

Applied Research Technologies, Inc: Global Innovations Challenges

BA5804: Managing the Global Enterprise

Spring 2013 CL2014

Team 3

Applied Research Technologies - 2006

- Emerging technology giant
- Consists of 60 business units; \$11 billion revenue

Healthcare

(Medical Diagnostic
Equipment)

Industrial Automation

(Robotics)

Energy

(extraction, conversion,
transportation, etc.)

HVAC

(Heating Ventilation &
Air Conditioning)

Fostering Innovation & Entrepreneurial Culture

- Successes built on its innovation and entrepreneurship was encouraged
- Decentralized management philosophy
- Push 30% of sales for new products
- Independent R&D teams – US and abroad
- Promote “Tinker Time”
 - Half day a week on other projects

Engineering Innovation & Entrepreneurship

Mech 498/898

1 credit hour

Tuesdays 8am-9:15am



[click here for course description](#)

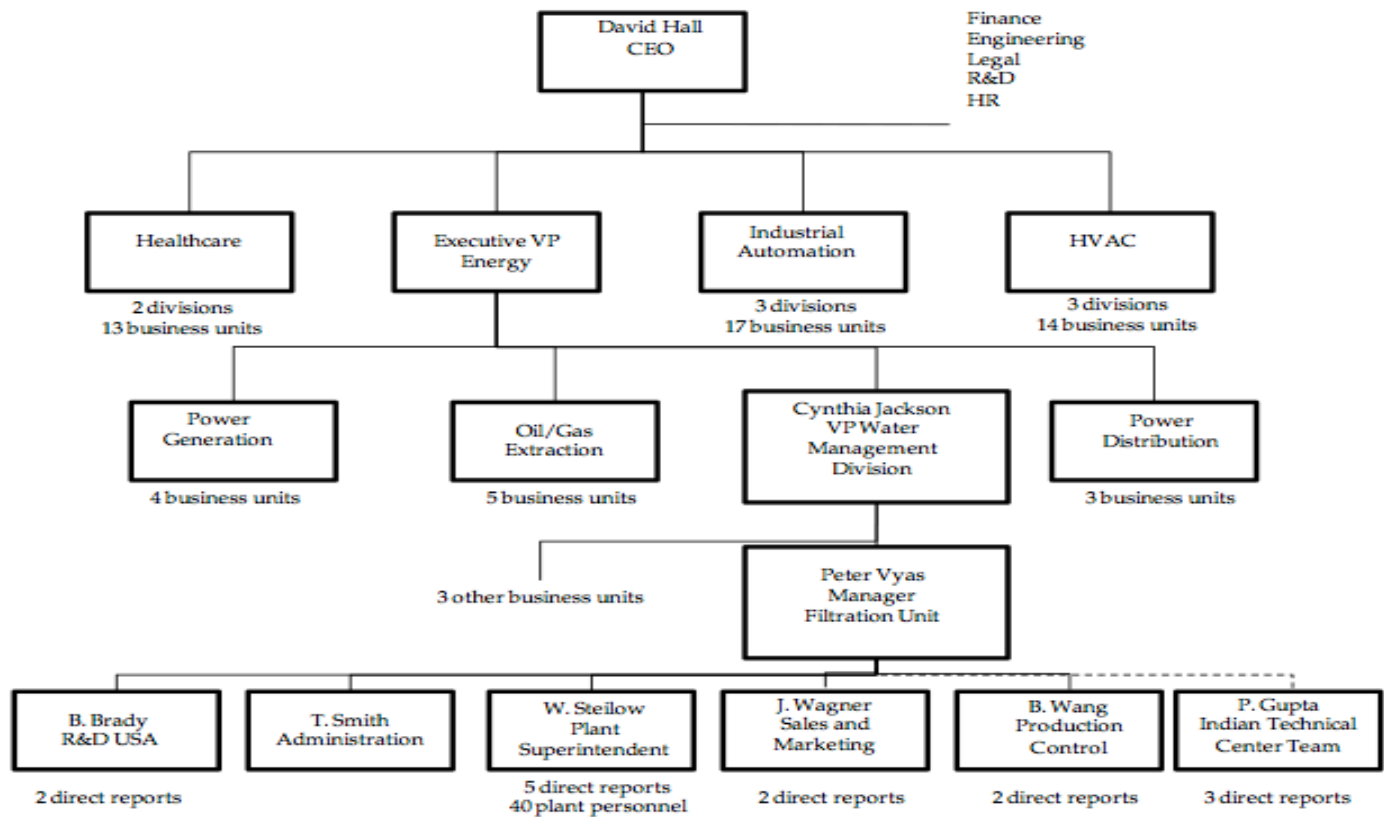
Peter Vyas -

- 32 years old
- Previous role - Lab Manager in HVAC
- Appointed as manager of Filtration unit in 2001
- Seen as an excellent talent manager by his management.
- Initiates series of appointments
 - Recruited Janice Wagner for Marketing Manager position
- Betting on mini-oxidation technology to revive Filtration business unit. (this is his 3rd attempt)

Cynthia Jackson -

- Appointed VP of Water Management as the mini oxidation was re launching for the 2nd time
- Seems to be weary about the Filtration units business prospects.
- Felt that the Filtration Unit was not doing a good enough job planning and assessing their business development

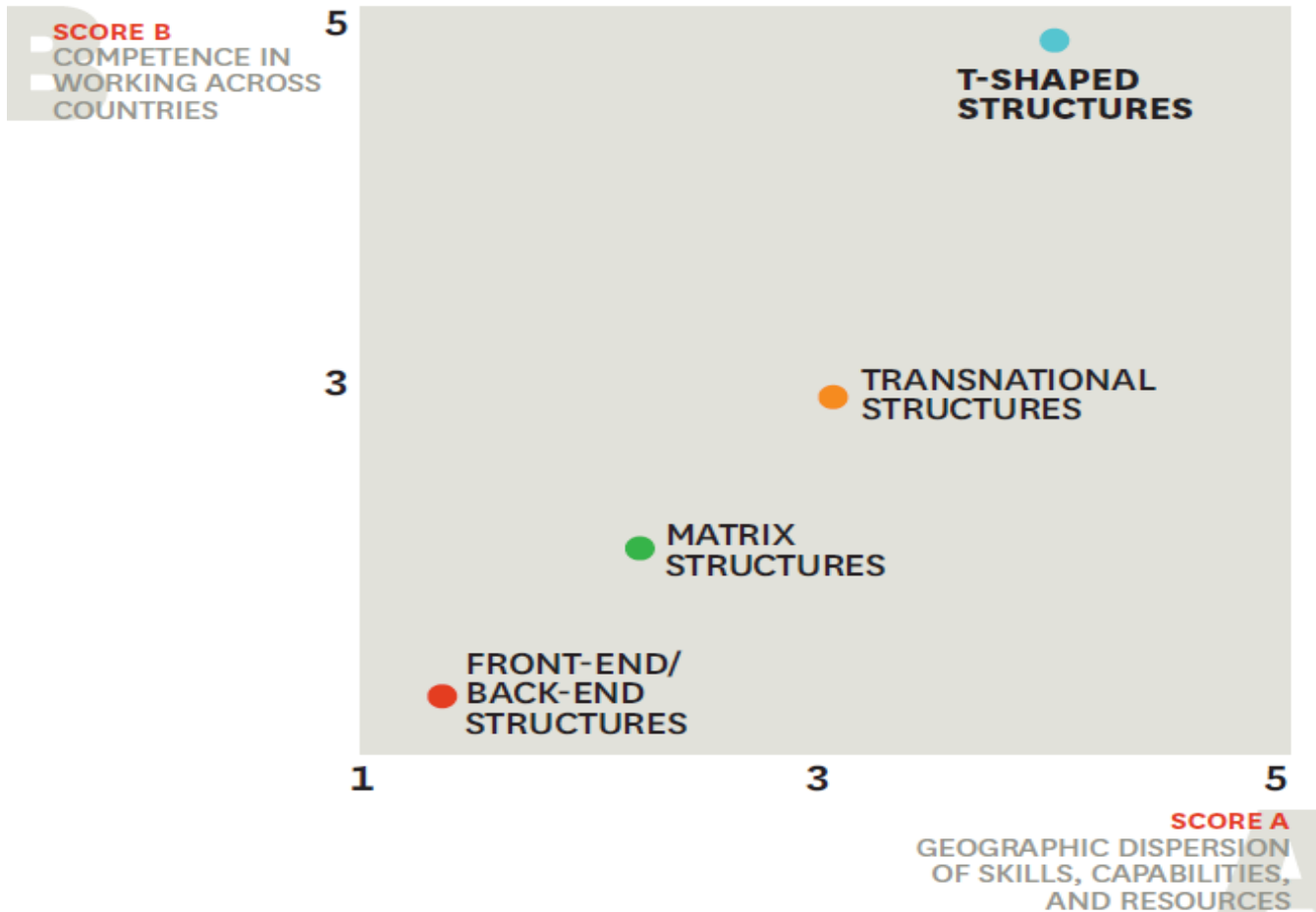
ART Organizational Chart:



Business Structure

- Corporate R&D group – subsidiary in India
 - Independent from Business Units
- Some people in the R&D teams are directly assigned to business units. (as advisors ?)
- Between Front end / backend structure and Matrix
 - Marketing and sales are grouped by product line
 - Centralized R&D in different geographies

Business Structure (cont.)



Mini oxidation – Previous attempts

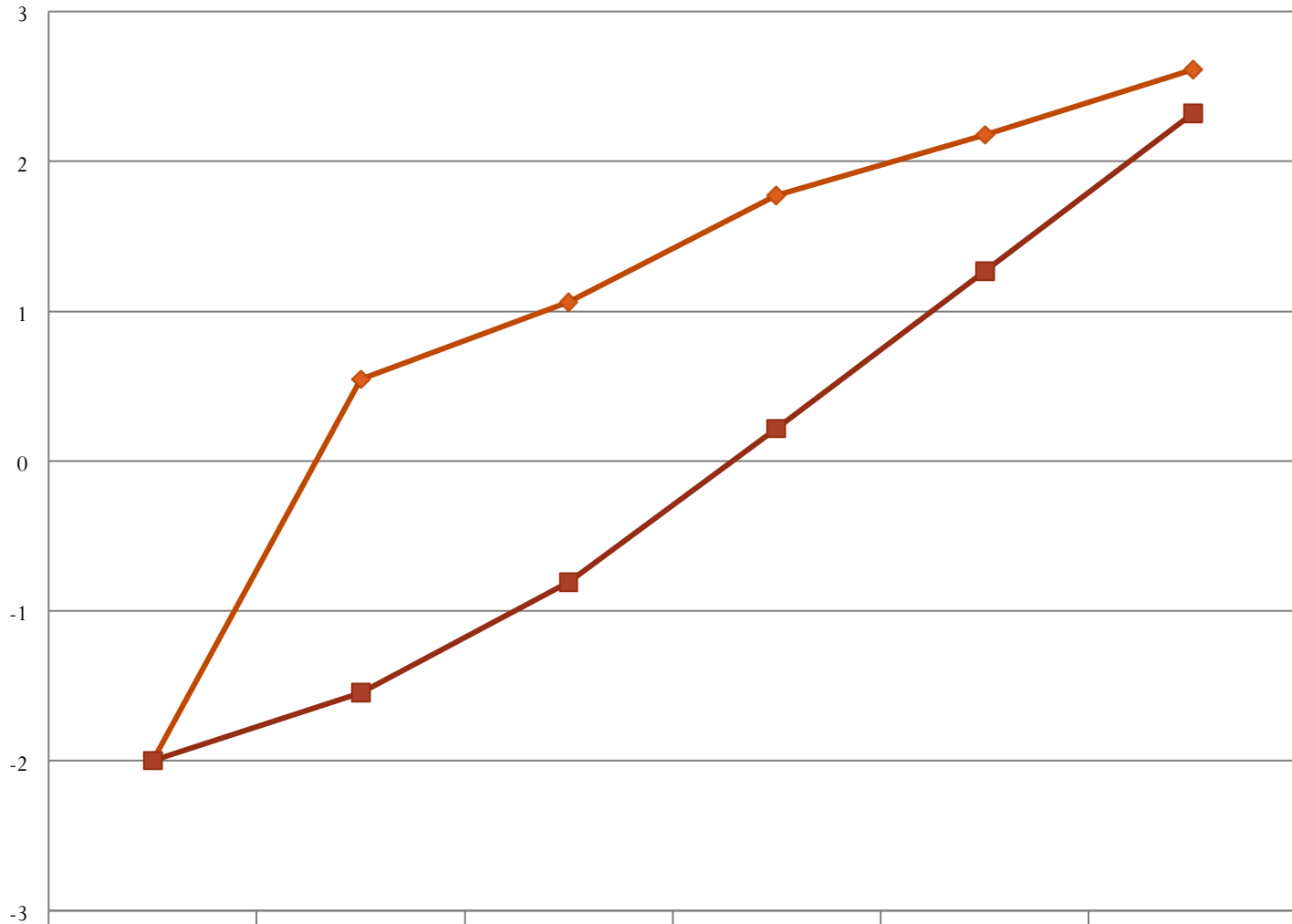
- 1st attempt
 - Safe drinking water for 3rd world countries
 - Paid for by aid agencies
 - Failed due to technical issues
 - Bad odor
- 2nd attempt
 - Same technology aimed at armies and NGOs in western countries
 - Relied on previous technology, odor problem fixed
 - Failed due to high power consumption

Mini oxidation 3rd attempt

- Domestic water treatment for irrigation purposes
- 26% of US is in moderate to extreme drought conditions
- \$2000 target retail price (\$1000 wholesale)
- HVAC Marketing relied upon to succeed
 - Originally Filtration came from drilling equipment
 - Selling to household consumers needs to be under HVAC branch
 - HVAC is a different branch on the organizational chart
 - Why should HVAC make an effort?
 - As long as the filtration unit is not within the HVAC organizational branch it maintains a high risk of failure

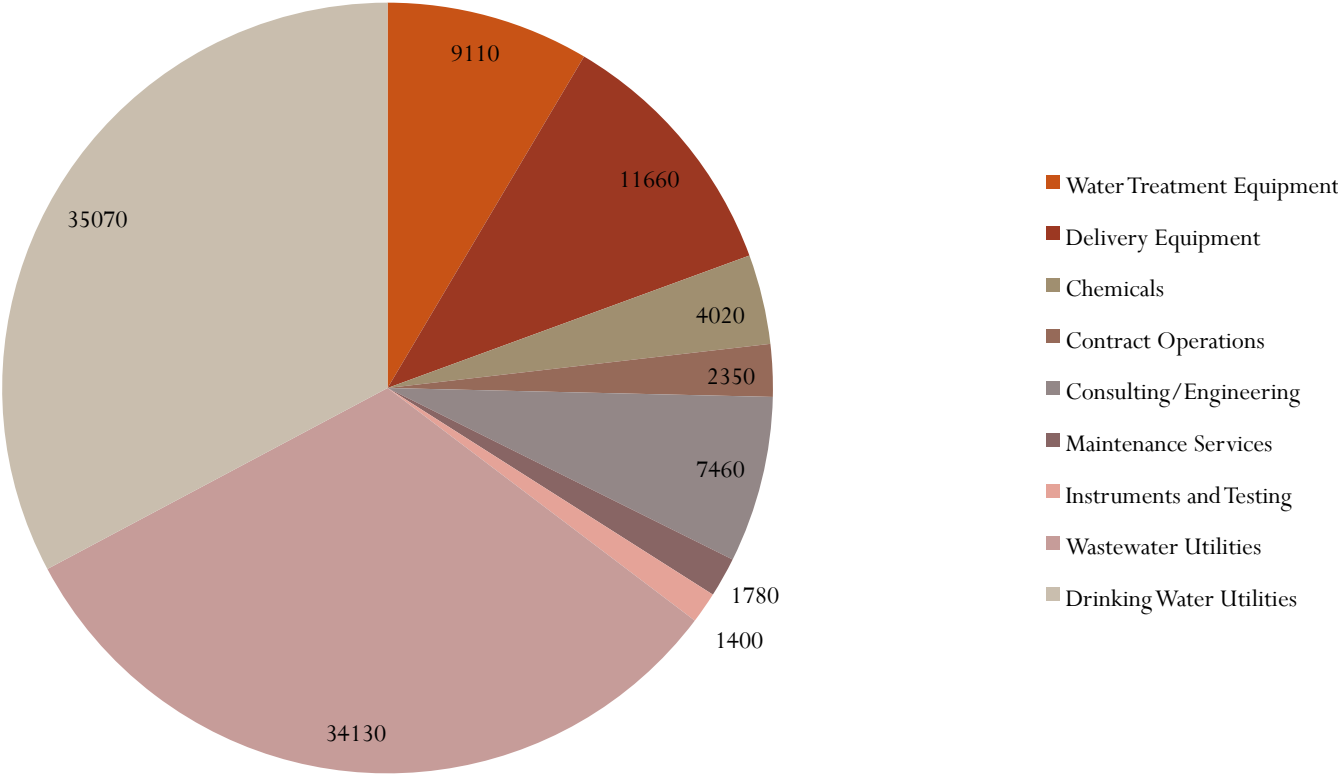
Profitability Breakthrough Analysis

Cash Flow (Millions of Dollars)



	1	2	3	4	5	6
Forecasted Cash Flow	-2	0.545	1.062	1.772	2.178	2.614
Cumulative NPV	-2	-1.54583	-0.80833	0.21713	1.267477	2.317985

The U.S Water Industry (Revenues in \$ millions)



MANAGING CONFLICT OF INTEREST



How effective have Peter Vyas and Cynthia Jackson been in their respective roles?

- Peter Vyas
 - He is able to bring product to the market
 - One trick pony?
 - Not multi-tasking effectively
 - Very good conflict resolver, able to cross culture barriers, and very good talent manager
 - Risk Taker
- Cynthia Jackson
 - Politician
 - Driving organization for more accurate and cost sensitive business plans
 - Promoting culture of joining R&D forces to maximize value proposition to customers
 - Thorough in demanding exceptional business plans
 - Risk Averse

Peter Vyas – Move Forward?

- Performed due diligence on background of products
- Going along with ART culture
 - “No shame in failure when stretching for big objectives”
- All of his eggs are in one basket!
 - Risky Strategy proposition
- Did not review due diligence after 1st and 2nd trials
- The technology matured after 2nd attempt
 - Now has differentiation advantage over competitors
 - First to market
- 3rd try can be considered as capitalizing on knowledge gained from first two tries – **not aligned with energy customer base .**
- **Vyas may be forced to move forward due to his connection with mini-oxidation unit – HAS NO OTHER OPTION**

Cynthia Jackson – Move Forward?

- She will be able to capitalize on the success, yet if it fails it will be her first failure in this role
- Initial complaints – failures were due to technical mishaps not market research
- Focus on marketing forced her to make revisions and fine tune their planning
 - Cutting cost – focus on one of two products (chose RIMOS)
 - Driving for cross R&D cooperation
 - Operating income payoff is within 3- 4 years
 - Pushed for stress test – she received push back from marketing
 - Acceptable for these forecasts
- From her perspective, Vyas might be seen as being locked on one idea.
- **Approve last attempt before scrapping the unit**
- **Request Filtration Unit be transferred under HVAC**
- **Or create joint marketing agreement so that HVAC gets payback?**

What kind of organizational changes would you suggest in order to ensure that emerging market teams are able to contribute to the innovation mandate of the organization?

- Current org chart which is aligned according to products, cannot accommodate adjacent products that are aimed at completely different customer base.
- Filtration Unit should be re-organized to report under HVAC group
 - Coordinate their value proposition with their customer base
 - Inject innovation into HVAC group
- Add “Center of Innovation” corporate body to align and govern entrepreneurship in different business units with their core business competencies.

New Org Structure

