



IEEE Engineering in Medicine & Biology Society
Queensland Chapter

Career Pathways in Biomedical Engineering

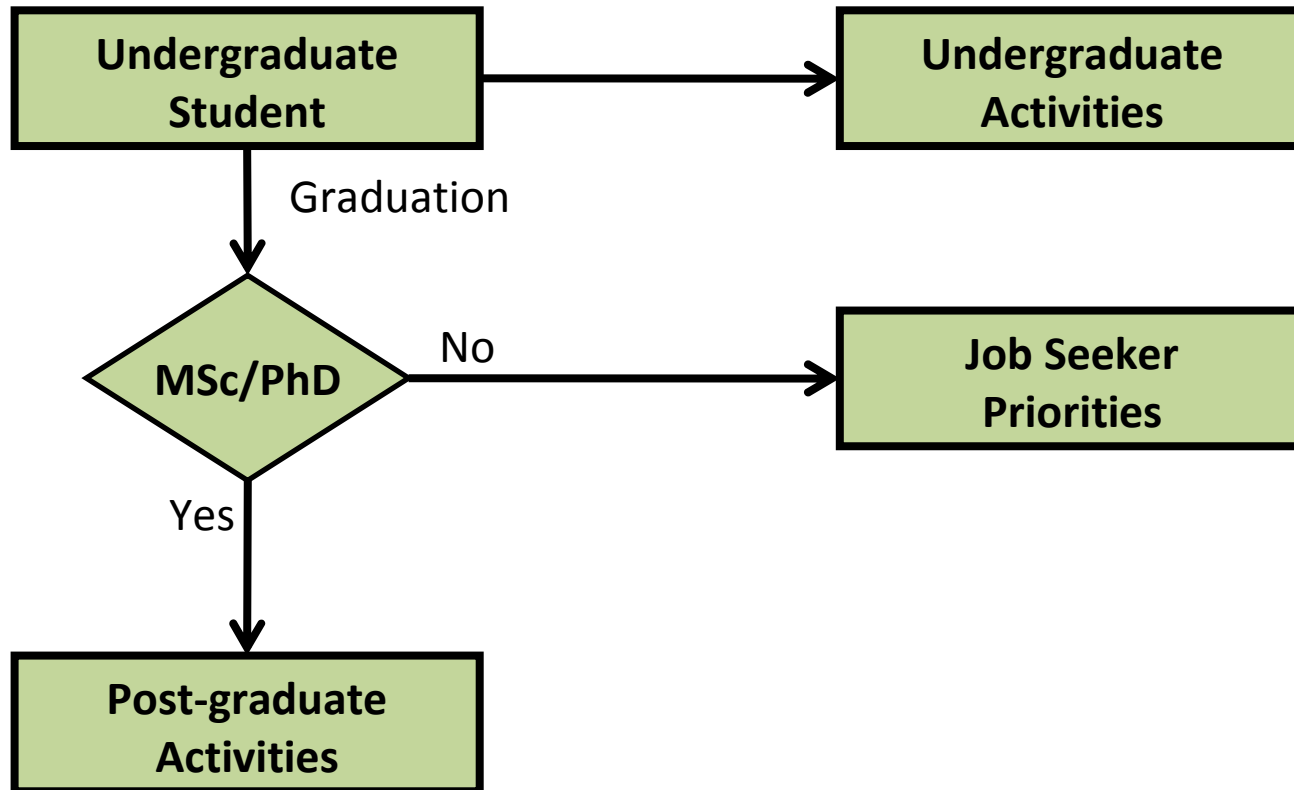
D. Robert Iskander, *IEEE Senior Member*
School of Optometry, QUT



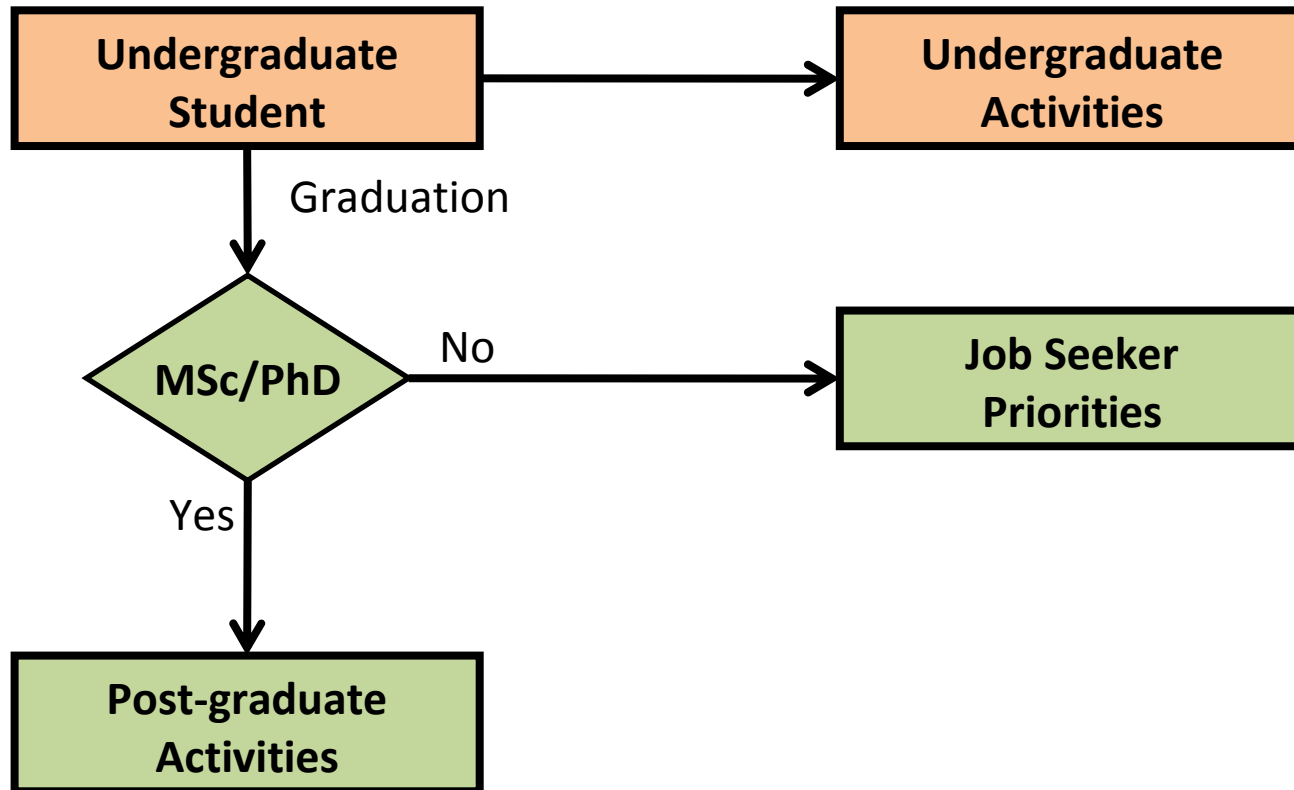
Introduction

- Career and employment information for undergraduate and postgraduate students and early career Queensland engineers involved in biomedical applications
- The IEEE provides comprehensive general resources for its members:
 - ieee.org/web/careers/home/index.html
 - a Career Asset Manager and Navigator,
 - Careers Webinars,
 - Employment Strategies,
 - The IEEE Job Site (jobs.ieee.org/careers/user/login)
- Most of these resources are tailored to the professional engineers and the US market

Early Career Pathway



Early Career Pathway





Undergraduate Activities

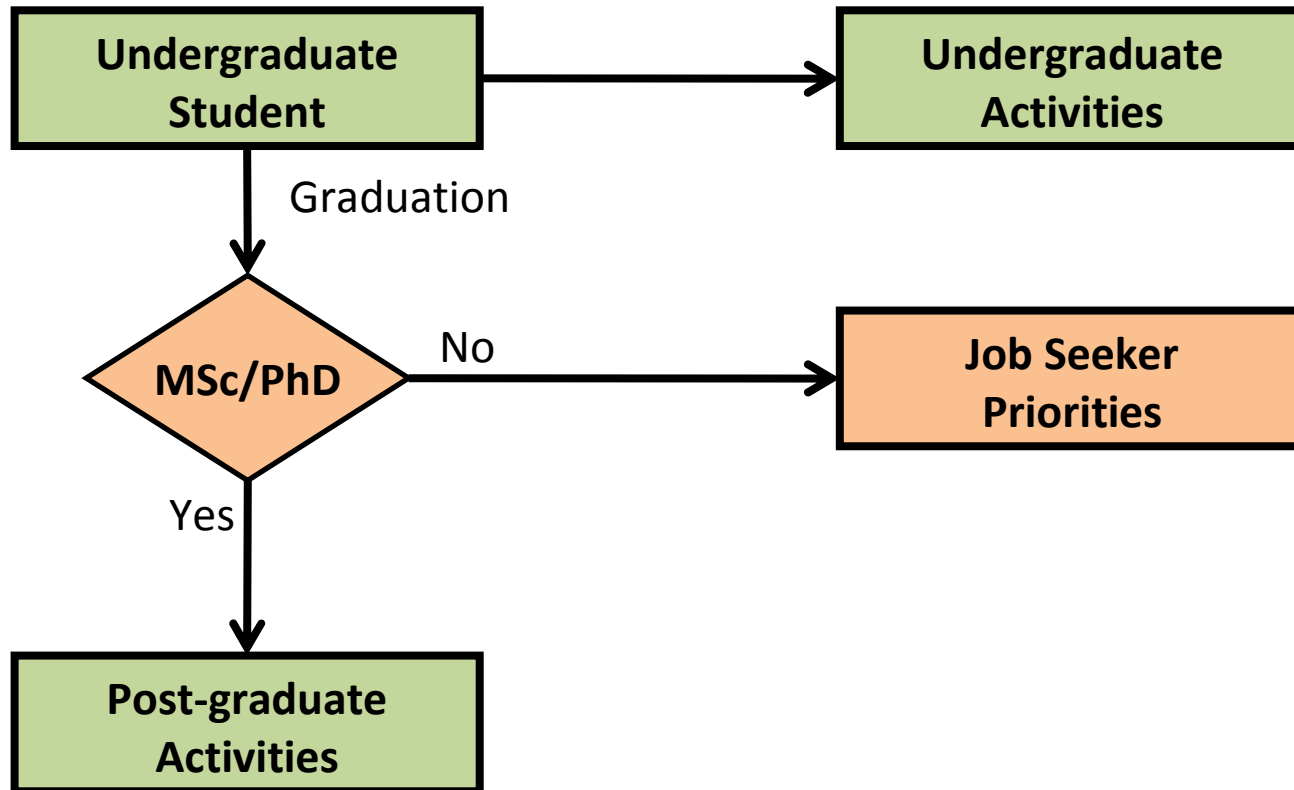
- Engage in / join professional engineering organizations:
 - IEEE
 - Engineers Australia
 - IEEE, EMBS, QLD (embsqld.org)
- These organisations provide
 - A forum to engage in engineering community activities,
 - Opportunities to attend seminars and workshops
 - A platform to learn about local biomedical industries



Undergraduate Activities

- Seek early professional employment:
 - Check with your lecturer/professor for part time employment opportunity
 - Show interest in (voluntary) short summer internships with local biomedical companies
 - Become familiar with Queensland biomedical engineering industry
 - Have your CV/Resume always updated. Clearly indicate your goals in a *Career Objective* at the start of your CV

Early Career Pathway





Job Seeker Priorities

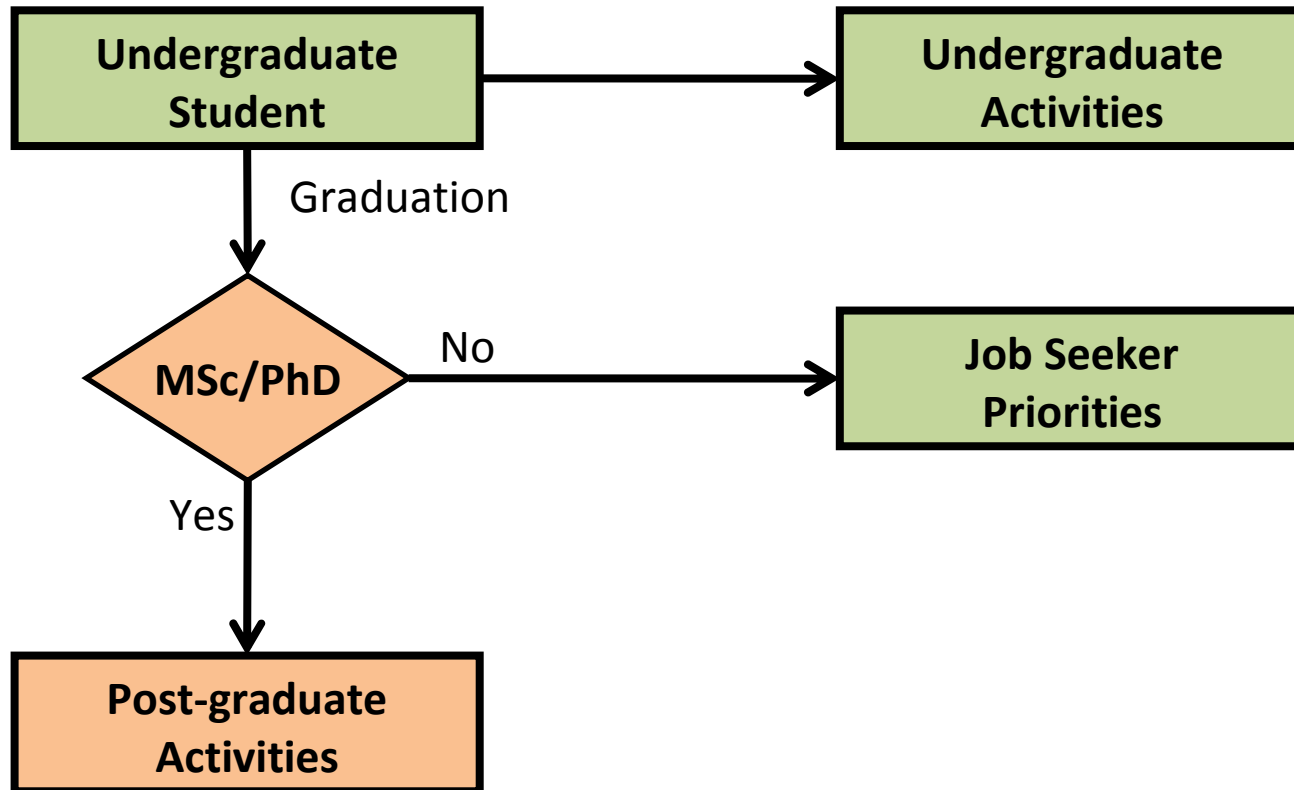
- Job seeker priorities:
 - Updated CV/Resume
 - Clear understanding of selection criteria
 - Understanding of the position description (what the employer wants?)
- Local job sites:
 - Seek (seek.com.au)
 - Biomedical at CareerJet (careerjet.com.au/biomedical-jobs.html)
- International job sites:
 - IEEE Job Site (jobs.ieee.org/careers/user/login)
 - Biomedical Engineer (biomedicalengineer.com)
 - Biomedical at ScienceAlert (sciencealert.com.au/jobs/biomedical.html)
 - Computer Vision at ScienceVision (visionscience.com/vsJobs.html)



Job Seeker Priorities

- Often the CV/Resume is the first point of contact
- Plenty of care should be given to its form and appropriateness for the particular sought position
- There are numerous sites with recourses on how to write a CV
- It is important to view examples and develop an individual form that suits the person and particular job application
- Consider having an executive summary which gives the employer the chance to get a quick overview without going into details
- Regularly update your CV, even in the no-job-hunting seasons

Early Career Pathway



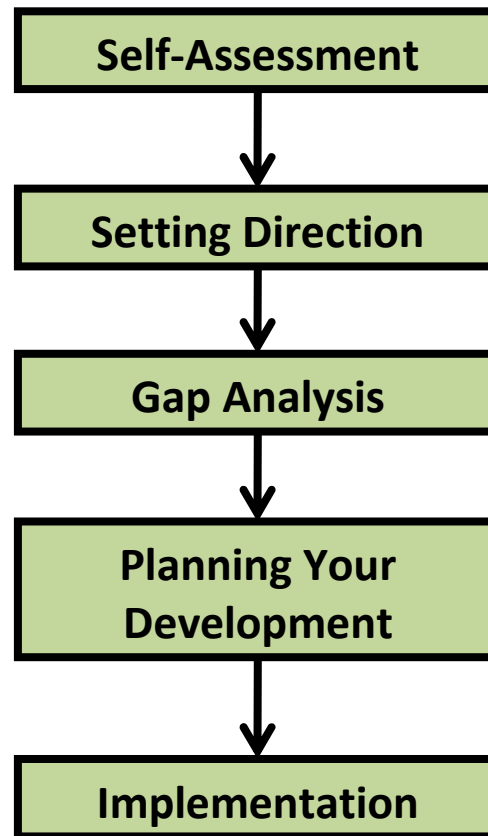


Postgraduate Activities

- Check local postgraduate opportunities
 - Scholarships (APA/APA Industry)
 - Seek industry scholarships funded by biomedical companies
- Check overseas postgraduate opportunities:
 - Academic jobs in UK (jobs.ac.uk)
 - Academic jobs in US (chronicle.com/jobs)
 - Academic jobs in EU (academicjobseu.com)
- Avoid sending SPAM letters to academics around the world
- Target particular academics
- Check the presentation:
 - “The road towards post-graduate studies”
 - (ewh.ieee.org/r10/queensland/embs/RoadTowardsPostGrad.pdf)

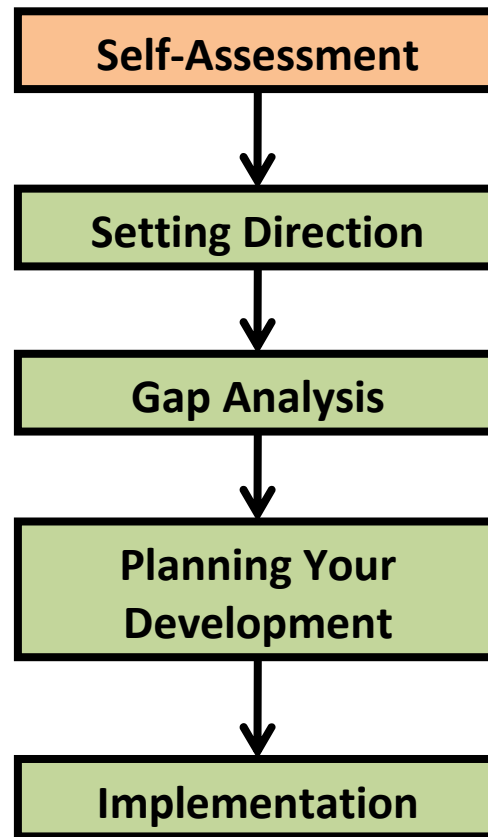


Biomedical Engineering Professional Career Planning





Biomedical Engineering Professional Career Planning

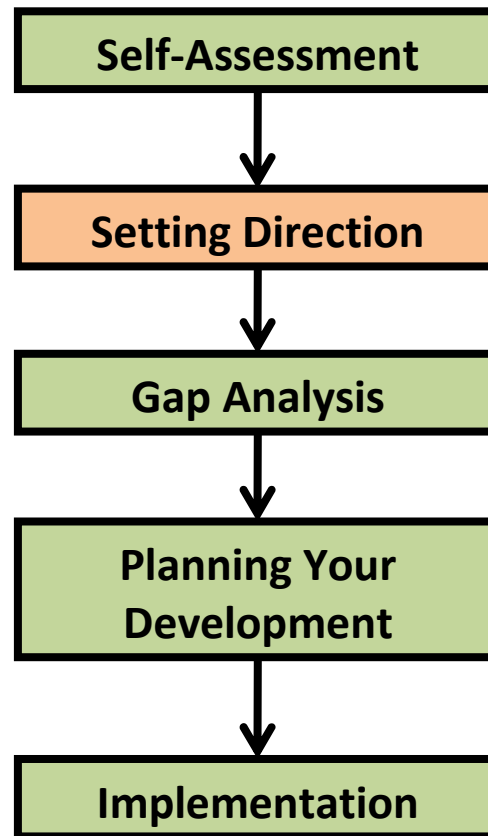




Self-Assessment

- Assessing Current Job Satisfaction
 - What do I enjoy most about my present job?
 - What are the least satisfying aspects of my present job?
- Identifying the IDEAL job (dream or reality)
- Making your current job better
- Identifying your talents
- Analysing your accomplishments
- Identifying your competencies

Biomedical Engineering Professional Career Planning

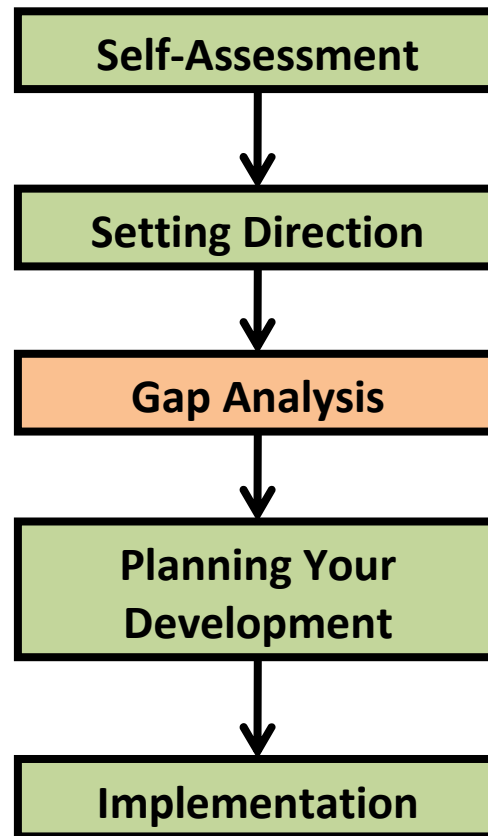




Setting Direction

- Writing vision statement
 - “I will become the director of research for the Company”
 - “I will enhance the competitiveness of the company by shaping its technological direction”
 - “I will be issued more patents than any other engineer in the company”
 - “ I will contribute to the company’s success by developing technologies that reduce country’s dependence on fossil fuel”
- Setting your goals
- Reality check

Biomedical Engineering Professional Career Planning



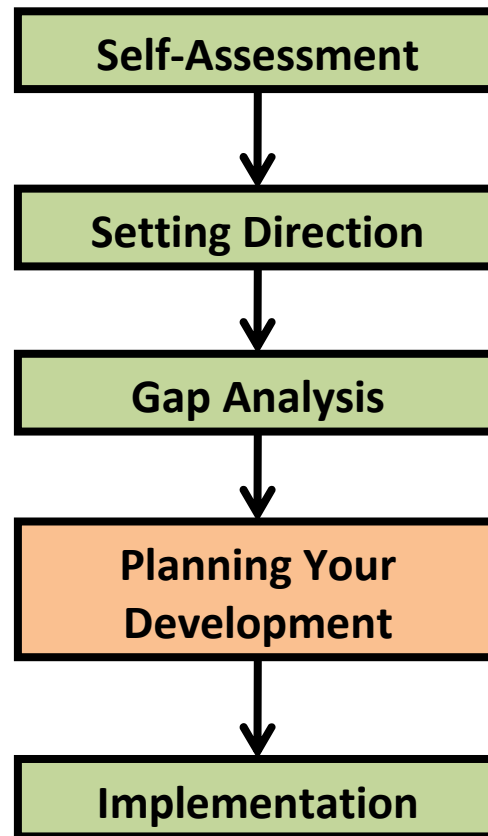


Gap Analysis

- Networking and interviewing
- Researching the opportunities
- Analysing the gaps
 - Required competencies (talents, knowledge, skills, behaviours)
 - Competencies you possess/lack



Biomedical Engineering Professional Career Planning



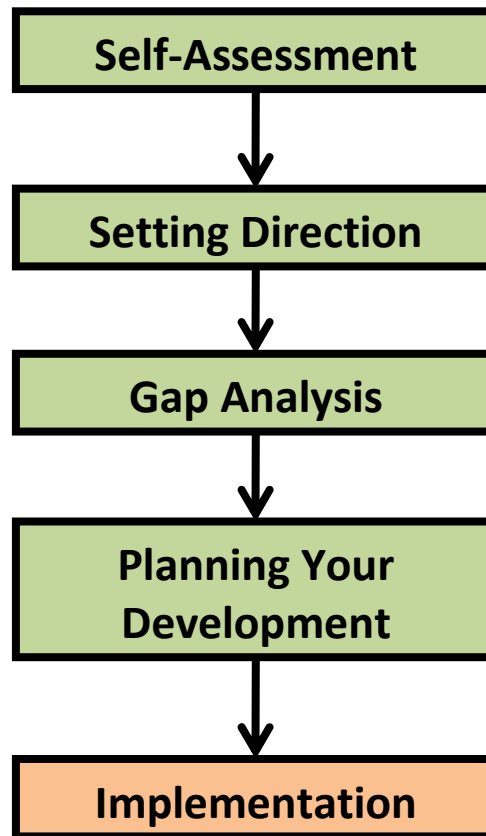


Development Planning

- Growing in your current job
 - Improving the current job
- Developing yourself for success in the next job
 - Short term goals (one to two years)
- Positioning yourself for long-term success
 - Long-term goals (+3 years)



Biomedical Engineering Professional Career Planning





Implementation

- Revising your plans
 - Being able to adapt them to changes in circumstances
- Getting support from others
 - Share your plans with others (getting feedback)
 - Turn your colleagues into coaches
 - Find someone to compete with
 - Get your immediate manager involved



Final Statements

- Use the principle that sustainable career vitality is only possible when your needs, as well as those of your employer, are satisfied.
- If either your needs or those of your organization are not met, you will undermine the long-term relationship with a perception of inequity.

THANK YOU