



# Pacific Rim Summit on Biotechnology and Bioenergy

Vancouver  
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# Safe Harbor Statement\*

Our presentation includes, and our response to various questions may include, forward-looking statements about the Company's future plans and objectives. Any such statements are subject to risks and uncertainties that could cause the actual results and the implementation of the Company's plans and operations to vary materially. These risks are discussed in the Company's filings with the S.E.C., including, without limitation, our Form 10-Q filed July 27, 2012 and Form 10-K filed March 12, 2012.

\*Under the Private Securities Litigation Reform Act of 1995

# Metabolix: PHAs and End-Use Applications

## Fermentation chemicals:

- C3: Acrylic
- C4: GBL, BDO, THF
- C5: PDO, VL

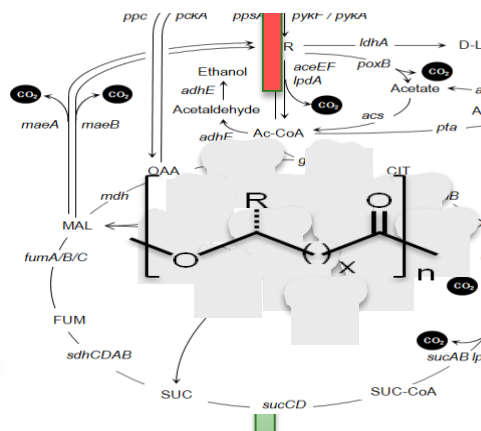
## Biobased Chemicals

## Crop based chemicals:

- Maleic anhydride
- Butanol
- Propylene

**FAST™**

Direct thermal cracking



**Fermentation**

**Industrial Crops**

**P-Ex™**

Polymer recovery

**PHA Polymer**

**Performance Biomaterials**



# Broad-Based Renewables Platform

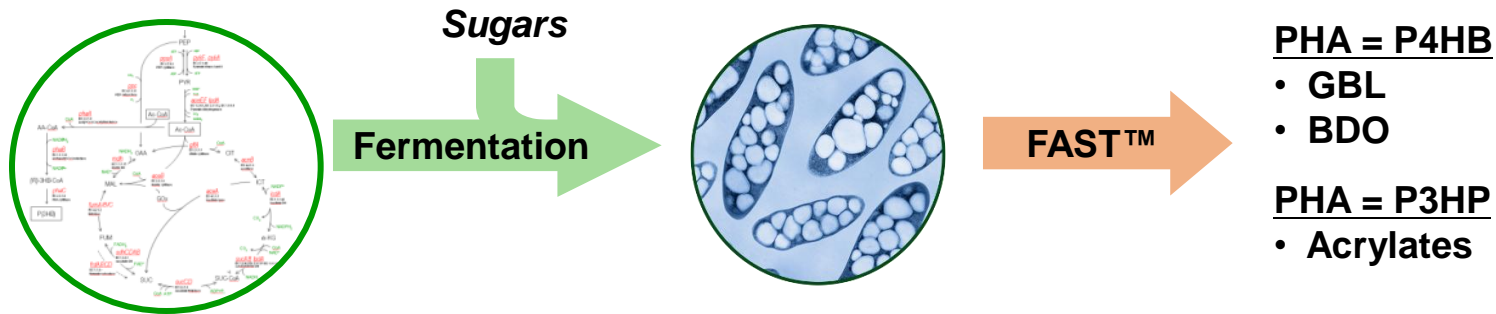
*Now Leveraging PHA Capabilities Beyond Bioplastics*

|                            | <b>Fermentation</b>                    |  | <b>Crop Technology</b>                          |
|----------------------------|--|--|---|
| <b>Products</b>            | Mirel™ Bioplastics                     | Industrial Chemicals                                 | Bioplastics, Chemicals                          |
| <b>Value proposition</b>   | High performance biodegradable plastic | Biobased C4 & C3, Cost Competitive @ \$60 - \$90/bbl | Cost Advantaged @ \$40/bbl                      |
| <b>Feedstock</b>           | Corn dextrose                          | >>Cellulosic sugars                                  | CO <sub>2</sub>                                 |
| <b>Recovery Technology</b> | <b>P-Ex™</b>                           | <b>FAST™</b>   | Oilseeds: <b>P-Ex™</b><br>Biomass: <b>FAST™</b> |

***Metabolix Core PHA Pathway Platform Technology***

# Metabolix FAST™ Process for Chemicals

Novel Approach uses PHAs to Store Chemicals Inside Cells



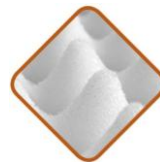
- Engineered strains that accumulate tailored PHA compositions
- PHA is converted via **FAST™** process (**F**ast **A**cting **S**elective **T**hermolysis) to range of industrial chemicals
- Initial focus is on C4 Chemicals, C3 Chemicals will leverage learning



Super-Absorbents



Engineering Resins



Polyurethanes



Paints

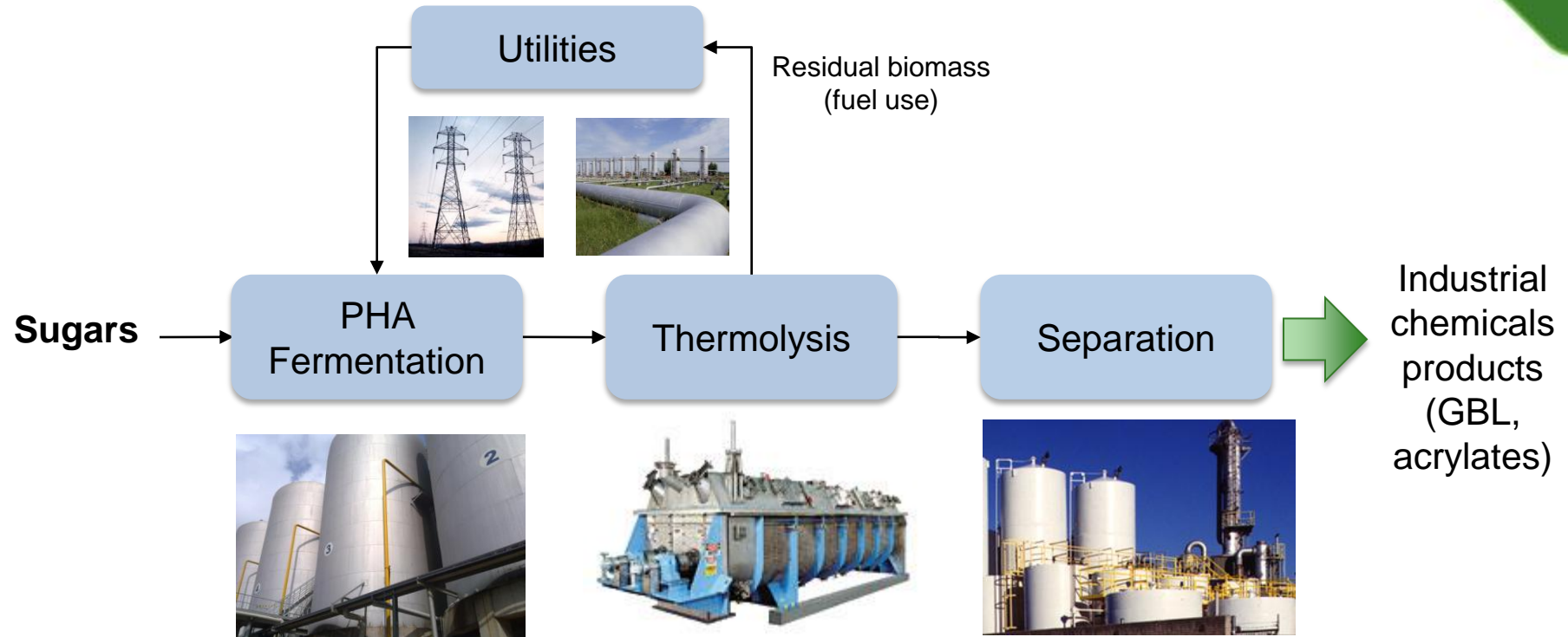


Spandex Fibers

# Metabolix FAST™ Process

*Novel Process that Leverages Metabolix PHA Chemistry Expertise*

## Metabolix FAST™ Process for Industrial Chemicals

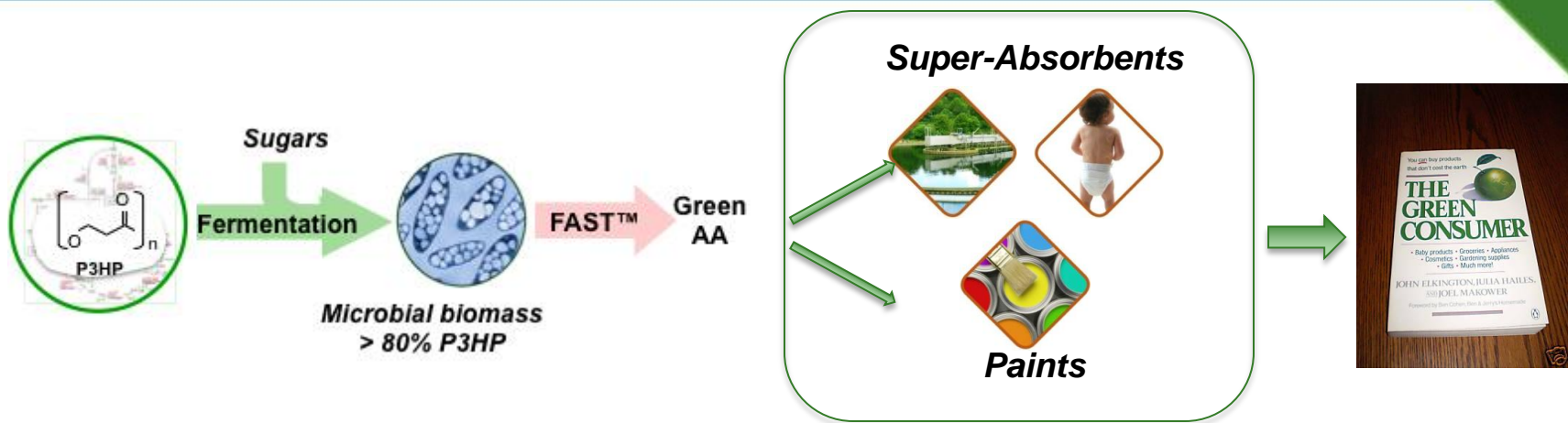


### Differentiation

- Elegant process based on Metabolix core PHA and fermentation strengths
- High yield and productivity; low capital; potential to repurpose existing assets
- Same platform used for range of products – accelerate commercialization



# Metabolix FAST™ Process for C3 Chemicals



- Engineered strains accumulate P3HP at high rate, yield and titer
- P3HP biomass is converted via **FAST™** process (**F**ast **A**cting **S**elective **T**hermolysis) to acrylic acid or acrylate esters and dried biomass residue is recycled as fuel
  - Direct route to aa highly differentiated from other green aa routes
  - Not partnered with existing acrylic franchises
  - Strong IP position
  - Alternative raw materials basis opens access to downstream

# Recent Milestones

## C4 Chemicals

- ✓ Sampling C4 chemicals from 60,000L scale
- ✓ Achievement of technical milestones for biobased GBL/BDO ongoing
- ✓ Active partnership discussions ongoing

## C3 Chemicals

- ✓ Advancing technology for C3
- ✓ Successfully scaled up laboratory recovery of biobased acrylic acid from dried biomass
- ✓ Active partnership discussions ongoing
- ✓ Started shipping dried biomass for conversion to acrylic acid





# Metabolix Value Proposition

*Robust Portfolio Aligned with Market Trends*

Leading position in unique PHA chemistry platform

Broad based renewables platform addressing large markets

Well positioned in rapidly growing biopolymers market  
Customer pipeline driven by pull demand

Competitive chemicals platform moving towards commercialization

Synergistic portfolio enabling multiple opportunities