



S2G BioChem
SUSTAINABLE CHEMICAL SOLUTIONS

www.s2gbiochem.com

Introduction

Scaling Up Conference
November 29, 2017

Background - BioProducts

- Greenhouse Gas Emissions
 - Efficient use of biomass to produce bioproducts is a key component of achieving global climate change targets
- Forest Industry Transformation
 - Forest products companies are transforming from paper producers to bioproducts producers
- Competitive Conversion Technologies
 - Economical industrial biotech conversion technologies are needed to produce profitable biomaterials from biomass that can compete with petroleum-based products



Introduction to S2G BioChem

- Founded in 2009
- Based in Vancouver, Canada
- Privately held
- 14 full-time/contract employees
- Industrial bio-tech conversion technology
- Products: Xylitol and Bio-glycols (MEG, MPG)
- Thousands of hours of pilot-scale validation



*Now scaling up to a
Commercial
Demonstration*

S2G History & Partners



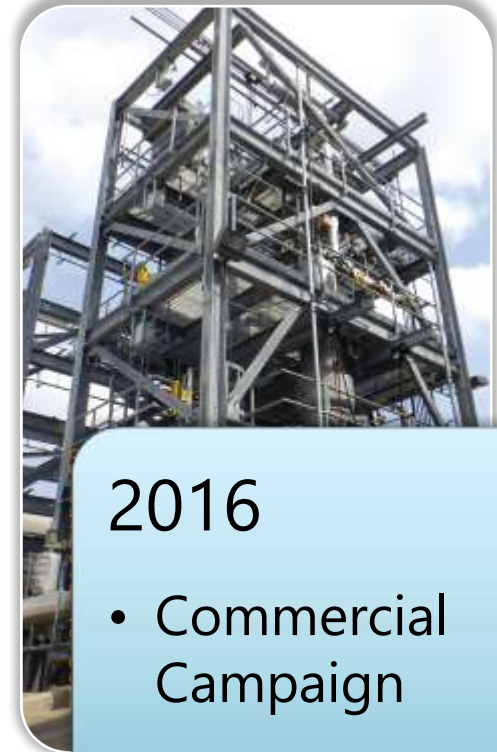
2009-2013

- Glycol Pilot Plant
- 2nd generation of technology



2013-2016

- Xylitol Co-production technology development



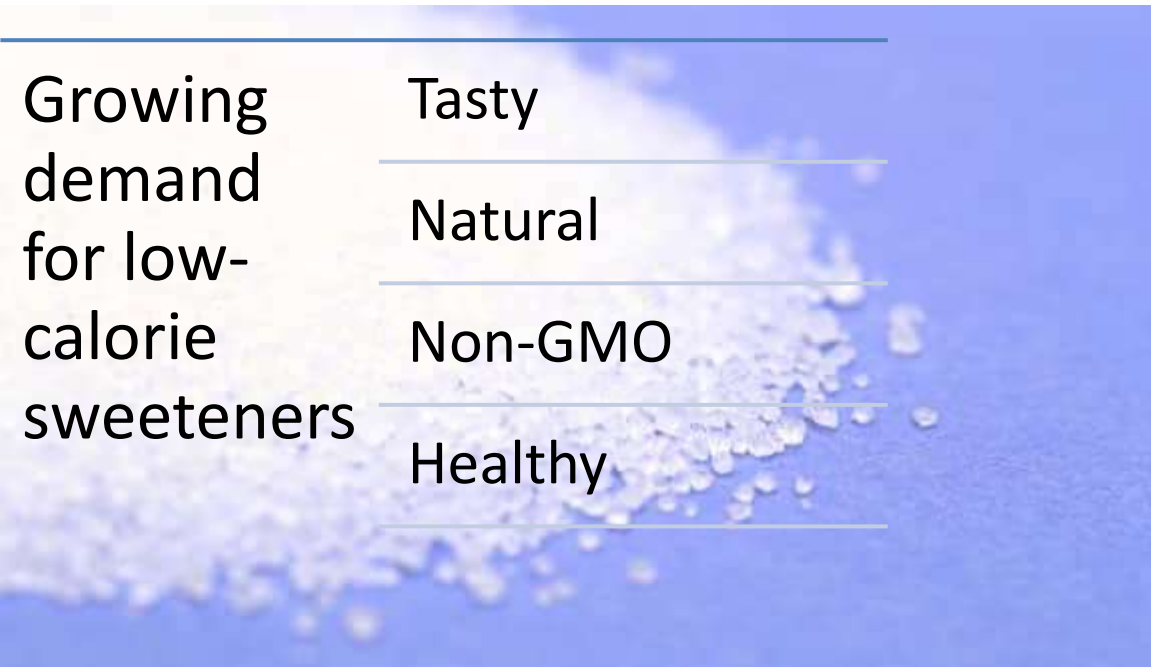
2016

- Commercial Campaign



Xylitol Opportunity

Sugar = Obesity = Diabetes



Growing demand for low-calorie sweeteners

- Tasty
- Natural
- Non-GMO
- Healthy

- Sweeteners: \$100 BB
- Sugar Alcohols: \$6.5 BB¹
- Next 5 years: 30% growth¹

¹ BCC Research - Global Markets for Non-Sugar Sweeteners

S2G Xylitol – A Superior Sugar Alcohol

Lowest cost

- 50% of current xylitol costs
- Highest product yield
- Co-product biochemical glycols

Cleanest

- Sustainable byproduct feedstock
- Cleanest production processes
- Supports sustainable biorefineries

Commercialization Strategy

Priority →

Demonstration Plant - Sarnia

\$30 MM budget

- Prove technology
- Prove scale-up
- Confirm economics
- Develop market for S2G Xylitol

Commercial Plant - Partner Site

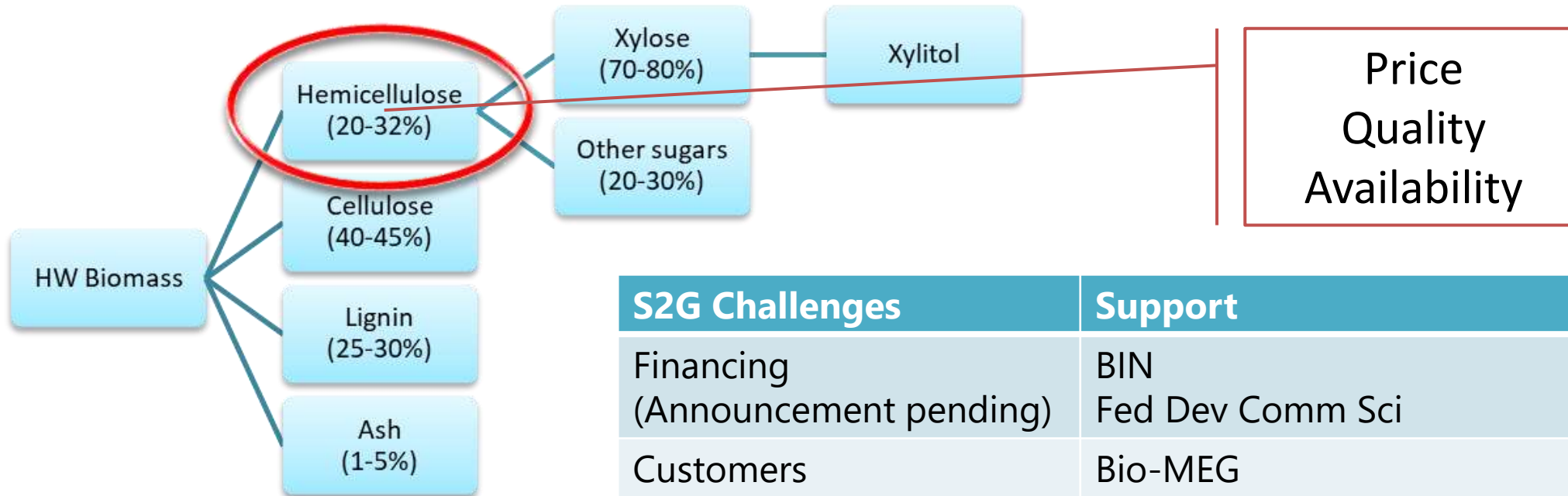
\$150 MM budget

- \$80 MM revenue
- \$40 MM margin
- Global low-cost producer
- Develop engineering packages

License to 3rd Parties

- Canada and global market
- Add other biochemicals

Hybrid Chemistry Cluster (HCC) in Sarnia-Lambton



Feedstock – S2G’s biggest challenge

| S2G Challenges | Support |
|-------------------------------------|---|
| Financing (Announcement pending) | BIN Fed Dev Comm Sci |
| Customers | Bio-MEG |
| Technology Partners | Origin Materials, Renix, Lambton College |
| Site | Western Sarnia Lambton Research Park, Newalta |
| Feedstock | Comet, Greenfield, Growers →Pulp Mills |

