Benefits to Montana by Resodyn’s Participation in the MBRCT Program

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Presented by

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www.resodyncorporation.com
www.resodynmixers.com
www.polymericsystems.com
Corporate Background

- Established 1994
  - Industrial and government sponsored R&D
  - Business focus is customized, high-tech equipment design and manufacturing

- Continued Business Growth Since Inception, Evolving to Product Development and Manufacture of World-Class Products

- Recognized Technology Leader and Solution Provider

- Product Sales and Support Worldwide
R&D, Design and Manufacturing

- Research & Development
- Engineering
  - Design
  - Solid modeling
  - Analysis
- Process Development Support
  - Mixing
  - Systems Configuration
- Manufacturing & Service
  - Procurement
  - Fabrication
  - Quality
  - Assembly
Resodyn Acoustic Mixer Product Line

Product Line History
2007 Present
Dramatically Increased Productivity
Resodyn Continuous Processing

New Products Emerging

Continuous Acoustic Mixer
Mixing Solids

Continuous Acoustic Mixer
Mixing Viscous Materials

Continuous Acoustic Chemical Reactor

Emerging Product Line
2016

change
RAM 5 Continuous Acoustic Mixer

- Processing Rate is Dependent Upon Residence Time Required for Mixing

- RAM 5 Processing Rate Limited to a Total Weight of 80 lb of Load at any One Time

- Example
  - Residence Time: 4 Minutes
  - Processing Rate: 20 lb/min
    - 1,200 lb/hr
Resodyn Acoustic Mixers
Business Structure

**Resodyn Corporation**
- Research and Development
- Technology Incubator
- Product Launch Platform

**Business Unit Startup**

**Product Development Division**

**Research & Development Directorate**

**Manufacturing and Operations Division**

**Resodyn Engineered Polymeric Systems**

**Resodyn Instruments & Sensors**

**Building Value through Discovery & Innovation®**

Launched 2007

“Deciding what not to do is as important as deciding what to do.” - Steve Jobs

- Marketing
- Product Sales
- Technology Support
- Toll Mixing

- Marketing
- Product Sales
- Partnering
- Technology Support

- Marketing
- Product Sales
- Partnering
- Technology Support
Market Opportunities

Revolutionary Technology Platform
Mixes Any Combination of Materials
Broad Based Market Applications

- Propellants
- Explosives
- Pyrotechnics
- Nanomaterials
- Adhesives and sealants
- Pharmaceutical compounds
- Advanced polymer systems
- Battery materials
- Sintered materials
- Pigments
- Chemicals
- Biotechnology products
- Cosmetics
- Dental products
- Advanced materials
- Ceramics
- Thermally conductive electronic materials
RAM Sales Nationally and Globally

Global Marketing, Sales and Support Presence
- RAM Trading Partners Established in Japan and South Korea
- Resodyn Europe Opened September 2015
Resodyne Europe Established in Bordeaux, France
Substantial and Sustained Market Presence

- Launched in 2007 and Experiencing Continued, Steady Market Share Growth

- Graph of Normalized Annual Sales

- More than 600 Systems Sold Worldwide

- 50% Revenue Growth in 2014 Achieved ✓
- 50% Revenue Growth in 2015 Achieved ✓
- 50% Revenue Growth in 2016 Shall be Achieved
DEFINE WHO YOU ARE AND WHAT MAKES YOU EXCITED TO GET UP AND BE SUCCESSFUL EVERY DAY

DETERMINE IF YOU HAVE THE CORE ATTRIBUTES THAT WILL ENABLE YOU TO SUCCEED
Description of the Challenges and Obstacles that had to be Addressed by Resodyne to make the Acoustic Mixers Business a success

Challenges and Obstacles

- Technical
- Business
  - Define the Approach to Take then Focus
  - Study and Understand the Market Landscape
  - Market/Sales Approach
  - Staffing
  - Effective Execution
INVESTOR/DEBT

+ Funding gestation time typically short
- Loss of equity
- Compromise in control of direction
- Business at risk for payback of loans
+ Capital for rapid growth can be available

GRANT/BOOTSTRAP

- Duration for obtaining funding typically long
+ IP and equity maintained
+ Have total control of direction
+ No debt payback risk
- Growth slowed by lack of upfront capital
Business/Funding Tactics

PRIVATE/SELF FINANCING

R&D

BUSINESS GROWTH

INVESTORS

Pre Commercial

Commercial Products
The Montana Board of Research and Commercialization Technology (MBRCT) provides a predictable and stable source of funding for research and commercialization projects in Montana. MBRCT encourages economic development through investment in research projects that have a clear path to commercialization.

Dave Desch, MBRCT Executive Director

MBRCT was a key contributor to the successful commercialization of the Resodyne Acoustic Mixers technology and to growth of the Resodyne businesses
Business/Funding Tactics

- SBIR FUNDS
- MBRCT FUNDS
- R&D
- Development Contracts
- Pre-Commercial
- Commercial Products
- Business Growth

Resources:
- Resodyne
- Acoustic Mixers

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Universal Acoustic Processing

- Manufacturing Industries
- Processing Industries

- Solid-Solid
- Solid-Liquid
- Liquid-Liquid
- Liquid-Gas

- Mixing
- Coating
- Grinding
- Sieving

- RAM Universal Platform

- R&D
- Quality Assurance
- Batch Processing
- Continuous Processing
- Chemical Reactions

MARKET DRIVEN
Manufacturing and Jobs in Butte

Manufacturing and Testing
ResonantAcoustic® Mixers

Where no MIXING has gone before
Thank you for your attention and for your interest.

A Veteran Owned Small Business