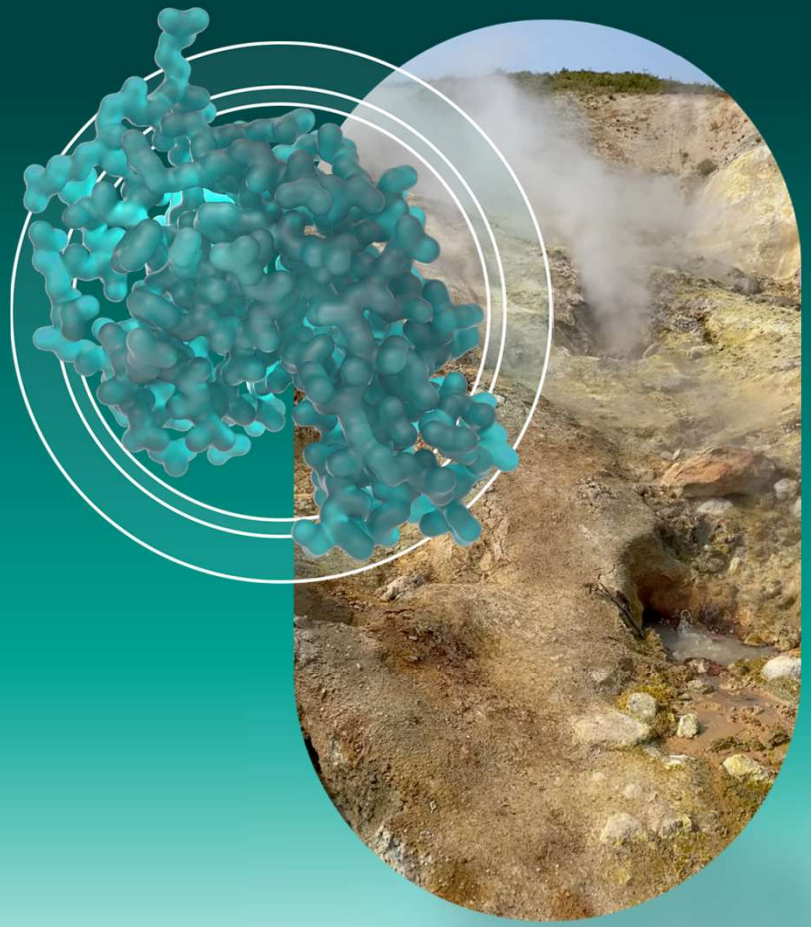
bitBiome

Unlock the Full Potential of Biology



Yuko Amizaki

June 18, 2025

Global plastic waste problem is becoming increasingly significant

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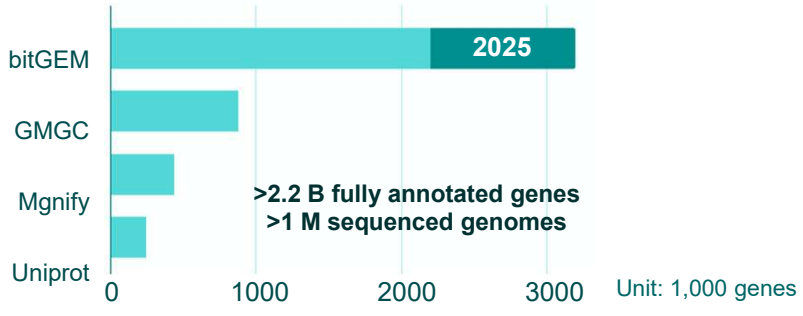
bitBiome has built the world's largest microbial gene database to harness the power of microbial enzymes

bit-MAP®
Single cell sequencing

Proprietary Flow-assisted massively parallelized process

112X more non-redundant genes from six different environmental samples

bit-GEM
Microbial gene database



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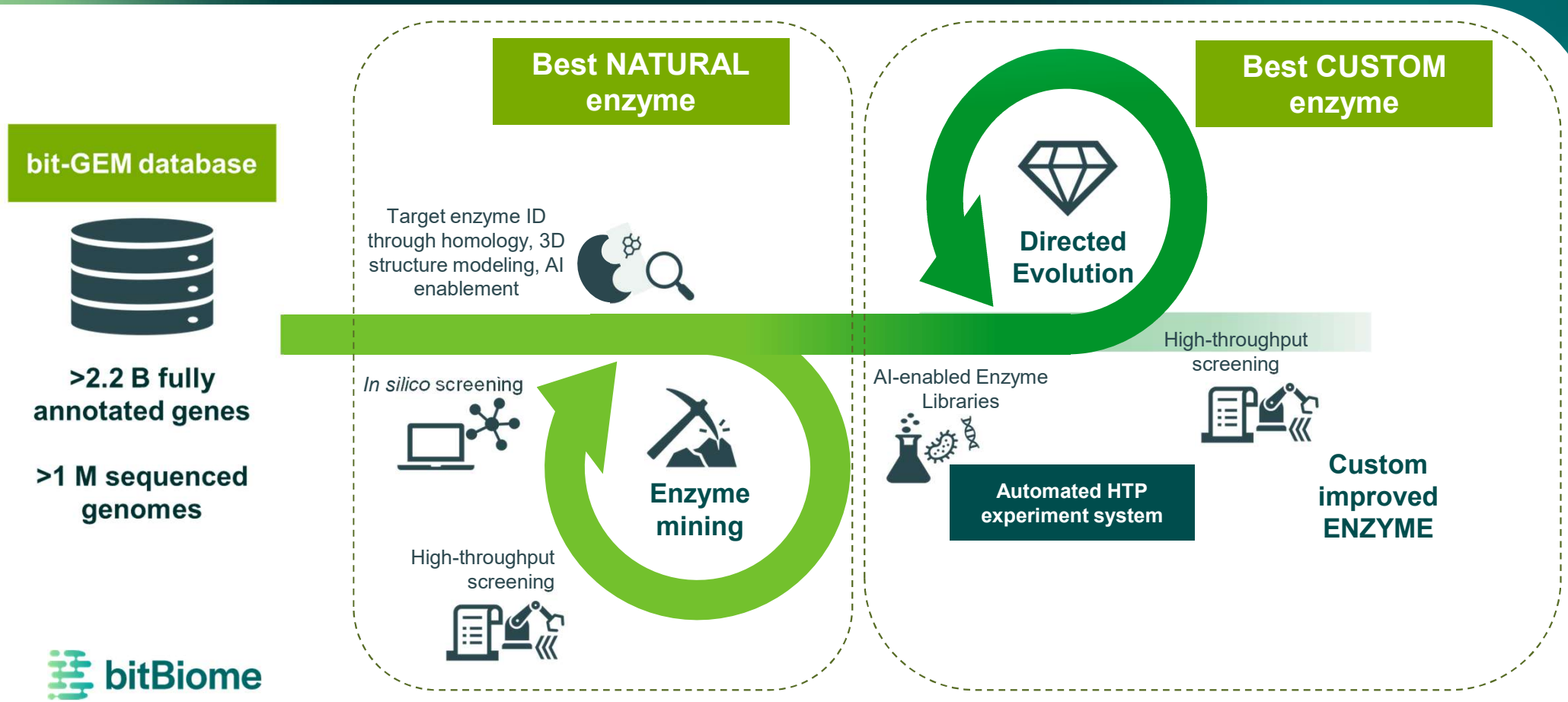
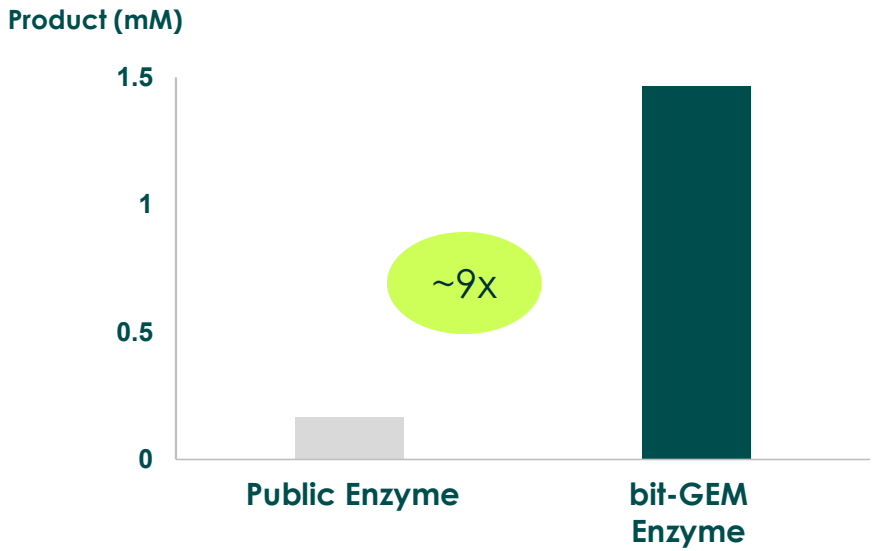
bit-QED ENZYME DEVELOPMENT: Enabling degradation of diverse, hard-to-break plastics



bitBiome's PET degradation started with identifying a natural enzyme with higher productivity than current best-in-class from bit-GEM database

9-fold higher activity than publicly available enzyme



Best natural enzyme found using AI-based technology

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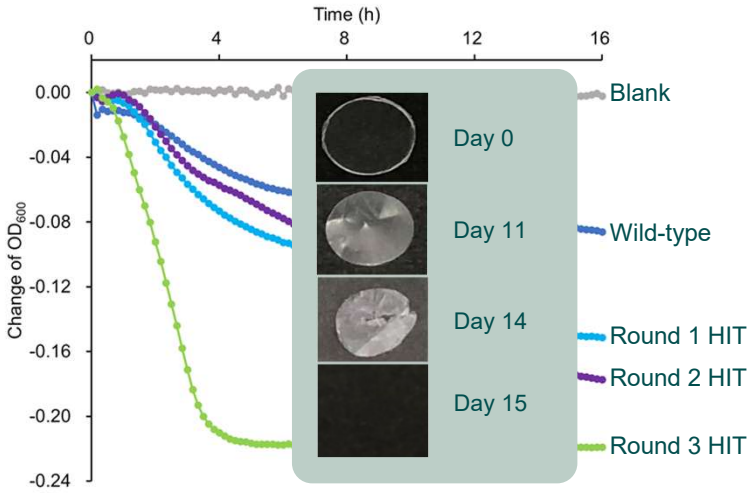
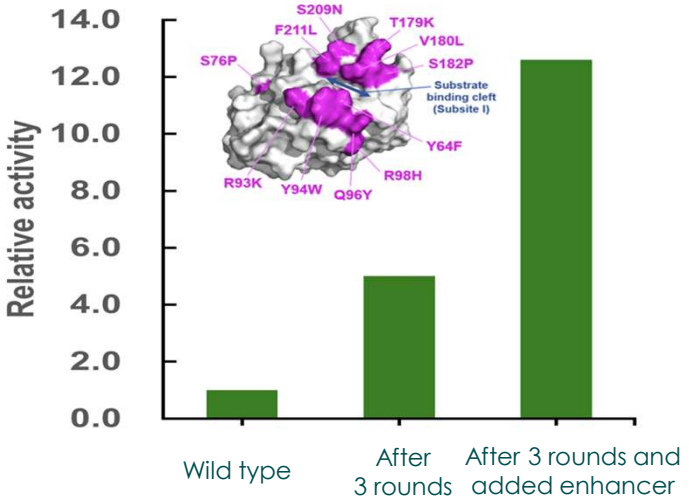
Success in enzyme engineering and & process improvement in PET degradation

DIFFERENTIATED IMPLEMENTATION: 3 rounds of engineering in 8 weeks for 13X process gain



3 rounds (8 weeks) of enzyme engineering achieved complete degradation of a PET film



13-fold process improvement towards degradation of PET polymers

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Partnered with companies along the value chain for commercialization


Next target:
polyurethane

129,121wild-type polyurethane degrading enzyme homologs found in our DNA database

of polyurethane degrading enzymes

Database	# homologs
bit-GEM	129121
UniProt	97229

Frequency distribution

Similarity (%)	# homologs (bit-GEM)
90 < x <= 100	25468
80 < x <= 90	30313
70 < x <= 80	39082
60 < x <= 70	23020
50 < x <= 60	8964
0 < x <= 50	2274

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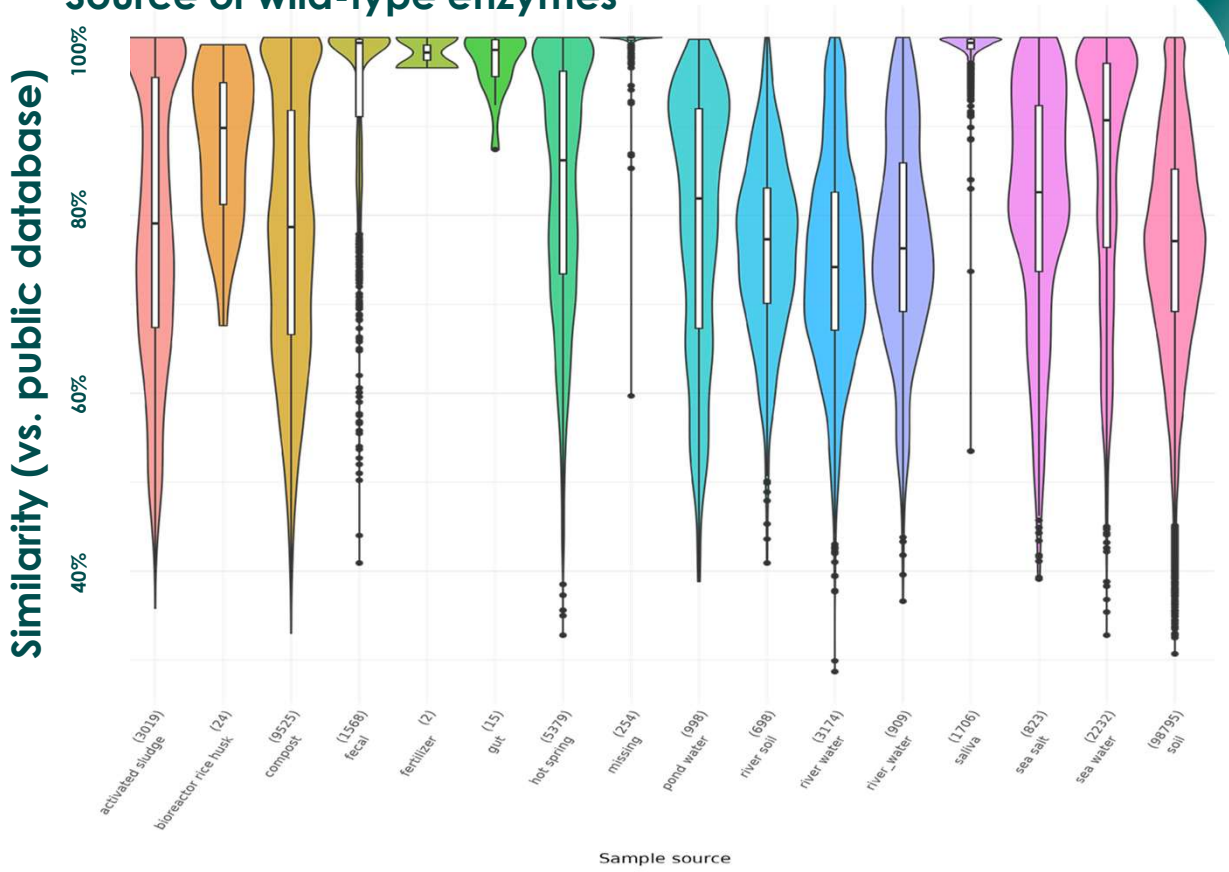
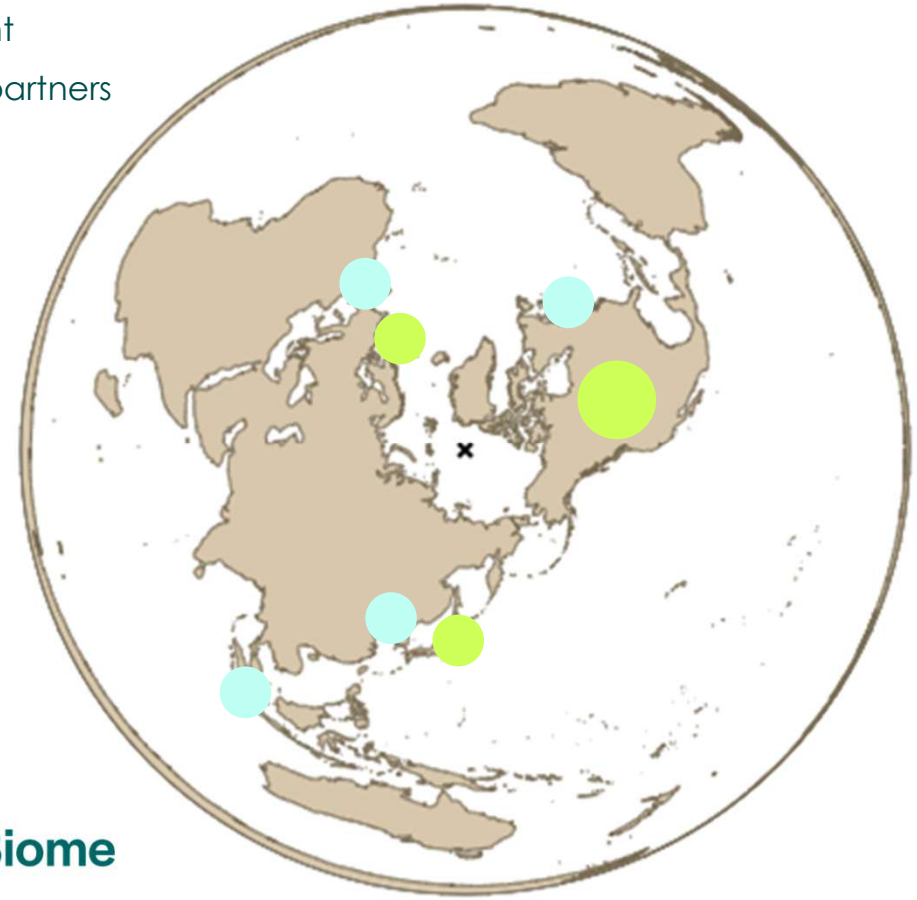
Source of wild-type enzymes



About Us: Global business launched from Tokyo

Footprint
Client/partners



- **Founded in November 2018. Raised >US$20 M including grants.** Headquartered in Japan, with presence in the US and the UK
- **State-of-the-art facilities in Tokyo. Significant cost advantage with operations in Japan**
- **Unique proprietary platform addressing all forms of bio-manufacturing allowing flexibility towards the most efficient design**

bitBiome

Team with deep experiences in science and business

CEO Yuji Suzuki

- **Ex-Mckinsey**
- **>15 years in** strategy and international business **incl. global offering IPO**
- MPhil at Univ. of Cambridge

CSO Masa Hosokawa

- **Associate Professor of Waseda Univ.**
- >15 years in microbiome research
- **Inventor of bit-MAP®**
- 20 patents

CTO So Tsuda

- **Ex-Associate Professor of Osaka Univ.**
- >15 years in biology and engineering
- **Inventor of bit-QED**
- Ph.D at Kobe Univ.

CBO Dipnath Baidyaroy

- **Ex-Dow Chemical, Codexis and Inscripta**
- **>20 years in biotech**
- Ph.D in microbiology

Innovation Lead Richard Fox

- **Ex- CSO of inscripta**
- >20 years in **data science** and **ML**
- **130 patents**
- Ph.D at UC Berkeley

Director James Winkler

- **Ex-Shell and Lanzatech**
- ~10 years in **scale-up**
- Ph.D in Chemical engineering at Texas A&M

Advisor John Nicols

- **Ex-Codexis CEO for 10 years**
- Led Codexis' **sales to exceed $100 million, commercializing >10 products**

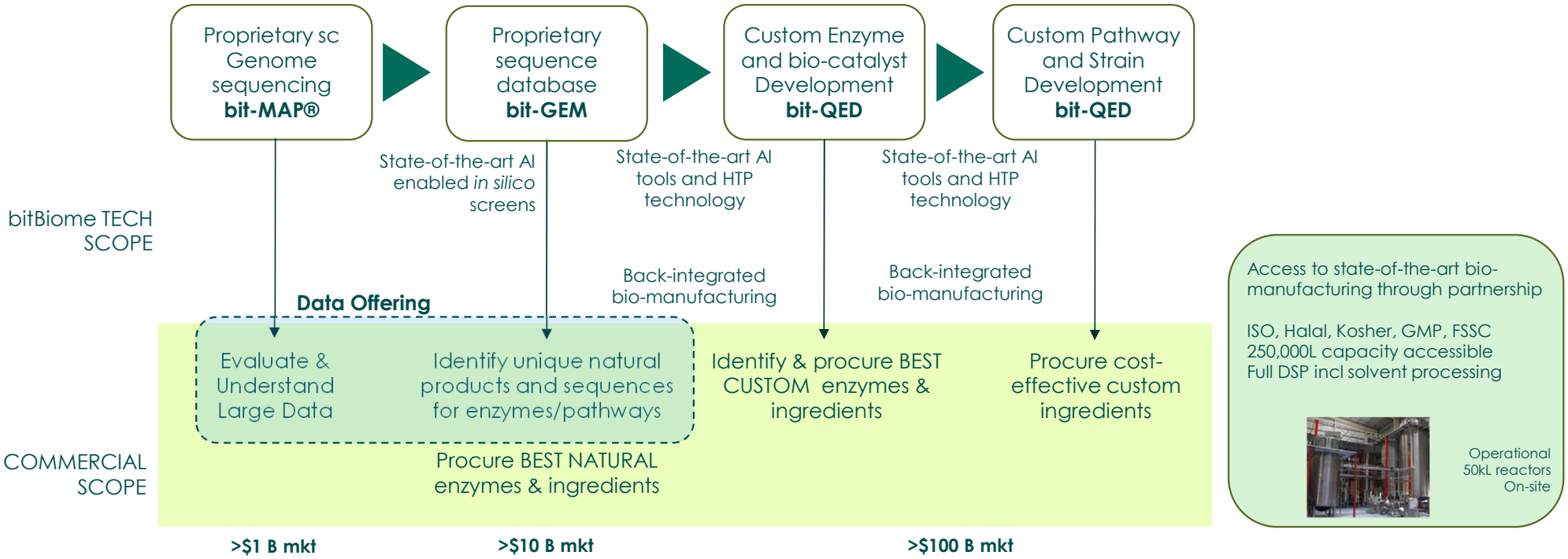
Past companies of employees

住友化学 AJINOMOTO McKinsey & Company DOW Shell novozymes

bitBiome INSCRIPTA MORINAGA DUPONT CODEXIS LanzaTech

bitBiome Technology Map

Broadest Application Scope



bitBiome

Key clients and partners

Traditional biotech champions

Leading manufacturing companies coming to biotech

bitBiome

Thank you