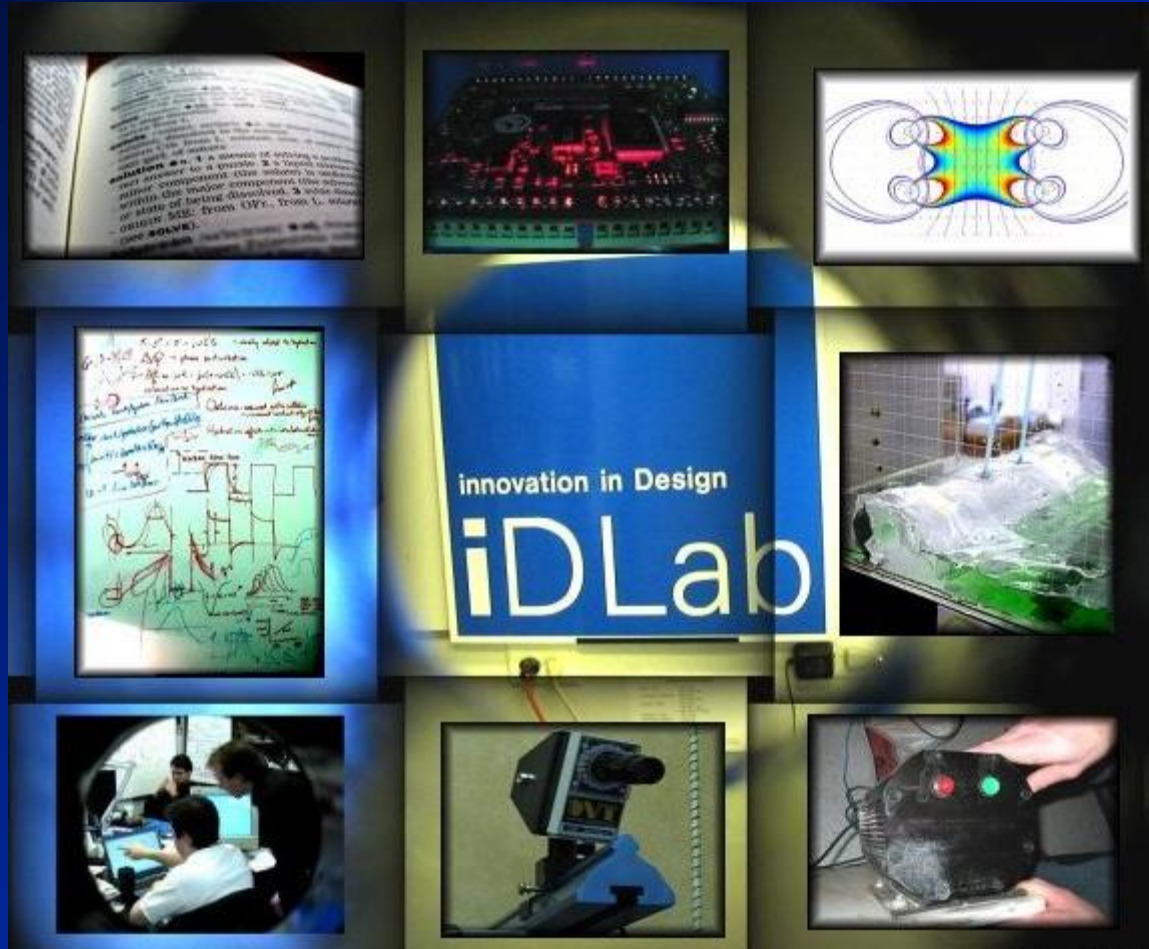


# Success by Design



Matt d'Entremont, B.Eng., M.A.Sc., P. Eng.  
Director, iDLab

# Who we are

## The **iDLab** is...

- a design-engineering lab in the Faculty of Engineering, Dalhousie University
- a creative, multidisciplinary team that assists companies in solving real-world product and process design problems
- client focused

***Confidentiality is paramount!***

# How We Operate

## Like a Business

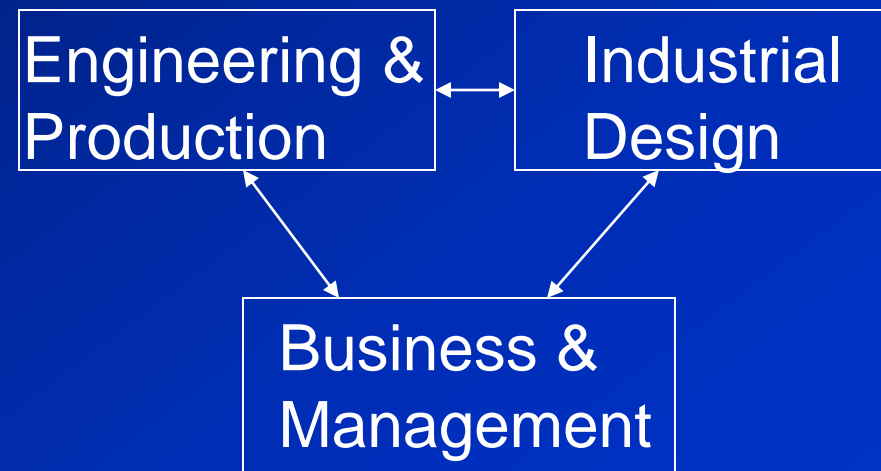
- Execute NDAs and IP agreements
- Detailed proposals
- Contracts through Dalhousie
- Project management to deliver on time and budget
- Regular project updates and invoices

***Our Clients' Satisfaction is Key!***

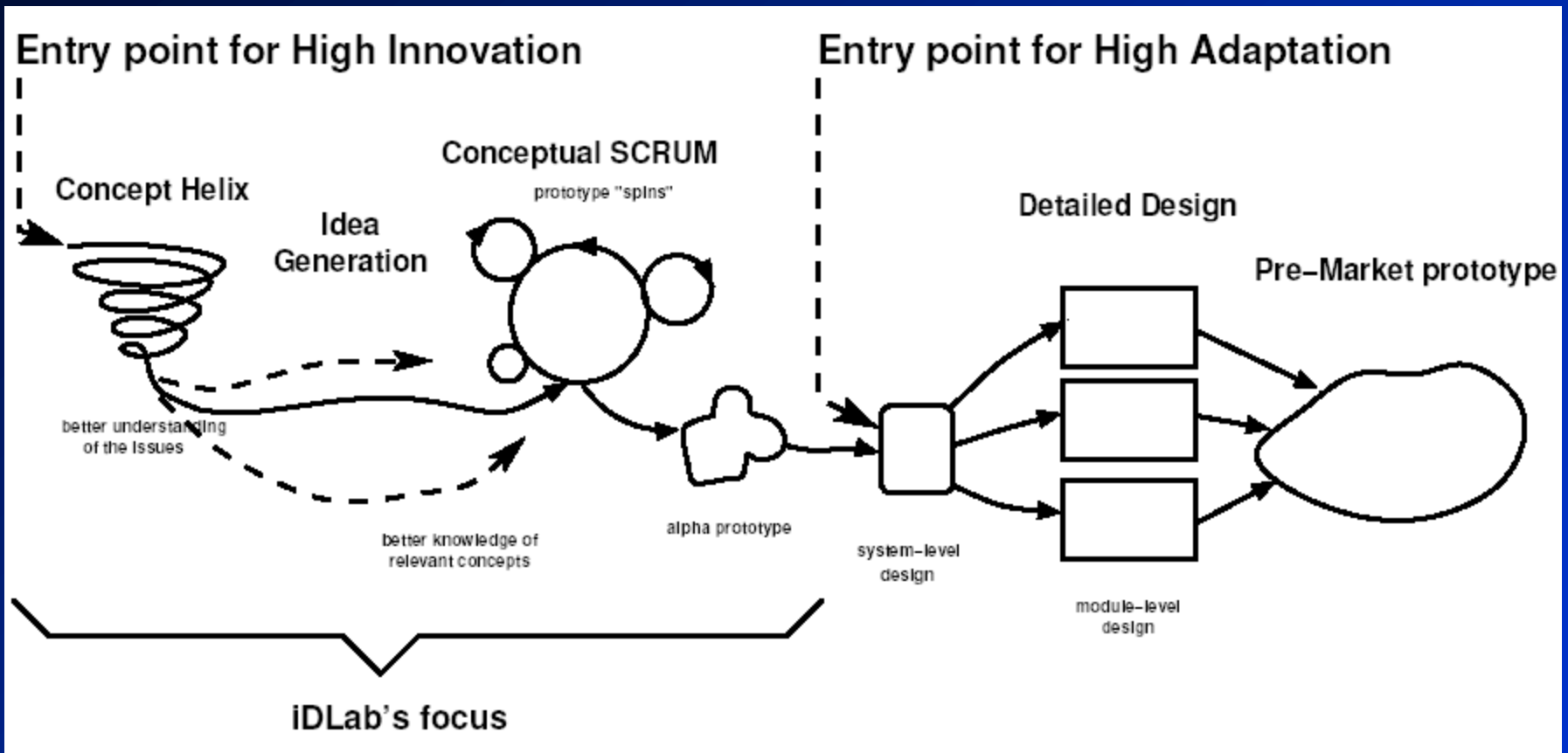
# Our View of Design

## Total Design

- Integrates the design of products or processes and the design of the business opportunity into one.



# Our Design Innovation Process



# Demonstration Farm

## Purpose:

- Raise public awareness
- Show how operations look
- Show long term water quality markers w/ref

# Demonstration Farm

What:

- Wireless (Internal and External)
- Unpowered (Self Generating)
- Stand-alone
- Robust
- Accessible (Web, WAP)

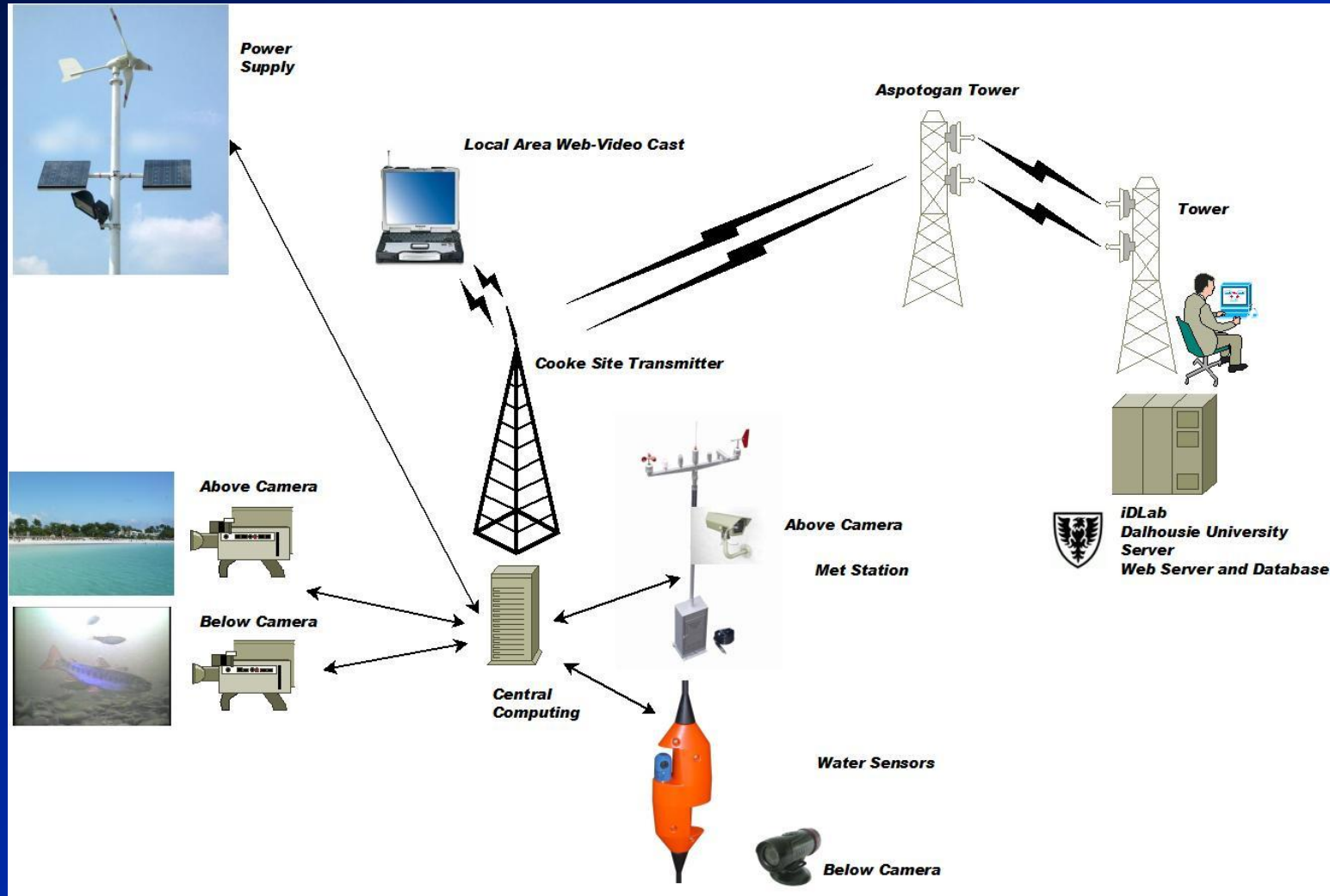
# Demonstration Farm

What:

- Video (Above and Below Water)
- Measuring
  - Dissolved Oxygen (1, 5, 10m)
  - Water Temperature (1, 5, 10m)
  - Air Temperature
  - Wind Speed/Direction
  - Solar Radiation

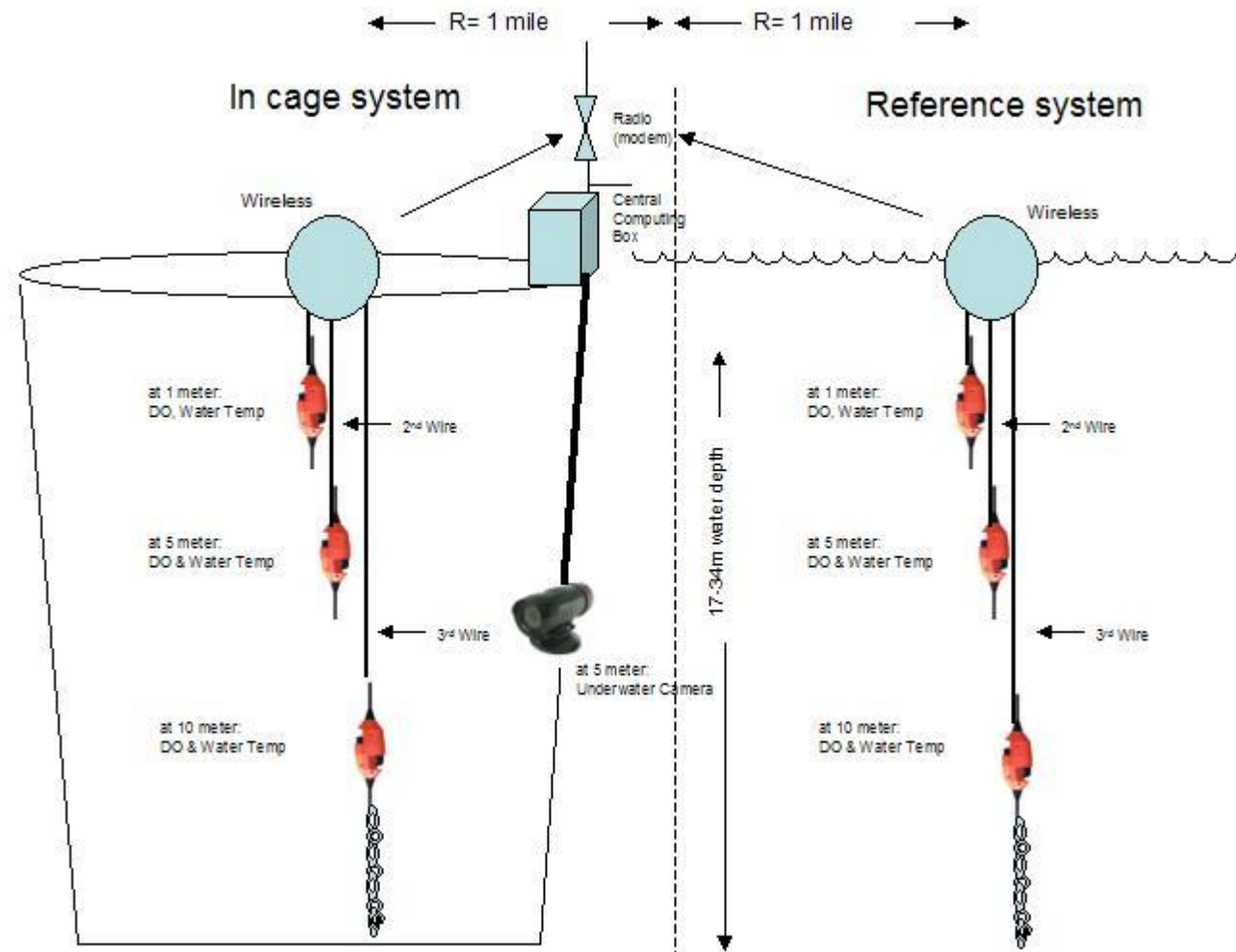
# Demonstration Farm

What:



# Demonstration Farm

What:



# Demonstration Farm

## What: Technical Challenges

- Power
  - Lower power required (Monitored)
- Internet
  - Connectivity
  - Local Area Presence -> Global Presence
  - Quality,
  - Throughput (Monitored)

# Demonstration Farm

## What: Technical Challenges

- Wires?
  - Hard to deal with across large farm
  - Wireless connection to sensors key
  - Currently simulating sensors and wirelessly transmitting to computer

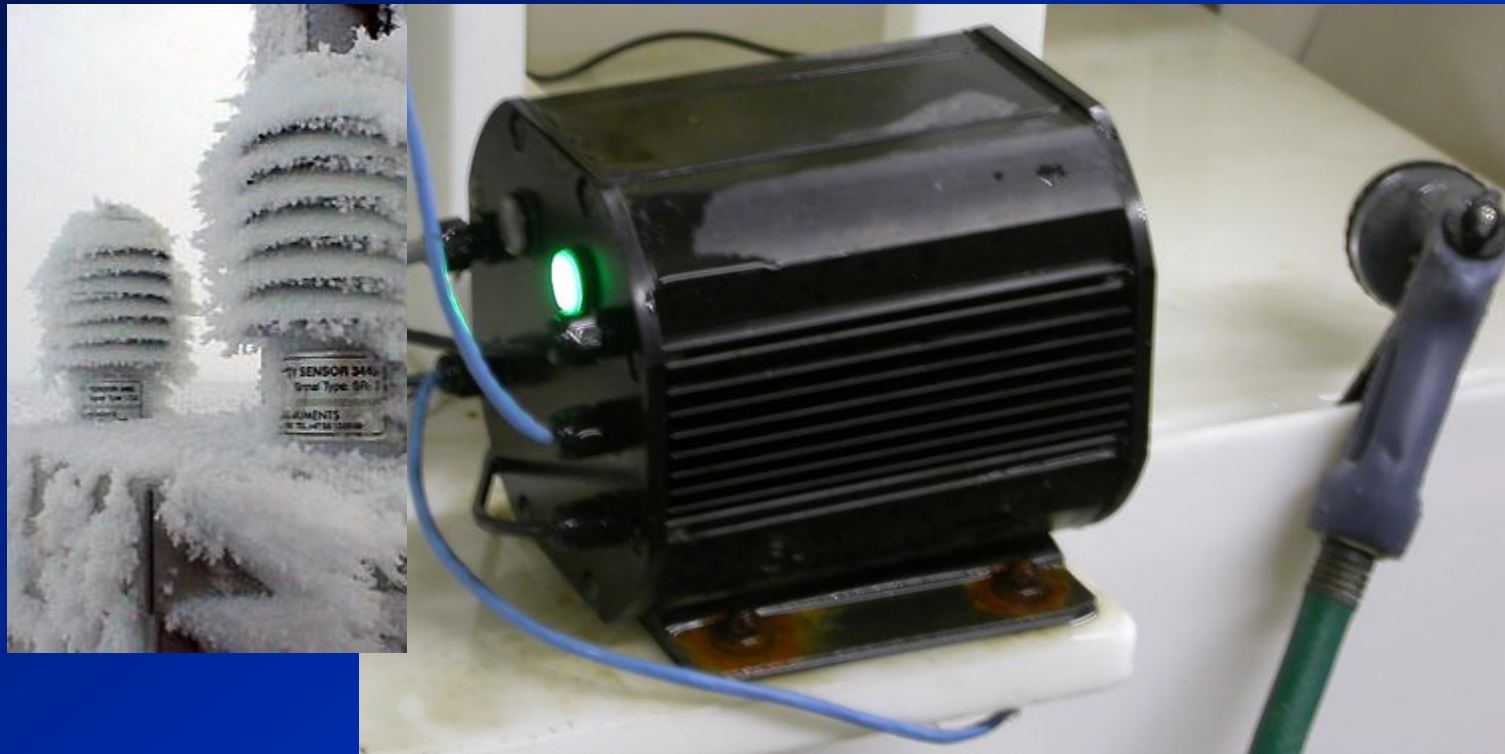
# Demonstration Farm

## What: Technical Challenges

- Video
  - Quality versus bandwidth
  - Quality versus total monthly data limit
  - Mpeg4 compression
  - TOD

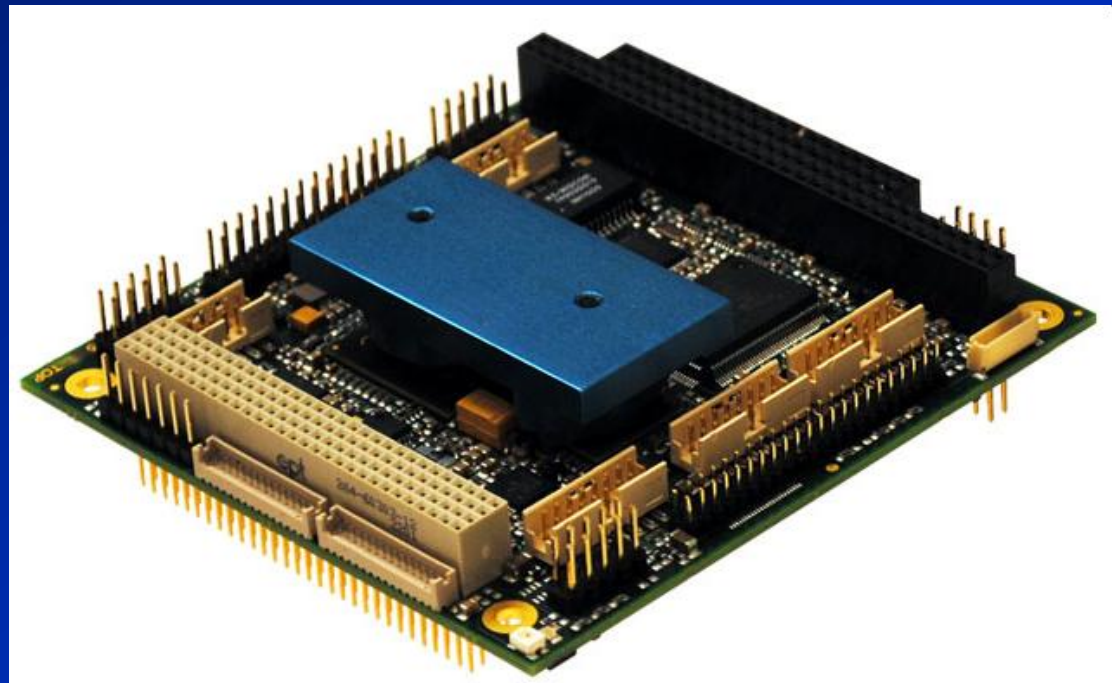
# Demonstration Farm

Implementation:



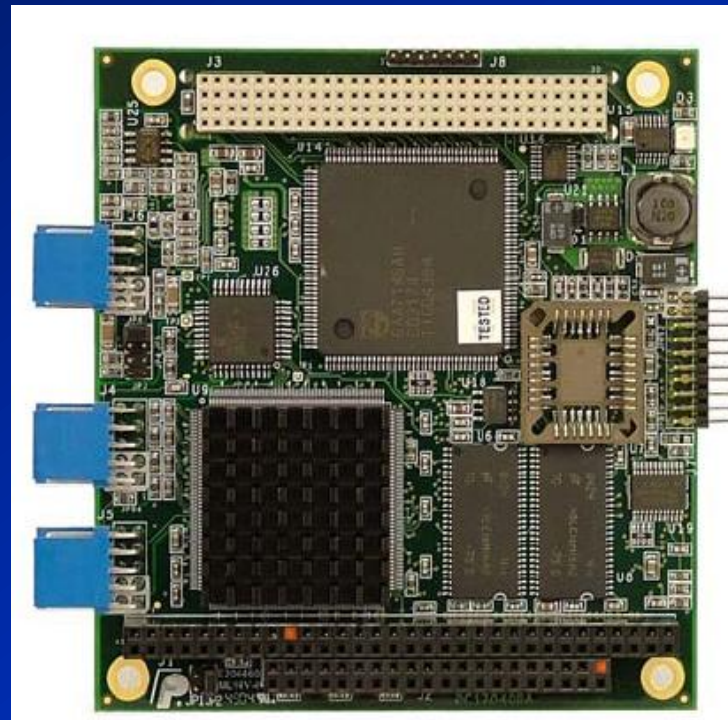
# Demonstration Farm

Implementation:



# Demonstration Farm

Implementation:



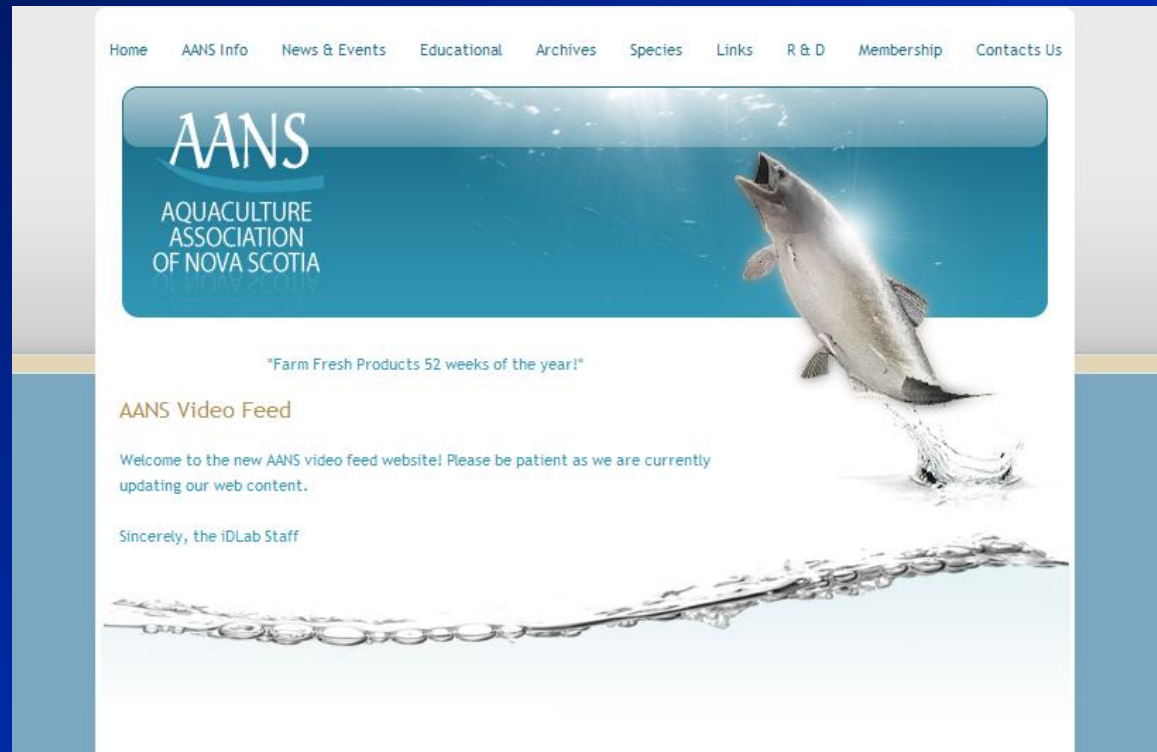
# Demonstration Farm

Implementation:

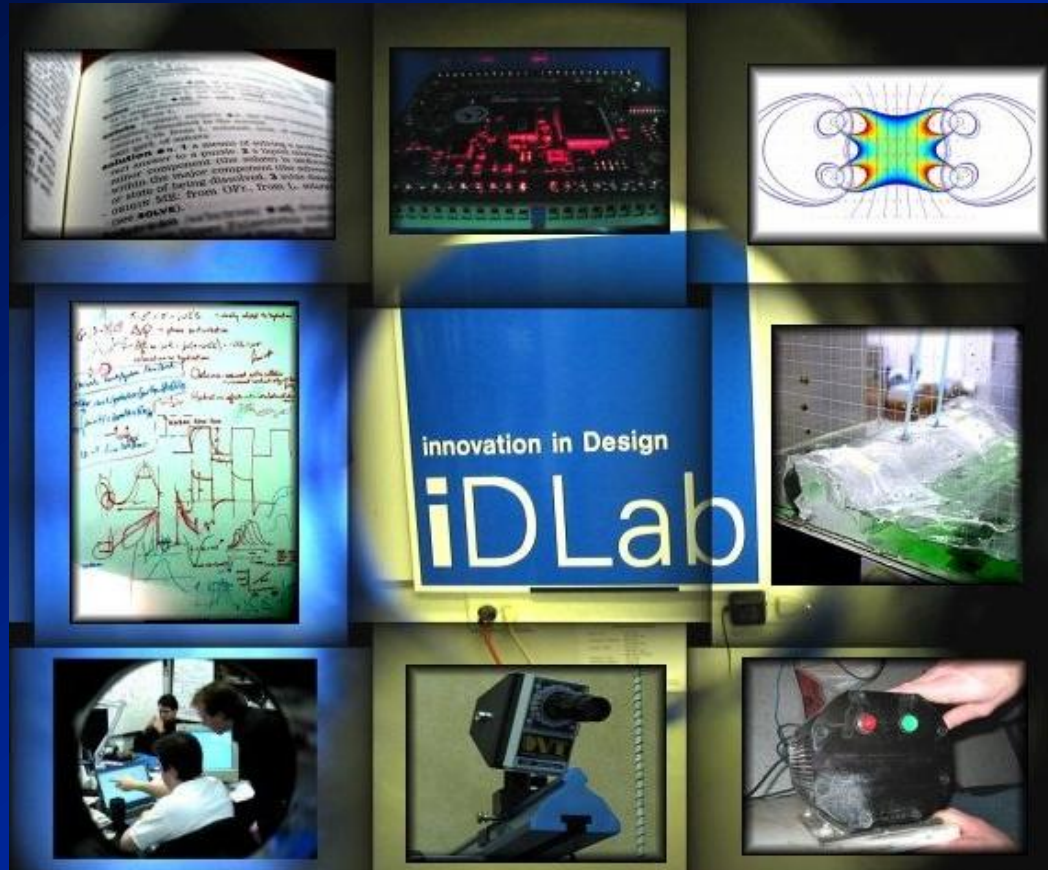


# Demonstration Farm

## Implementation:



# Success by Design



**Idlab@dal.ca**    **www.iD Lab.dal.ca**

Thank you.