ATAS

Date : July 17thth, 2025

About Kanadevia Corporation

- Kanadevia Inova is part of the Kanadevia Corporation, based in Osaka/Tokyo
- Formerly known as Hitachi Zosen Inova
- Solution Partner for realizing Sustainable and Safe & Secure Society
- Provide Technology for People, the Earth, and the Future

A joint history since 1960 / Integration since 2011



* formerly Schmack Biogas Service GmbH
** formerly Schmack Biogas Srl

We contribute to a future free of wasted waste

Kanadevia INOVA

Why we exist

Our Mission

We create value for communities, contributing to a future free of wasted waste.

What we want to be

Our Vision

We are a global, vertically integrated green utility, an innovation leader in the waste infrastructure space, driving resource circularity, decarbonization and supply security, for present and future generations.

Leadership Principles

How we get there

- Inspire Others
- Be Accountable
- Balanced Judgement
- Communicate Clearly
- Trust and Empower Your Teams
- Show Appreciation

Kanadevia Inova North America is part of the Swiss-Japanese Kanadevia Inova Group:

- Global clean-tech leader for over 100 years
- Integrated resource recovery and circular economy waste management solutions
- NAM headquarters in Knoxville,TN
- Engineering, procurement, and construction (EPC) provider
- Complete turnkey plants for capturing energy and greenhouse gases from waste
- Kanadevia Inova's innovative solutions have been part of more than 1600 projects worldwide

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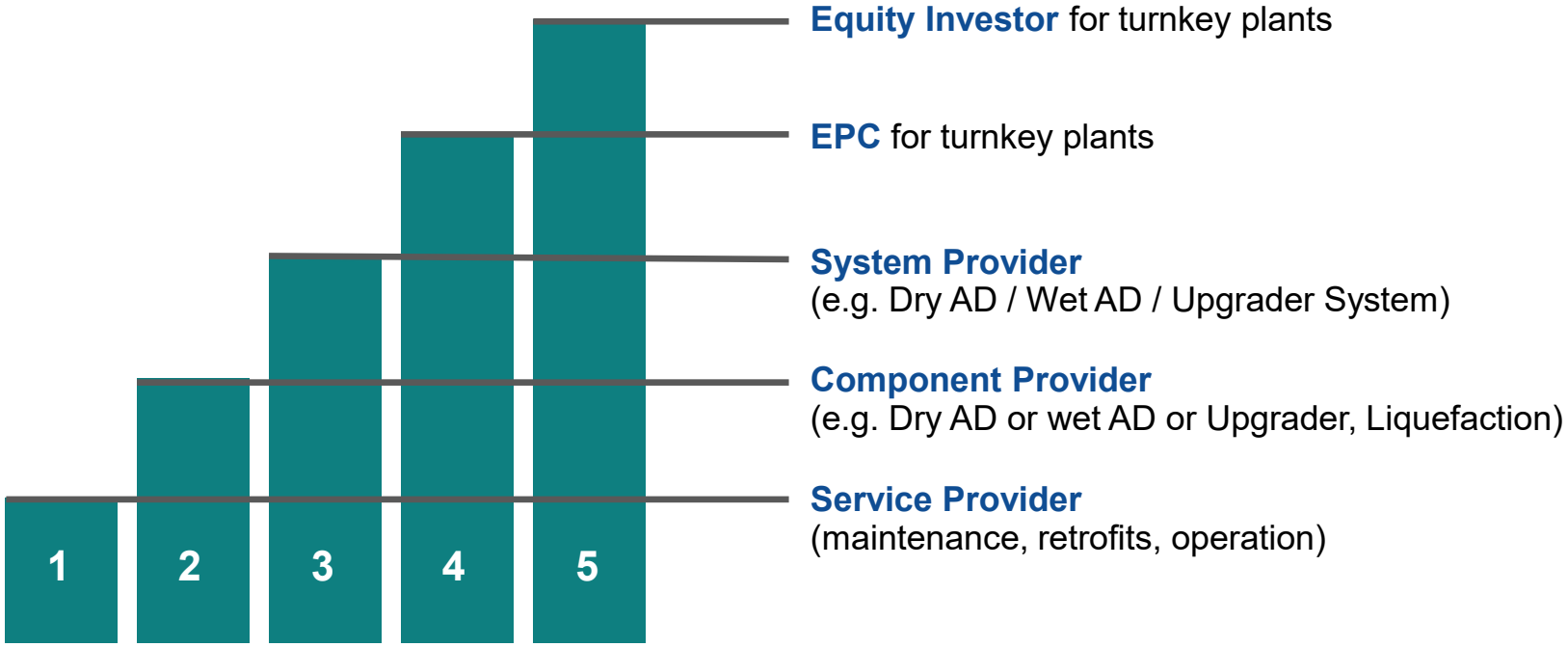
Flexibility based on Market Demand and Partners



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KOMPOGAS®
San Luis Obsipo, CA

High Solids Anaerobic Digestion of Source Separated Organics

What were the drivers ?

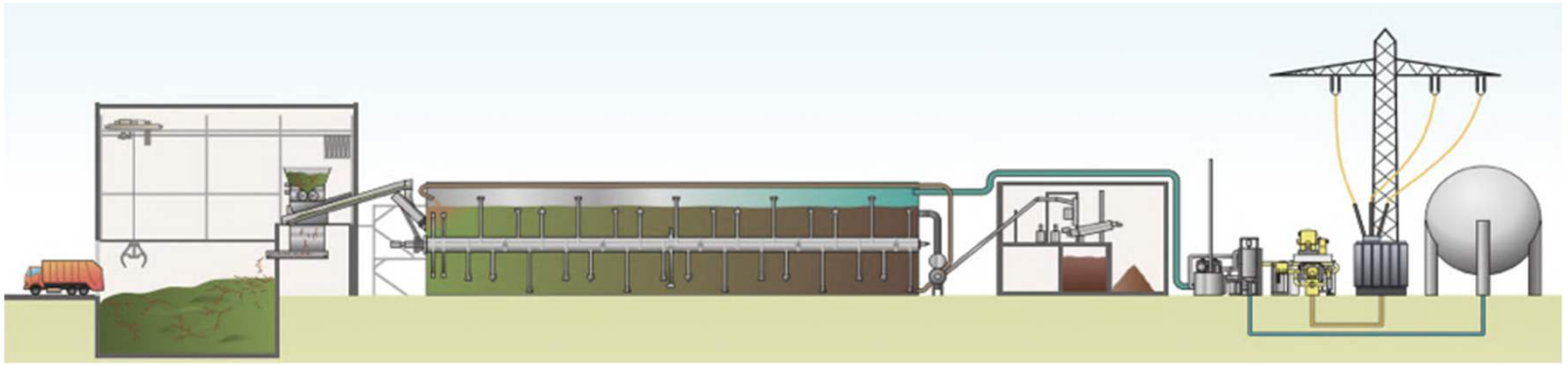
Policy

- State Mandate to divert 75 % of Organics from Landfill by 2030
- Short Lived Climate Pollutant Reduction Legislation SB 1383
- Municipal & Corporate decarbonization strategies

Organics Problem

- County had existing residential green bin program for yard waste and composting facility
- Increased food waste in green bin causing issues (odors, vermin, vectors)
- Compost facility shut down
- Organics hauled out of county adding significant cost and carbon footprint
- County conducted extensive technology vetting and identified KOMPOGAS as suitable

KOMPOGAS® – Leading High Solids AD Technology



Proprietary Technology from KVI	Feeding System	Digester	Dewatering	Gas Upgrading	Integrated Solution Maximized Efficiency Reliable Execution
Engineered by KVI	Electrical and Control Technology				
	Balance of Plant				
	Energy Use				
Managed by KVI	Site and Building Services Engineering				

KOMPOGAS® - **Continuous Plug Flow Technology**

- Designed for a variety of input materials

Source Separated Organics (Household or Commercial waste)

Catering and kitchen waste

Post Consumer Organic fraction of unsorted MSW

Green & yard waste

Pre-Consumer (Expired food from supermarkets)

Plug Flow Technology - Designed to handle impurities

- Impurities: sand, gravel, stones, plastic bags, plastic foils, cans, ceramics, bottles, flower pots, glass, batteries, video tapes, hard plastics, CDs, electric devices, wooden boxes, metal pieces, garden tools, nails, cutlery, dead animals, lawn mowers, waste bins, etc.

The KOMPOGAS® Plug Flow Advantage

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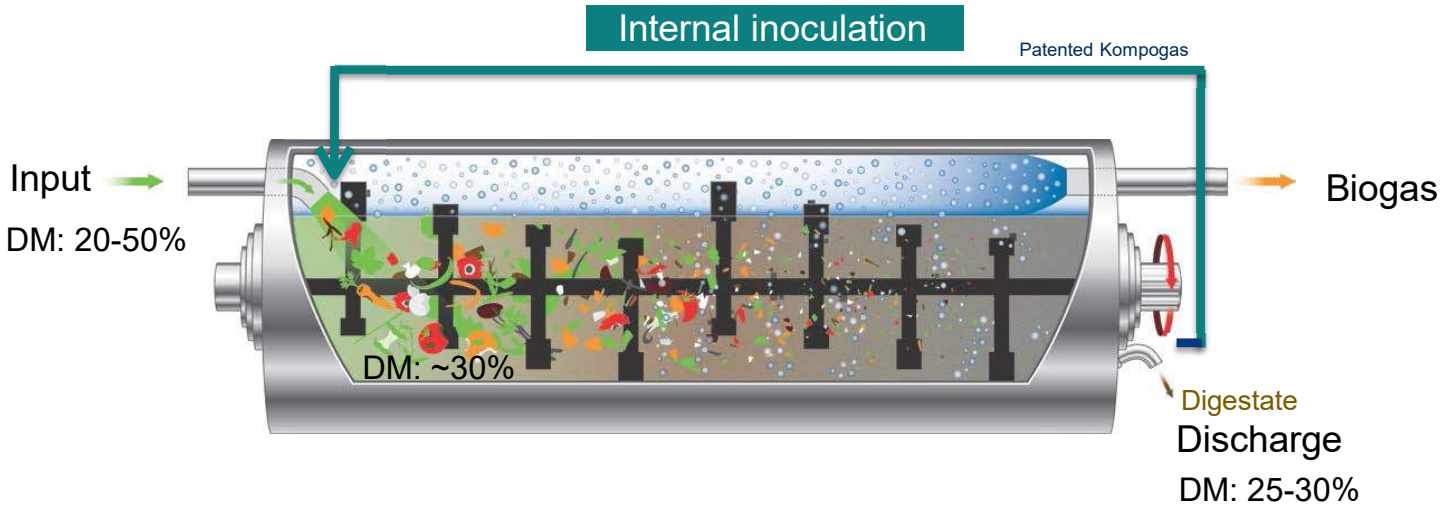

Horizontal plug flow	Thermophile temperature 131° F	Longitudinal agitator	Internal inoculation
- Optimal digestion -	- Biological activity -	- Energy saving & tight -	-Stable & quick process -

- Retention time 14 days @ 131° F → sanitized fertilizer products, no additional steps required
- Inoculation allows fastest process start, defined & specialized process conditions allow highest conversion efficiency → highest biogas production and quality

KOMPOGAS® – Full Stream Digestion

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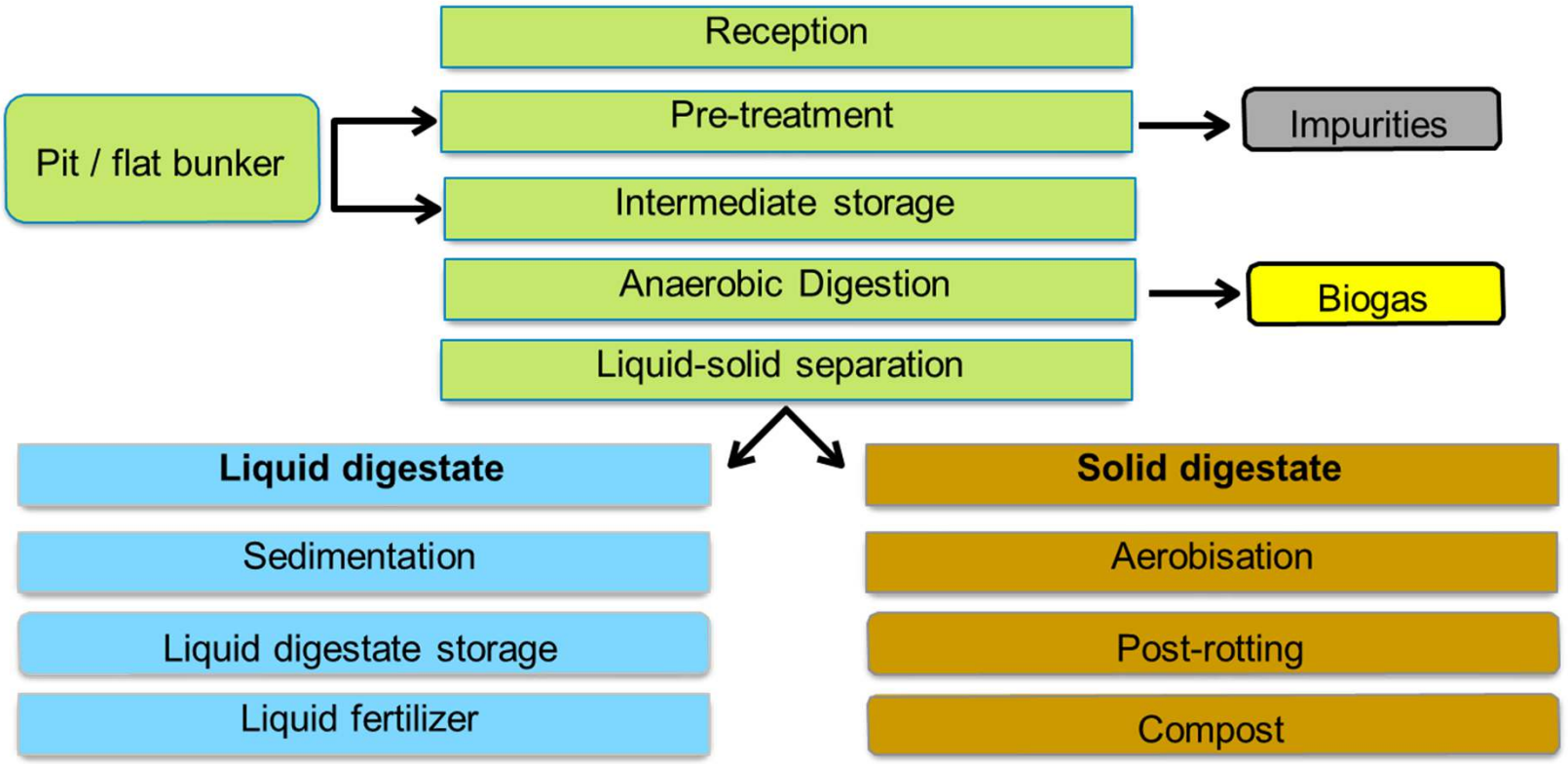

Project Specifics

- SLO County had 27,000 tons/year of yard waste composted/disposed out of County and wanted to include additional 6,000 to 8,000 tons/year food waste in the future
- Waste Connections (WC) provides disposal services to majority of County
- WC owned a site with office, workshops and truck parking, ideal location for Anaerobic Digestion facility
- Waste hauler not interested in 'technology projects' – open for third party to finance-design-build-own-operate an AD facility
- Participating Municipalities to extend franchise waste disposal agreement with WC to 20 years to justify KVI - AD investment
- Project received grants from CEC, CalRecycle as well as qualified for ITC funding

Major Milestones

- Begin Design June 2015 (Permit Application)
- Begin Construction December 2016
- Start of Commercial Operation September 2018
- Initial Solid Waste Permit for 36,500 TPY
- Addition of FOG (Fats, Oil Grease) receiving station Feb 2020
- June 2025 - Increase of Solid Waste Permit to 42,000 TPY

Statistics

- Operated 24/7
- Staffed by six full time operators during regular business hours 5 days/8 hours per day
- Operational uptime 97 %
- As of June 2025, plant diverted over 220,000 tons of organics from landfill
- Producing 6.3 Million kWh of electricity per year
- Enough electricity to power 600 homes
- Reducing Green House Gas Emissions by 5,300 Metric Tons of CO_2 equivalent per year
- Equivalent of taking 1,000 cars of the road
- Produced over 50,000 tons of OMRI Certified Compost and nine Million Gallons of liquid fertilizer

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Challenges

Permitting:

- Site had no Solid Waste Permit
- Conditional Use Permit approved by CEQA and planning commission based on MND (Mitigated Negative Declaration) tiered off statewide programmatic EIR.
- Building Permits took longer than normal to educate local staff and California Code Check on this type of facility.
- APCD: Authority to construct permit by local APCD

Perception:

- Project encountered some opposition, engagement and education of residents
- CalFire visited plants in Europe to better understand safety aspect and fire suppression systems, now fully supports the technology

Residue Management:

- Producing marketable end-product from solid digestate (space & time requirements)
- Meeting compost certification labels due to physical and chemical contamination (Compostable Plastics, Heavy Metals, PFAS)
- Managing liquid digestate

Conclusion

- Enables County to meet SB 1383 compliance for both diversion and procurement requirements
- Proven technology guaranteeing decades long management of organic waste
- Increased of life of landfill
- Less transportation cost & equipment wear
- Net energy producer compared to composting
- Essential part of local community with continuous public engagement (tours, compost give away, etc.)

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Thank you!

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