Operation Marketing Gurus

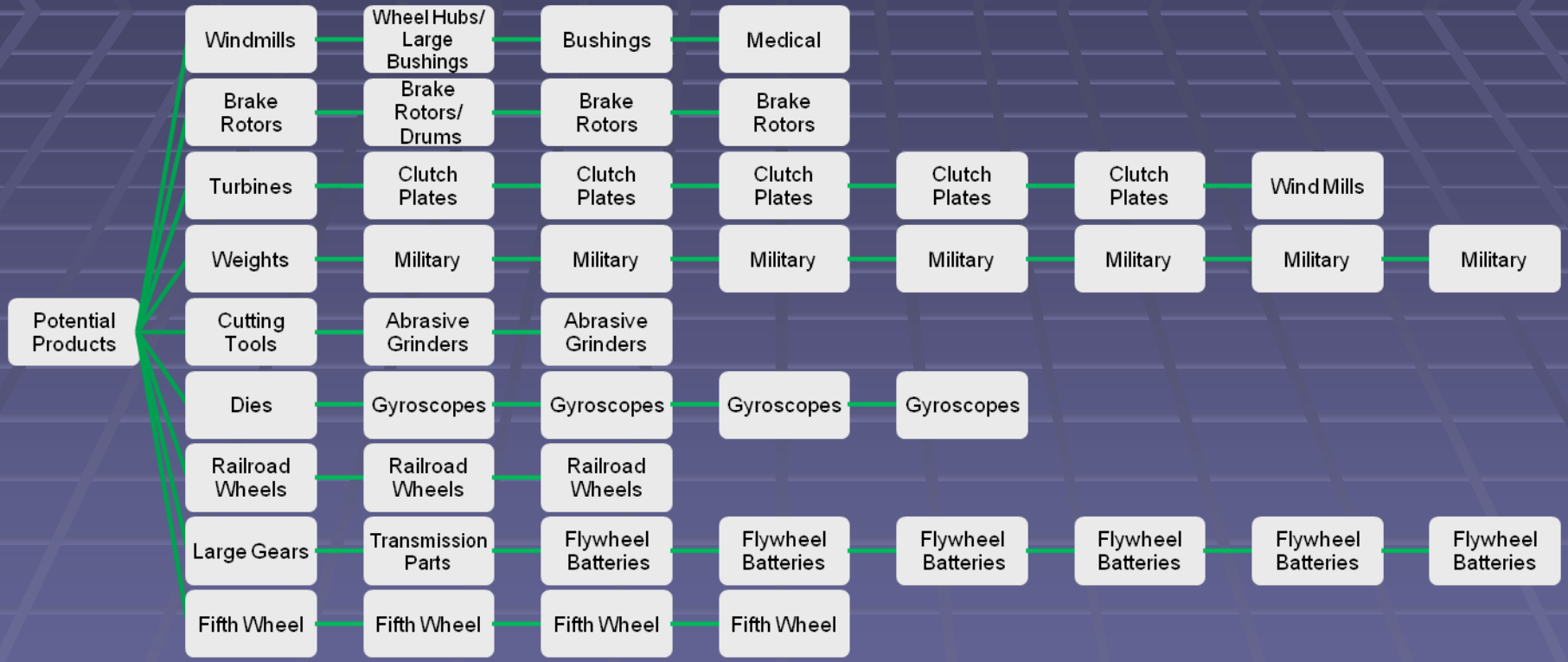
IPRO 346

Engine Flywheel Market Research & Business Strategy

Problem Statement

- DACO Incorporated is a precision machining company that specializes in flywheels and pulleys.
- A large percentage of their sales are to only a small number of companies.
- We are to research new products, and locate new customers based on their manufacturing capabilities.

Chart Illustrating our "Mining Process"



Goals

- We have identified three main goals

  -Research new products for existing customers

  -Find new customers for existing products

  -Develop new products for new customers

Opening Strategies (Pre-DACO Meeting)

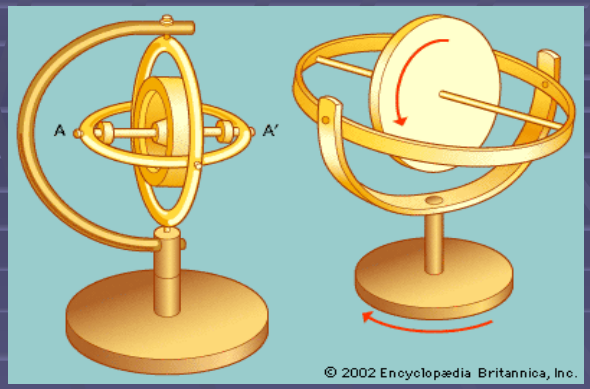
- Potential new customers/marketing strategy Cat, Deere, Mercedes Benz Auto

  Tim, Dan, Jay, Jelena

- List of companies that make flywheels—see what else they make
- What products require precision machining?

  Zack, Kara, Mike, Eric, Hasan

Example of Initial Organization



- **Gyroscope**
  - -Two types: angle gyros and rate gyros
  - -Applications: Aviation, Maritime, Electronics
- **Military**
  - -Tanks: wheels, sprockets and turret
- **Gears**
  - -Anything big
- **Kinetics**
  - -Use large flywheels to store kinetic energy to be used as electrical energy.
  - -More efficient than chemical batteries
- **Railroad Wheels/Pulleys**
  - -Who manufactures wheels?
  - -How many?
- **Bushings**
  - -Large # of companies that make bushings
  - -Mostly small

Agenda for First Visit to DACO

- Familiarization – Operations: Plant, equipment, capability
- Contact/communication
- Steer us towards what they want us to do
- Marketing Info
  - Market share (for flywheels?)
  - Customers
  - Competition
  - Promotional activities
  - Ideas so far
  - How do they interact with customers/how are they selling?
    - Internet
    - Sales representative
    - Direct sales

Progress at Midterm

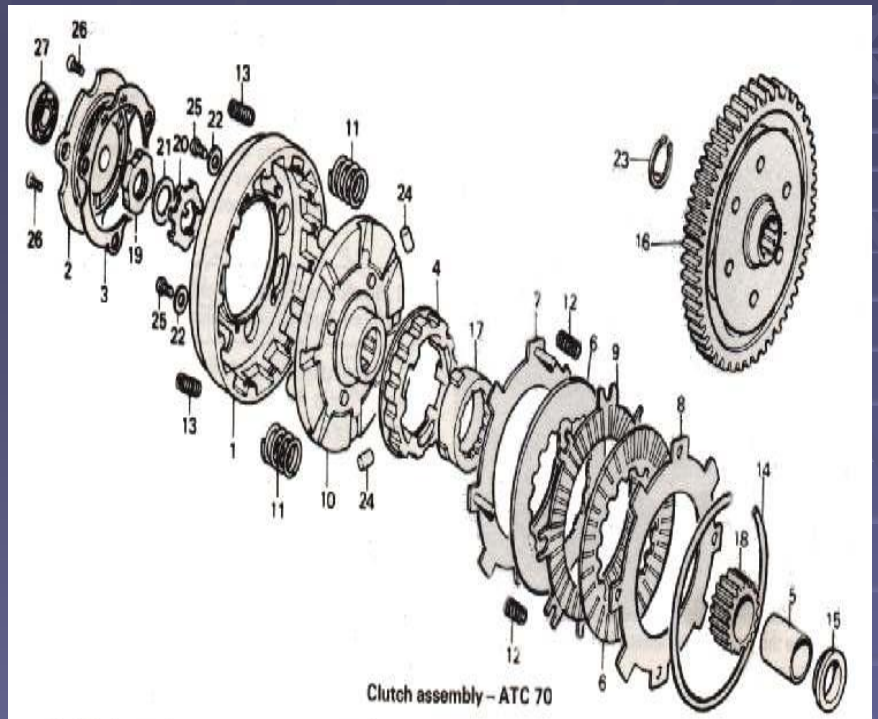
- We researched many products, and presented the results to DACO
- After more research, we narrowed down to three major product groups
  - -Military Vehicles (Eric, Tim, Dan)
  - -Clutch Plates (Jay, Hasan, Kara)
  - -Flywheel Batteries (Zack, Mike, Jelena)
- Preliminary market research was completed on each possibility

Research Methodology

- Competency
- Ideas
- Distilled ideas (Battery, clutch, military)
  -Learn about industry
  -Suppliers
  -Potential
  -Barriers to entry
  -Sale technique
  -Build strategy
  -Develop tactics

Dropping Clutch Plates

- Uncertainty in the future of the market
- Large Barriers to Entry
- Machining Issues



Clutch assembly – ATC 70

1	Clutch outer drum	8	Plain plate	15	Shouldered collar	22	Washer – 4 off
2	Clutch outer drum cover	9	Friction plate	16	Primary driven pinion	23	Circlip
3	Outer drum cover gasket	10	Drive plate	17	Drive gear sleeve	24	Plunger (roller)
4	Centre boss	11	Clutch spring – 4 off	18	Primary drive gear	25	Screw – 4 off
5	Collar	12	Spring – 2 off	19	Peg nut	26	Screw
6	Plain plate	13	Spring – 2 off	20	Tab washer	27	Bearing
7	Locator plate	14	Circlip	21	Washer		

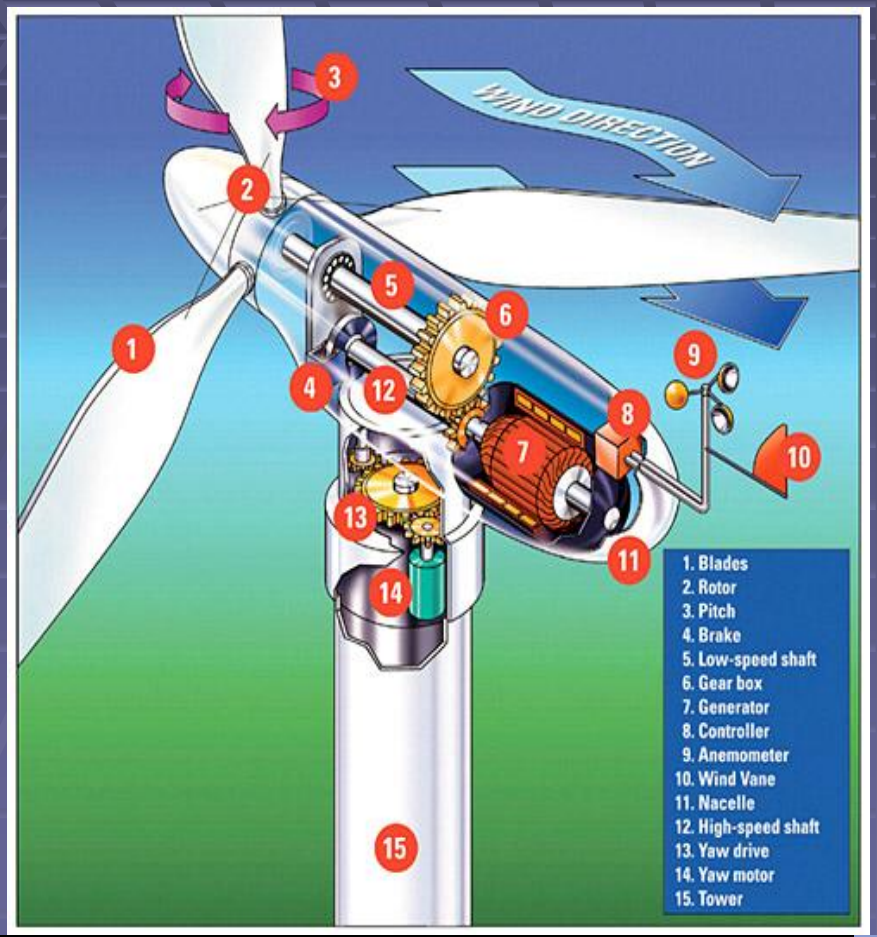
Re-Examining Windmills

- At DACO's insistence, we re-investigated the wind industry

  -Market Research

  -Capability

Wind Turbine



- Gear Box

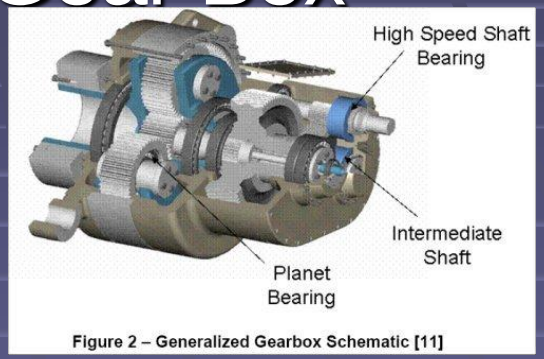


Figure 2 – Generalized Gearbox Schematic [11]

- Yaw Drive

Windmill Research

- Determine if market worth can justify pursuing a product
- Learn about the parts of the windmill that DACO can produce
- Develop tactics for DACO's entry into the market

Results

- **Clutch Plates: contacted several companies .**
  -Market seems very shaky and controlled by few.
- **Batteries**: developed contact with a few companies
  - Carbon fiber “wrench in the gears”
- **Military**: Sales techniques for government contracts
  -What kind of opportunities are there?
  -CCR – Central Contractor Registration

Obstacles

- We encountered many obstacles along the way, which include:

  -Meeting with DACO being delayed several times

  -Initial research was done with limited company information

  -Product list was altered along the way

  -Vast number of products that could be made

  -Difficulty reducing down to a manageable number

  -We found that many companies now use a method of winding carbon fiber to manufacture their flywheels for high speed applications.

  -A lot of time and energy was spent in clutch plates before we found it wouldn't be a viable option

  -No one on our team had any sort of marketing experience

Any Questions?

Special Thank You

- Bruce Lindgren, President of DACO
- Ryan McCann, Director of DACO Human Resources
- Adam Ochsenschlager, Director of DACO Marketing
- Martin Olson, Vice President of Business Development at Active Power
- Karl Schuetze, Vice President of Engineering at Active Power
- Phil Lewis, Instructor
- The IPRO staff