



INNOVATIVE REDUCTION STRATEGIES INC.

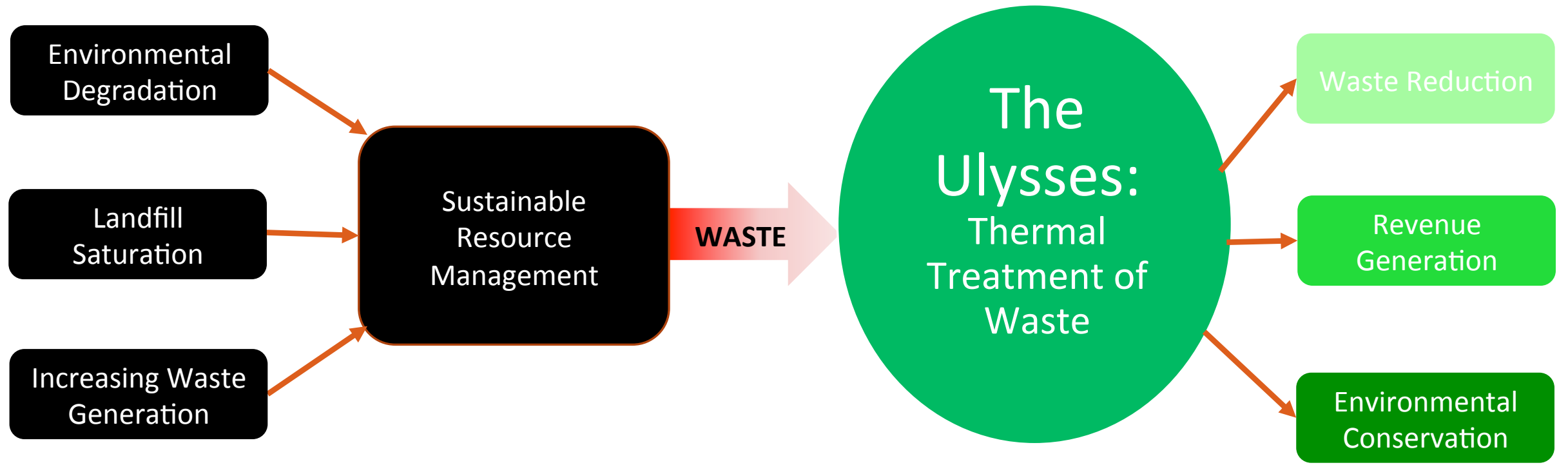
THE ULYSSES PYROLYSIS SYSTEM

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Sustainable Waste Management Through Integrated Technological Solutions

Burning Issue



The Ulysses





Chris Olson, B.A., NAIT Alt E
Director



Bruce Saunders, NAIT Alt E
Director

- Incorporated in 2014
- IRSI team has over 40 years experience
- IRSI Staff:
 - FTE: Mechanical Engineer, Chemical Engineer
 - PTE: Process/Chemical Engineer, Electrical Engineer
 - Contractors: Fabricators, Vendors, Electrical Fabricator



IRSI Advisory Board



Trevor Nickel
Executive Director at Alberta
Bottle Depot Association



Don Harfield
AITF – Senior Projects Leader

Darrell Ewaskiw
VP Operations Altaland
Steelworks Inc.



Don McIntyre
MLA for Innisfail – Sylvan Lake



Gregory Snaith
NRC-IRAP Technology Advisor

Market Opportunity

600+ Sites Throughout Western Canada

- Waste To Energy Throughout Europe and Asia

Ulysses Can Utilize Majority of Waste Streams

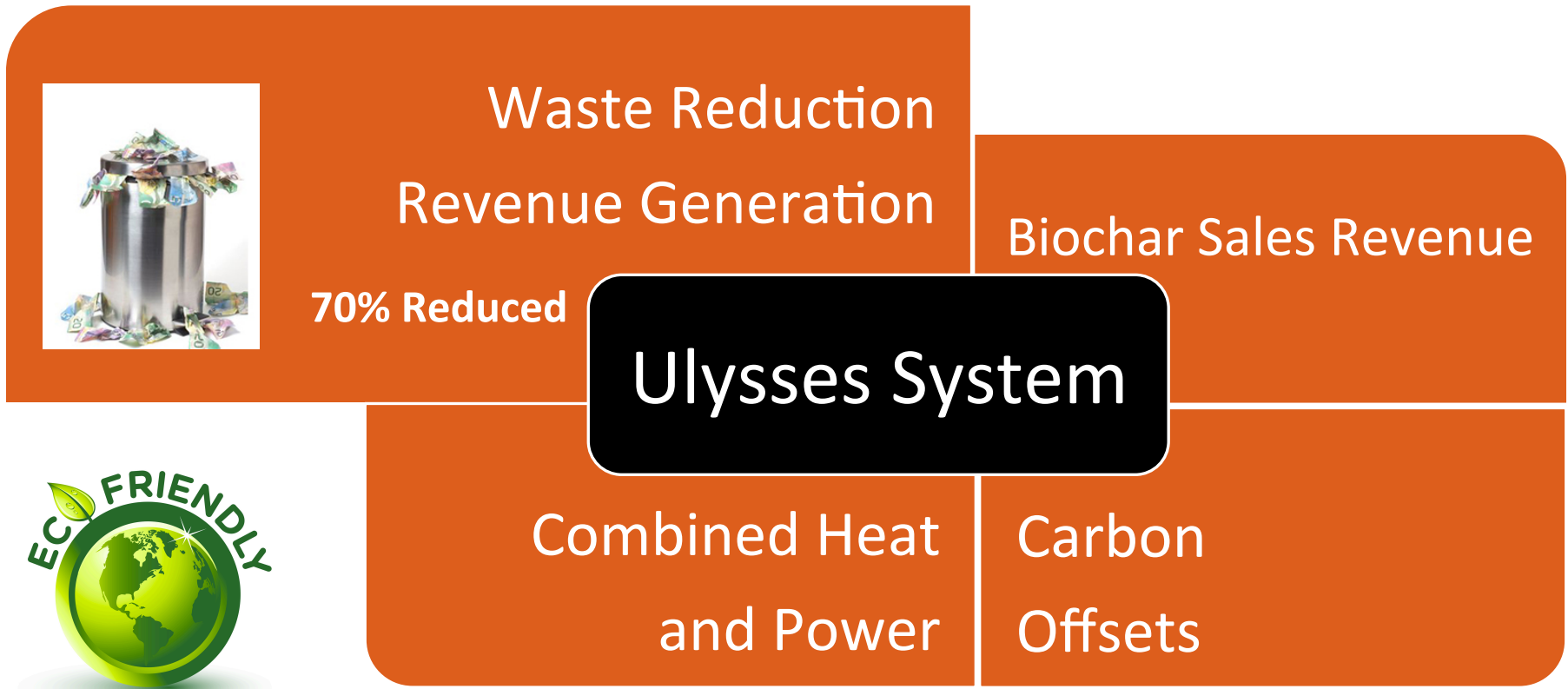
Mid Value Chain Waste Management Market

Multiple Applications for End Char Product

- Biochar Market Growth of 15%-20% in Next 4 Years

Substantial Revenue Generation From the Implementation of IRSI System

Client Revenue Generation



Waste Reduction Revenue Generation



Normal Operation

- 60 tons x \$50.00
- \$3,000.00 disposal fee
- \$600.00 for labor and transport
- **Total cost of \$3,600/day**



Ulysses System

- 12 tons x \$5.00
- \$60.00 disposal fee
- \$100.00 for labor and transport
- **Total cost of \$160/day**



Net Benefit

- 95% savings in disposal costs
- Daily swing in costs of \$3,440
- Annual gross savings of **\$980,400**



Waste Reduction Revenue Generation

Landfill Life Extension

14,500 tons per year

3 cubic yd per ton

43,500 cubic yards

70% reduced

30,450 yd³ saved per year

456,750 yd³ saved 15 years

Landfill diversion with Ulysses operating 10 hours a day @ 5 tons/hr for 285 days a year is 11,250 tons of CO²E

Client Revenue Generation

End Char Product

- High value (fertilizer, food additive, organic growth medium)
- Mid value (biofilters, absorbents, compost mix)
- Lower value (alternate daily cover, improved landfill decomposition)

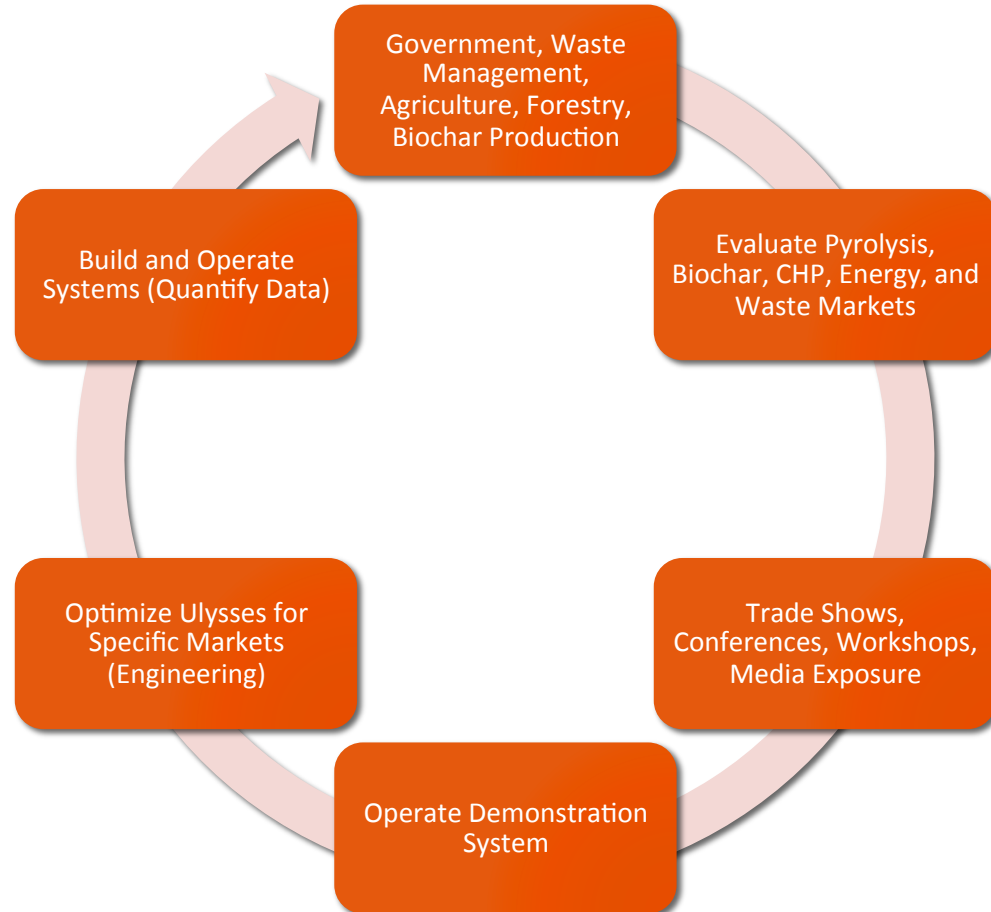
Combined Heat and Power

- Thermal energy generation
- Electrical energy generation
- Reduced GHG emissions
- Net metering

Carbon Offsets

- Landfill diversion credits
- Reduced reliance on petrochemicals
- Biochar Sequestration Protocol
- Absorption of GHG at landfill sites

Go-To-Market Strategy



Build and Connect Network with Early Adopters in Biochar and Pyrolysis

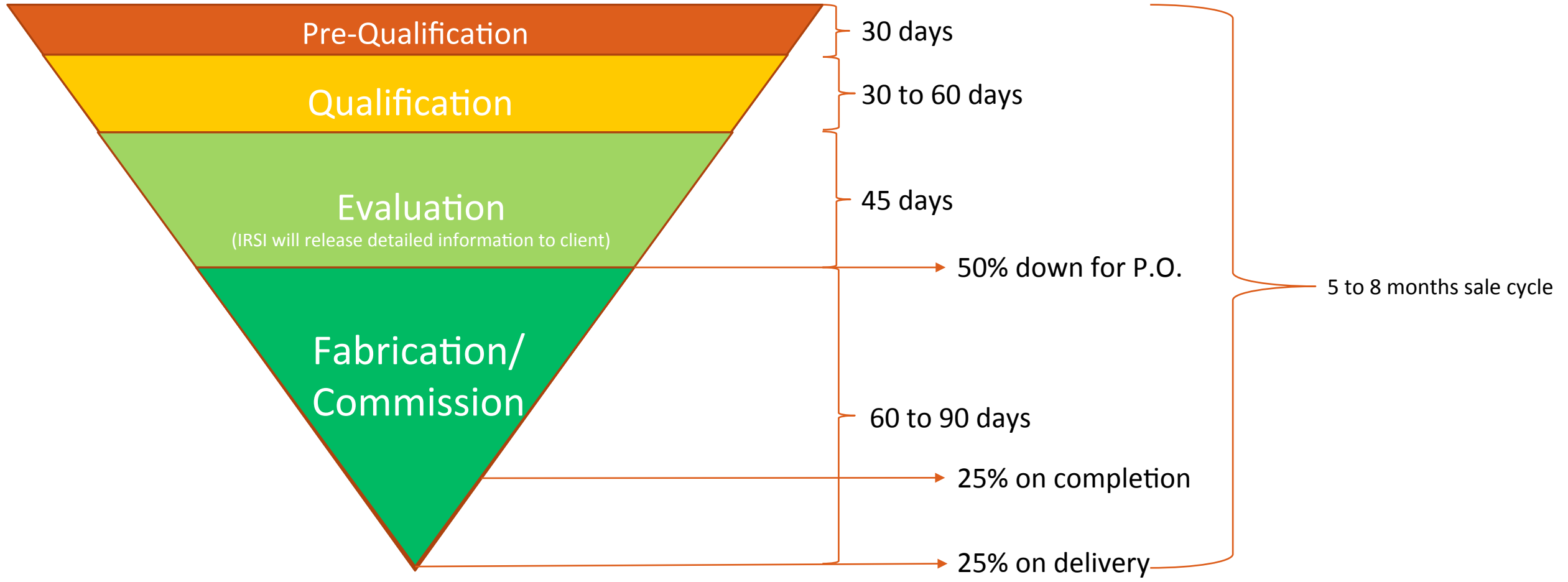
Provide Biochar at a Effective Price Point to Drive the Biochar Market Forward

Use Data to Drive Permitting of Pyrolysis Systems in Canada

Use Quantitative Data to Drive Biochar Sequestration Protocol in Canada



IRSI Sales Cycle



Project Sponsors



Questions/Comments



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