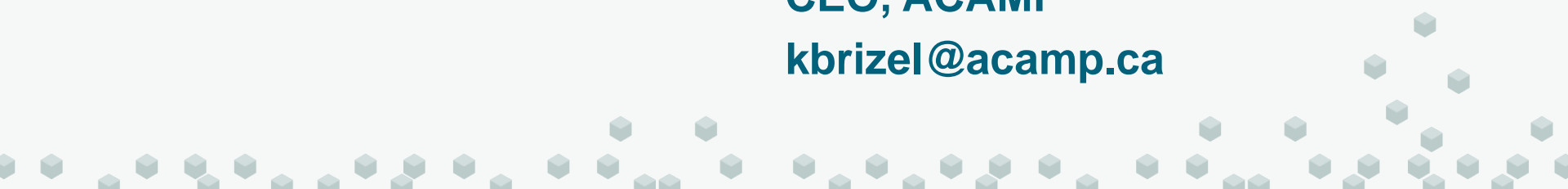


# Emerging Pipeline Technologies Seminar

## Introduction

September 29, 2014

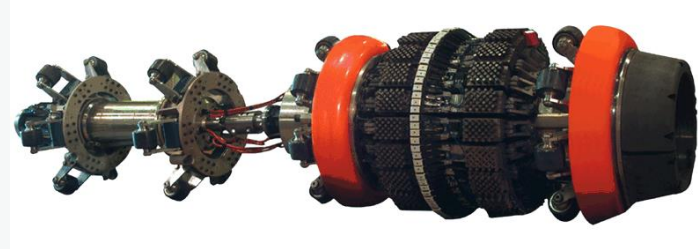
Ken Brizel  
CEO, ACAMP  
[kbrizel@acamp.ca](mailto:kbrizel@acamp.ca)



- ❖ ACAMP established as a not for profit corporation, July 2007
- ❖ Operational funding from the Province of Alberta (Now AITF)
- ❖ Equipment funding from the Federal Government through Western Economic Diversification
- ❖ Total \$14M invested by the Province & \$15M by WED
- ❖ ACAMP is an Industry led organization - Independent from Academia and Government.
  - ❖ Senior Management have 25 years+ relevant industrial experience
  - ❖ Managing board is industrial lead and finance communities

# Why is ACAMP running this seminar ?

Pipeline Technologies are growing rapidly driven by the increase in energy delivery from new pipelines and older pipelines world wide. With an eye towards the need for the safest, most reliable and most efficient way possible to deliver energy, new opportunities incorporating sensors, remotely and autonomously controlled mechanical systems, passive and active monitoring systems, remote inspection, leak detection and pipeline protection are now becoming available.



ACAMP makes it easier for companies engaged in product commercialization to access the expertise and equipment they need to develop new products

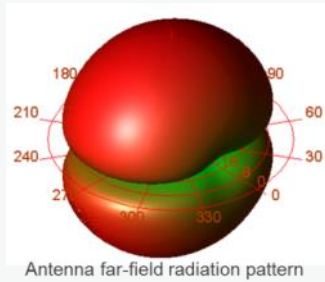
- ◆ Design & Development
- ◆ Assembly and packaging
- ◆ Manufacturing
- ◆ Supply chain
- ◆ Business development
- ◆ Easy, cost effective access to all technologies and services for regional companies
- ◆ Dissemination of knowledge
- ◆ Seminars enable networking and business growth !!

# ACAMP's Marketing & Business Development Process

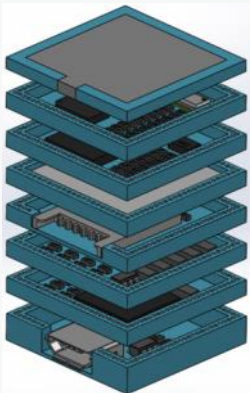




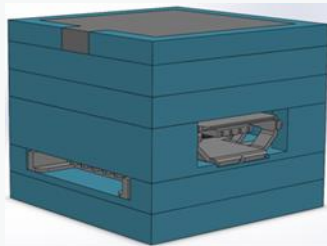
## Simulation



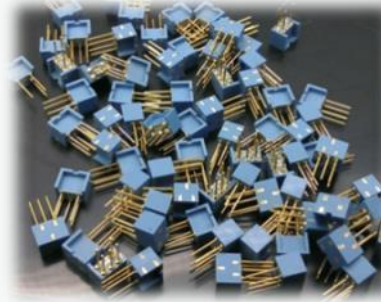
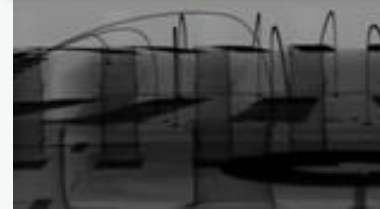
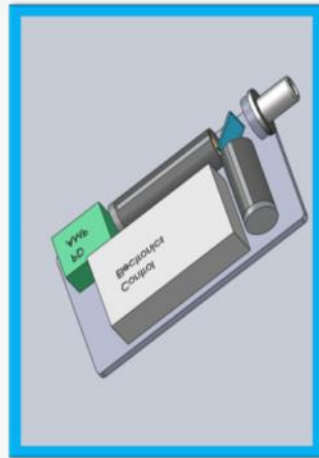
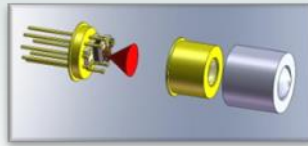
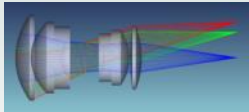
## Inertial Products



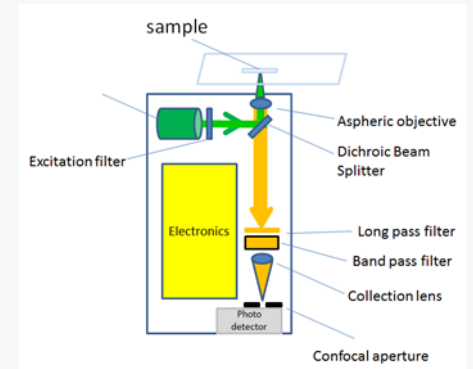
## IMU's

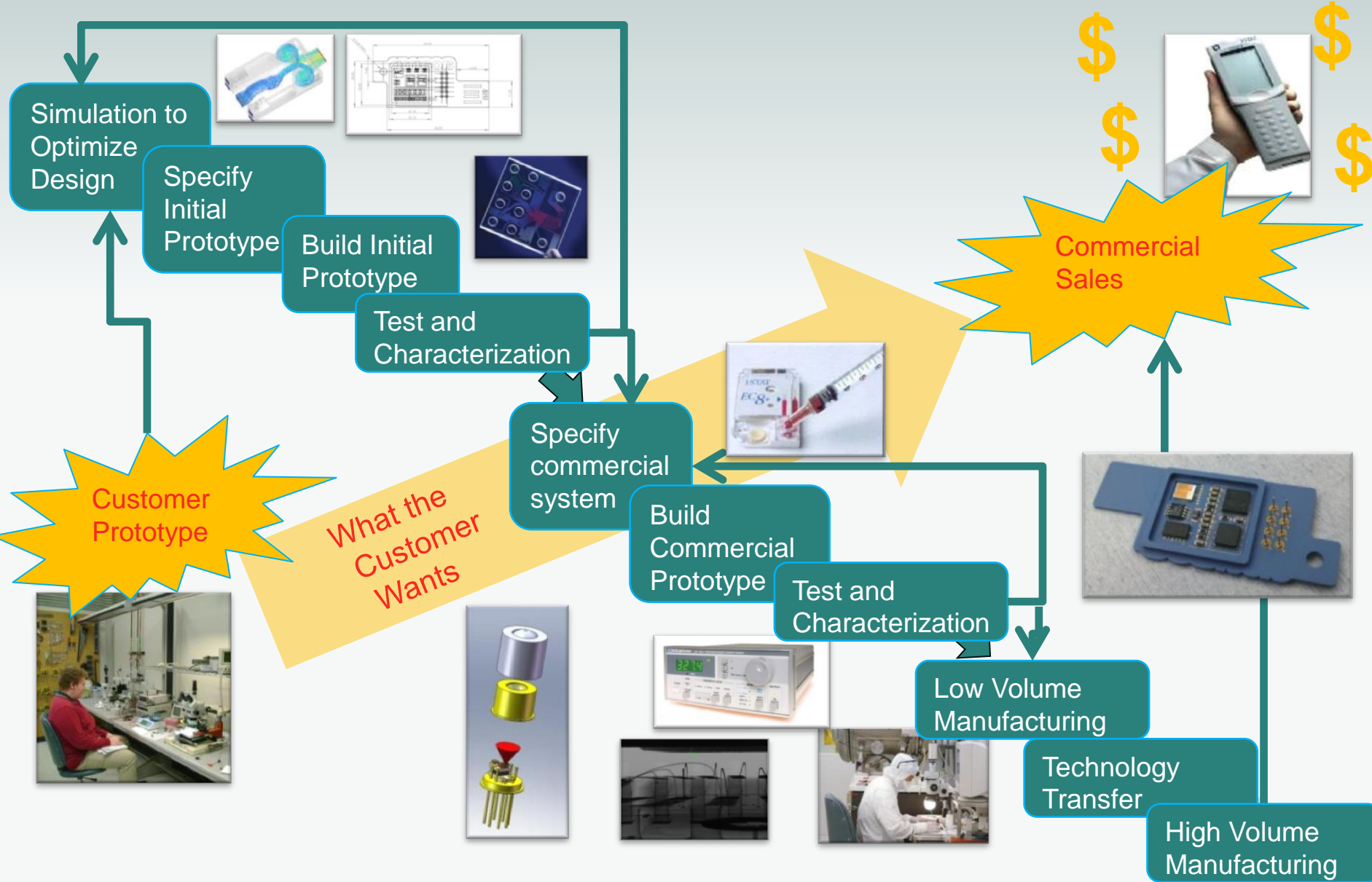


## Laser & Micro-Optic & Ceramic Assembly



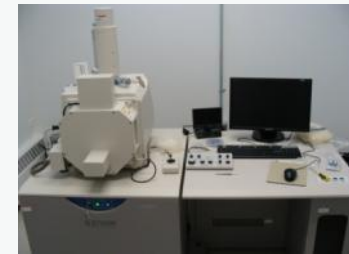
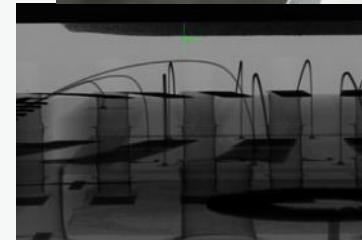
## MicroFluidic Products





## Product validation is important !!

- ◆ **Inertial Products** 3 Axis Rate Table
- ◆ **Physical/FA** – optical microscopes, laser confocal microscope, SEM/EDS, microscopes, profilometer, cross sectioning, real time x-ray, Laser Doppler vibrometer, die/wire shear/pull, pressure testing
- ◆ **Reliability** - comprehensive suite of test tools – HTS, Thermal cycle, Temp/humidity, Vibration, Drop shock, compressive/tensile, fine and gross leak...
- ◆ **Electrical** - semi-auto probers, manual probers and suite of electrical test tools
- ◆ **MEMS** - die probe capability – Solidus test system + prober
- ◆ **Optical** – dark room, optical table, range of devices for optical measurements





- ❖ ACAMP is an industry driven hardware development organization
- ❖ Focuses on design for manufacturing & taking products to market
- ❖ Simple fee for service model looking for cost recovery
  - ❖ Depreciate equipment over 5 years
  - ❖ Manpower charged out at cost
- ❖ Client owns and keeps their IP, we don't want it
- ❖ New packaging IP developed collaboratively is jointly owned
- ❖ Client can use facilities, with or without support
- ❖ Presently support over 190 clients - [www.acamp.ca](http://www.acamp.ca)

Thank-you to our contributors  
for today's seminar

