

# Welcome



416-410-GAIL(4245)

“Engineers participate in the activities which make the resources of nature available in a form beneficial to man and provide systems which will perform optimally and economically.”

– *L. M. K. Boelter (1957)*

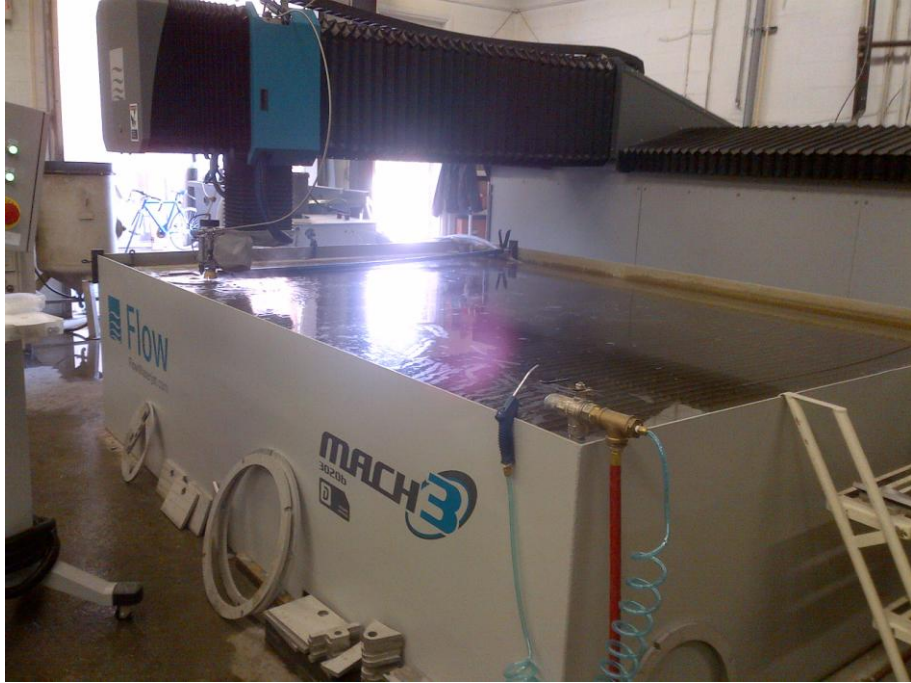
# Problem

- Willingness to invest in capital (equipment)
- Non-willingness to invest in technology systems

# Why?

- Lack of confidence
- Lack of in-house expertise
- People think it is really expensive
- Match between the investment and ROI is not understood

# Example of Business Case



\$\$\$\$\$-large capital investment



# Example of Business Case



Cost to integrate is \$\$ - small investment



# Example of Business Case



Estimate minimum \$90,000 per year



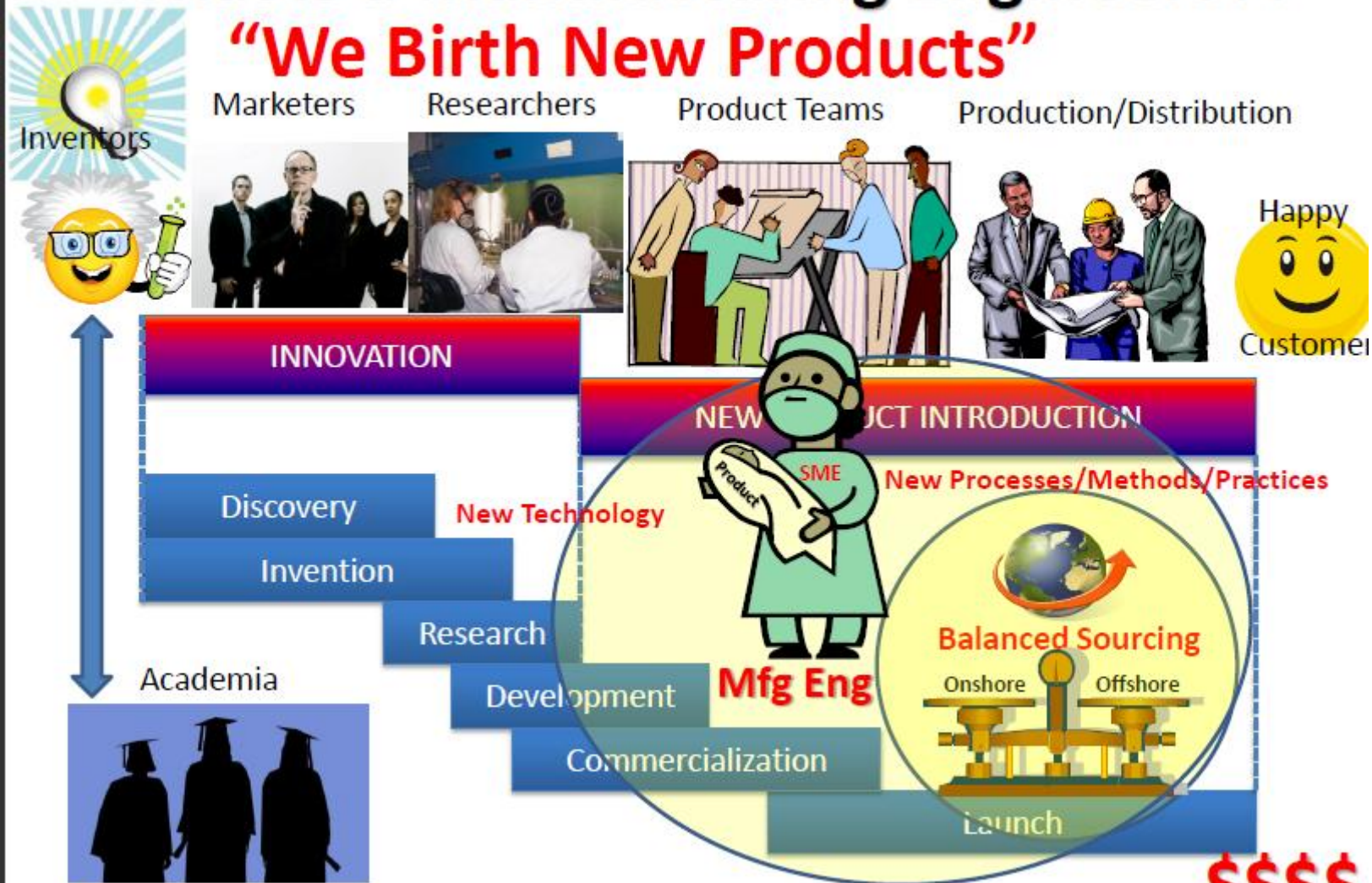
# Mechanical Engineers Today

- Engineers are still the birth of new and better products
- As we know, a process must be followed
  - The discovery
  - The invention
  - The research
  - etc.
- In concert with all this, is a team of people working together for the better good.



# What is a Manufacturing Engineer???

## "We Birth New Products"



How do you match up with this?



# 7 Essential Systems

| Number | Type of System                        | Don't Have | Manual (spreadsheets too) | Computerized | Integrated to |
|--------|---------------------------------------|------------|---------------------------|--------------|---------------|
| 1      | Engineering software name and version | Y N        | Y N                       | Y N          |               |
| a      | scheduling                            | Y N        | Y N                       | Y N          |               |
| b      | change management                     | Y N        | Y N                       | Y N          |               |
| c      | Label system - production             | Y N        | Y N                       | Y N          |               |
| 2      | Accounting software name and version  | Y N        | Y N                       | Y N          |               |
| a      | time clock                            | Y N        | Y N                       | Y N          |               |
| b      | job costing                           | Y N        | Y N                       | Y N          |               |
| 3      | Inventory                             | Y N        | Y N                       | Y N          |               |
| 4      | Purchasing                            | Y N        | Y N                       | Y N          |               |
| 5      | Order entry                           | Y N        | Y N                       | Y N          |               |
| a      | packing system                        | Y N        | Y N                       | Y N          |               |
| b      | transportation                        | Y N        | Y N                       | Y N          |               |
| c      | label system - packing                | Y N        | Y N                       | Y N          |               |
| 6      | CRM                                   | Y N        | Y N                       | Y N          |               |
| 7      | Communications                        | Y N        | Y N                       | Y N          |               |
| a      | office/email                          | Y N        | Y N                       | Y N          |               |
| b      | telephone                             | Y N        | Y N                       | Y N          |               |