



**Aerospce & Defense**



**Aeroengines**



**Consumer Electronics**



**Healthcare**



**Industrial Product**



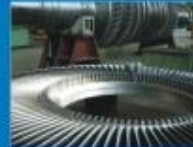
**Marine**



**Nuclear**



**Oil & Gas**



**Power Generation**



**Transportation**

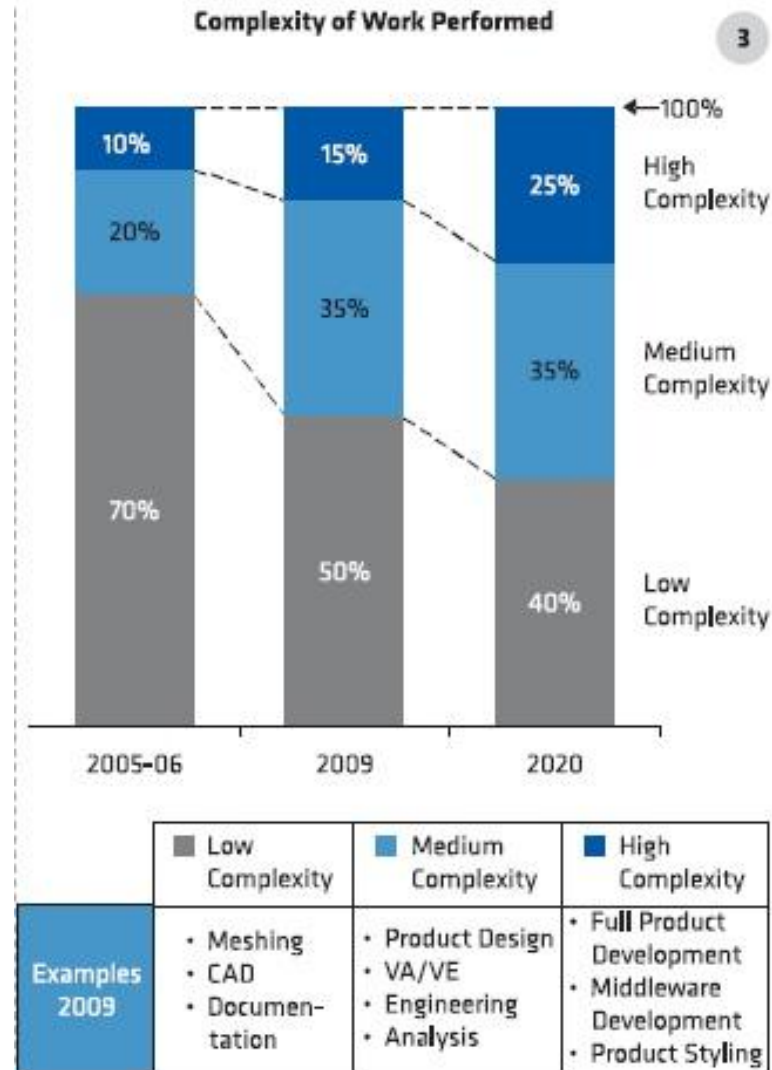
## Career development - an ESO perspective

1. The current engineering outsourcing market scenario
2. What is career ? What is career development ?
3. Changing needs of the individual
4. How can we (academia/industry) contribute ?
5. Some examples
6. Summary

# The current market scenario

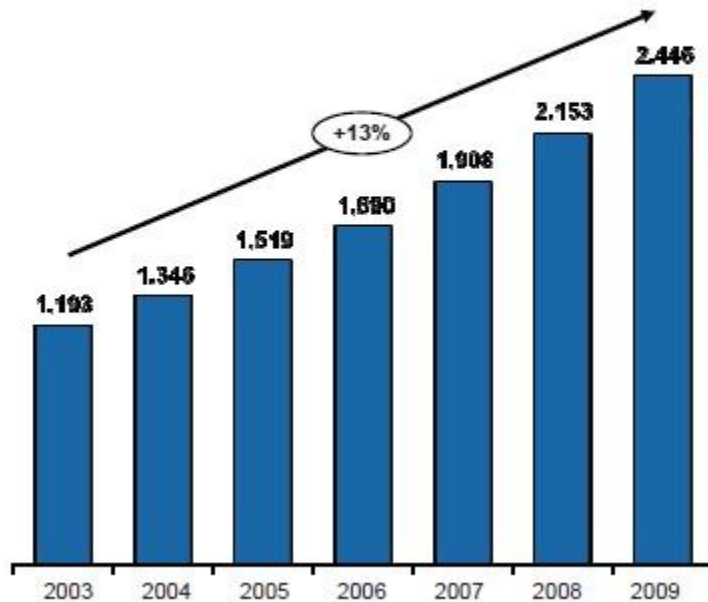
- Offshoring as a necessity has driven work to countries like India
- Automotive, Telecom, Aerospace, Power generation, Mechatronics, Semiconductors
- Typically task based work on CAD/CAE/technical documentation etc

# The changing market environment for engineering outsourcing ...

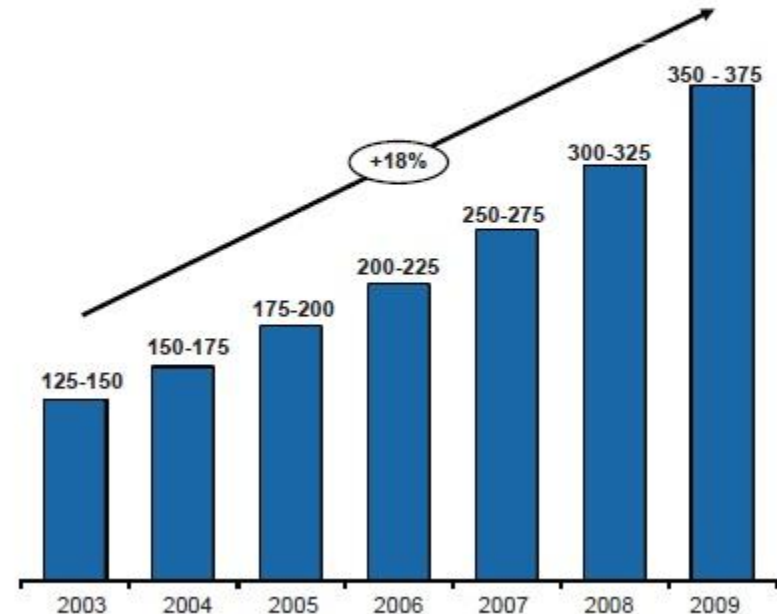


# Growth of engineering student base

**Growth in Number of Engineering Colleges**  
2003 – 2009, No. of colleges



**Growth in Number of Graduating Engineers**  
2003 – 2009, '000s



**Number of PhDs in engineering and related sciences is very low**

# Current challenges for the industry

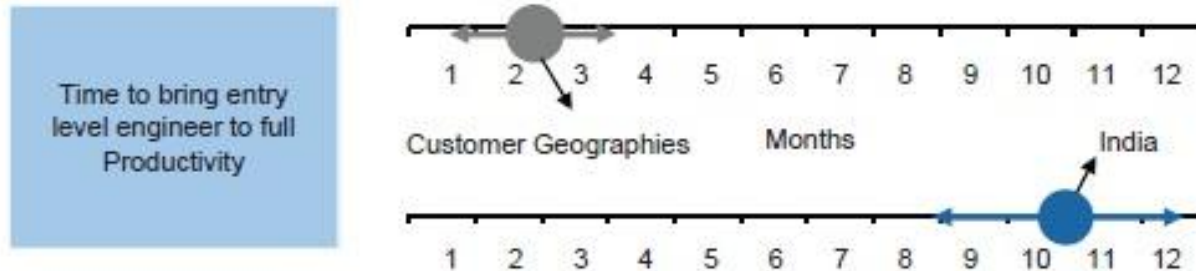
## **Lack of capability:**

- Product/system design, new materials, mechatronics
- Lack of programme management skills, requirements definition, systems integration, testing & certification and manufacturing integration.

## **Lack of quality engineers:**

- Other than top institutes, there is a general weakness in fundamentals
- Minimal practical real world experience

# What has this resulted in ?



Source: Interviews, Booz & Company analysis

- Minimal importance on practical training
- Graduates have very little awareness of actual industry requirements

# What is a career ? What is career development ?

- A lifestyle concept that involves a sequence of work in which one overengages throughout a lifetime.

Career development is a lifelong process of developing beliefs and values, skills and aptitudes, interests, personality characteristics, and knowledge of the world of work.

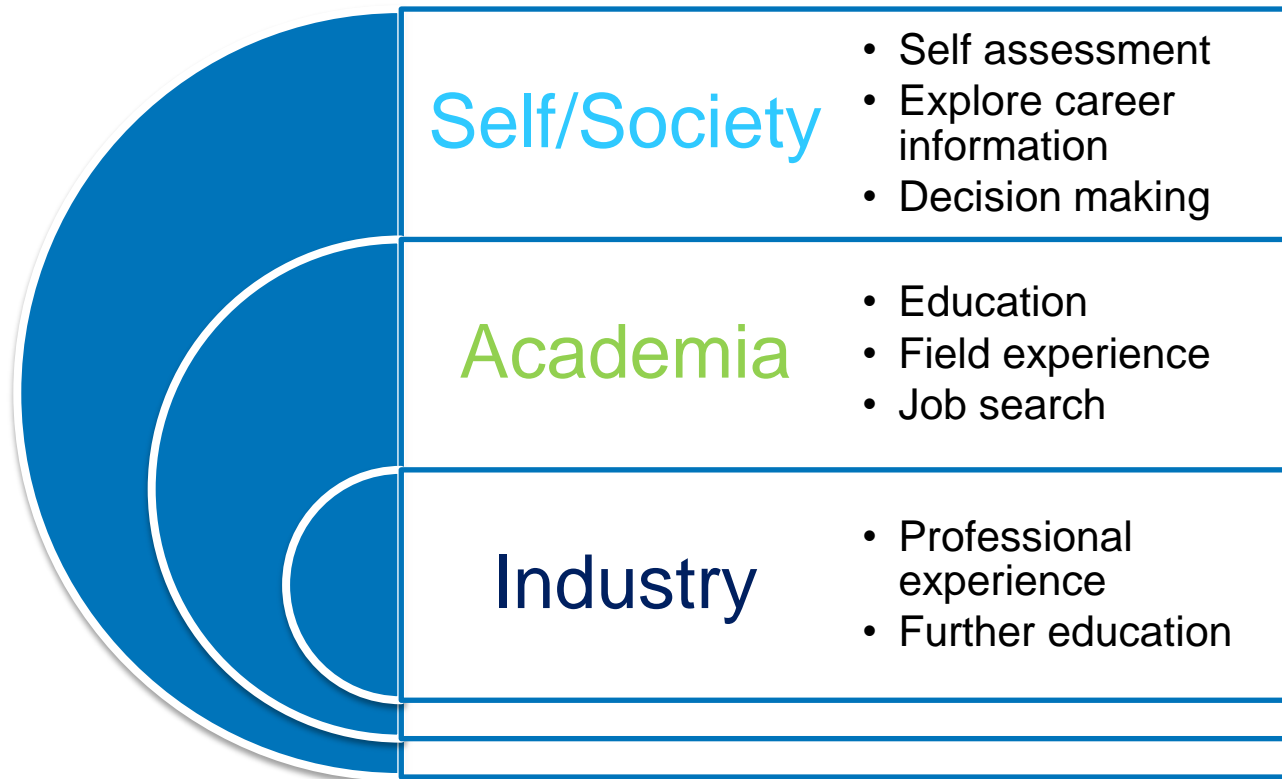
# Today's challenges for the youth .....

Over the last decade, significant economic, social, political and technological changes have made it challenging for young people to adapt to the numerous employment trends. These trends include:

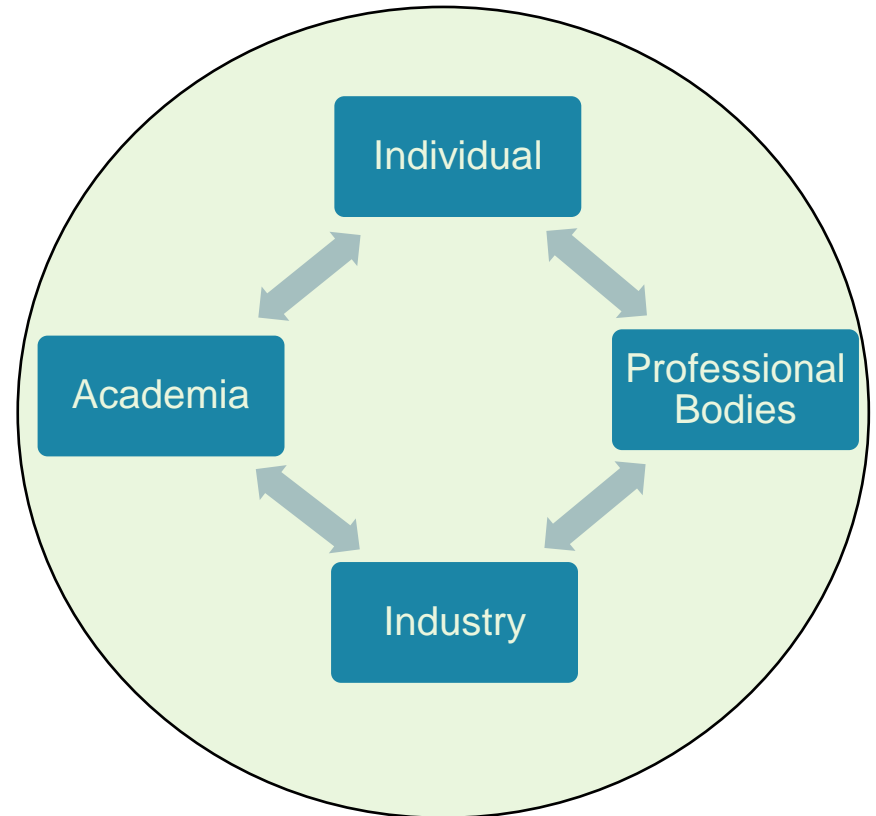
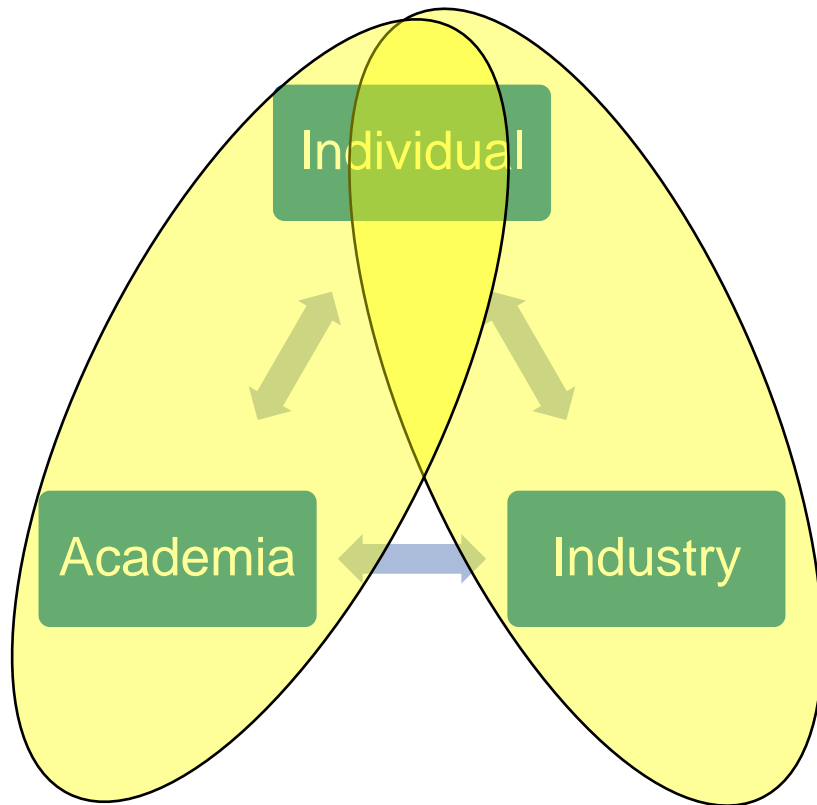
- shift from the production/ manufacturing sector to the service sector;
- increase in computer technology;
- increase in the number of women in the work force;
- increase in the number of job changes that one can expect during a lifetime.

According to a 2010 survey by Hewitt Associates, 77 percent of professionals at large employers say that career development is more important to them now than it was 5 years ago.

# Roles in career development



# Changing trend in career development



# How can we all contribute ...

## **Academia**

- Partnering with industry to offer skills development and internship programmes to engineers
- Faculty development programmes that ensure the faculty is of top quality
- Increasing practical experience through real world projects and investment in lab facilities
- Soft skills development required for the managers of tomorrow
- Improving and updating curriculum-based on current technology and industry trends

## **Industry**

- Higher cooperation with academic institutes
- Identify focused areas of research
- Access to knowledge database
- Shared equipment

## **Professional bodies**

- Can play an important role in giving neutral feedback about quality of students and help in designing courses

# Examples

## OEM's

- Have extensive tie ups with Institutes
- Open up R&D facilities to faculty

## Captives

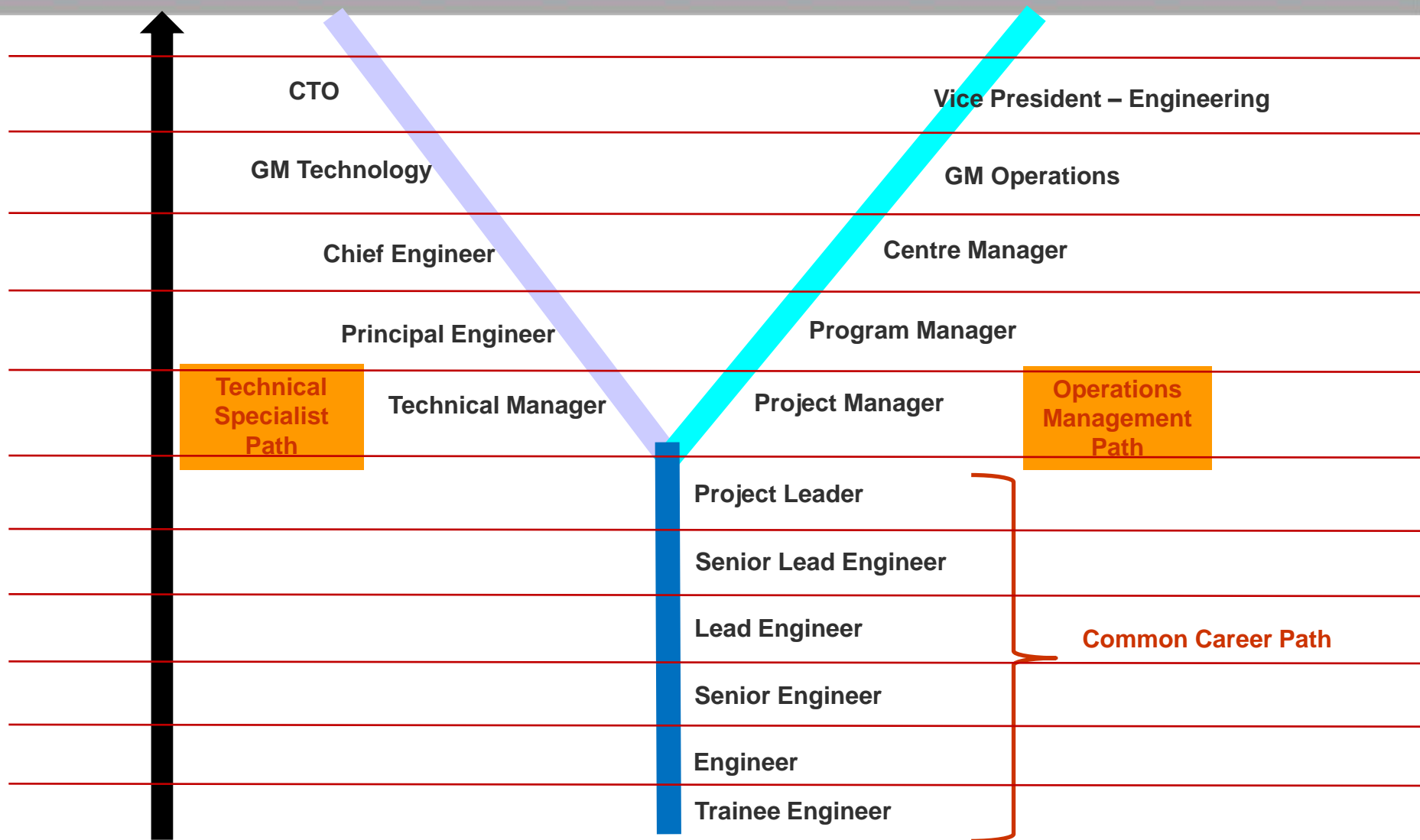
- Bring in expertise from parent companies
- Labs and test facilities development

## Engineering Service providers

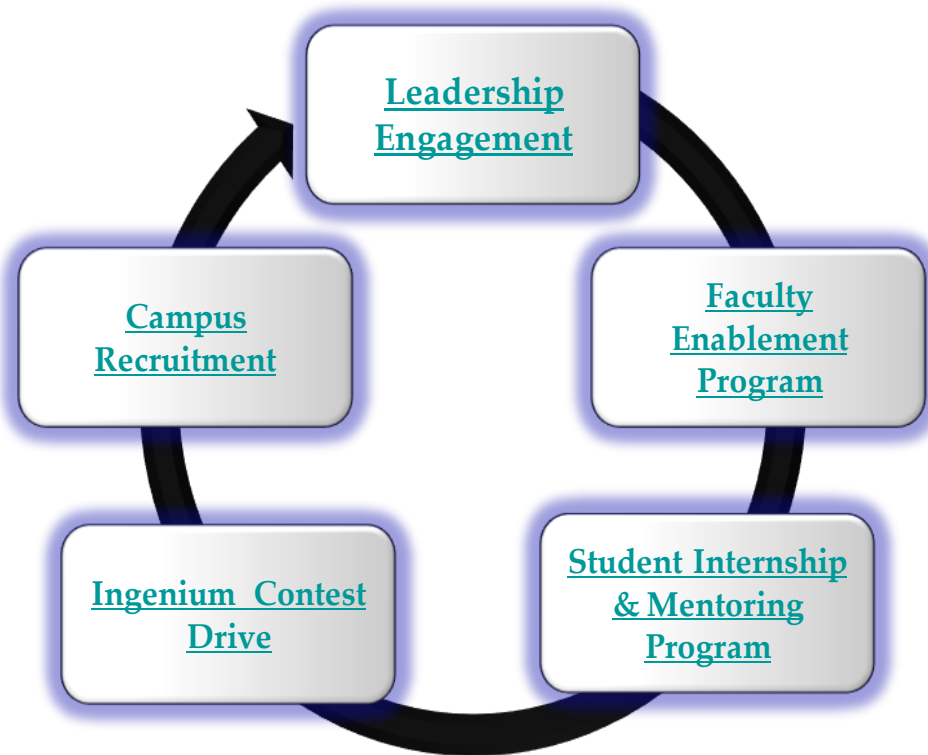
- Specific curriculum development

# Initiatives - Progression Possibilities

## Technical and Operations Management Paths



# University Relationship Programme at QuEST



## Objectives

- 360 degree approach to relationship building
- Engagement with all University stakeholders
  - Students
  - Faculty
  - Management
- Promote Passion for Engineering
- Sustainable and long term engagement - year round

- Market environment is changing rapidly
- Expectations of individuals are increasing
- Industry/Professional bodies must work closely with academia to help in career development of individuals more than ever before

## QuEST Recognition

Ranked No. 1 ESO vendor in Black Book Of Outsourcing 2009

Listed in the Top 10 Engineering Services providers in India by Dataquest, 2009

Listed in the Top 5 Global R&D service provider rating (Aerospace & Defense) by Zinnov Management Consulting, 2009

Winner in Deloitte Technology Fast 50 India, 2009

Winner in Deloitte Technology Fast 500 Asia Pacific, 2009

Best 10 Leaders in Revenue Growth; Best 5 Companies by Industry Focus - Air Transportation (IAOP 2010)

Competitive Strategy Leadership award from Frost & Sullivan

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