Engineering Career Development

Panel & Activities!
Planning your career path
Who is responsible for your career?

YOU!
Agenda

- Story Telling
- Planning for the Future
- PE Prep
- Networking & Building Relationships
- Making A Change
- Final Thoughts
Story Telling

4 people from the industry
Cassie Polman

2002  •  Ulteig Engineers
  • Substation Design Engineer

2005  •  Great River Energy
  • Substation Design Engineer
  • Portfolio Project Manager

2017  •  Ulteig Engineers
  • Substation Technical Manager
Nathan Germolus

1988
Black & Veatch
- Engineer 1
- Engineer 2
- Engineer 3

1993
Ulteig Engineers
- Electrical Engineer

1994
Orr Schelen Mayeron Assoc.
- Electrical Engineer

1996
NV5 (Sebesta)
- Project Manager
- Associate
- Vice President
Brianna Swenson

2005
S&C Electric
- Design Engineer I
- Design Engineer II

2008
Alliant Energy
- Substation Engineer II
- Substation Engineer III
- Senior Substation Engineer
- Business Technical Lead – ADMS
Denny Branca

1984

Xcel Energy (NSP)
- Substation Engineer 1
- Substation Engineer 2
- Substation Senior Engineer
- Key Account Operations Engineer
- Manager, Subs Design Engineering
- Director, NSP Engineering
- Director, Emergency Response
- Director, Distribution Control Centers
- Director, Special Projects

2005

Cannon Technologies/Cooper Power Systems/Eaton Corp
- Director, Substation Marketing
- Director, Energy Automation Solutions

2017

ElectroTech Sales
- Director, Business Development
- VP, MN Utility Division
Planning for Your Future

What’s important to you and how to figure it out!
Where to Start

- Know yourself
- Know your manager
- Knowing your organization
- Know your industry
Industry

The WHO
- Utility
- Consultants
- Manufacturer
- Technical Associations
- University
- Regulatory

The WHAT
- Planning
- Design
- Procure
- Construct
- Operate
- Maintenance
- Inspect
Organization

- Who’s who in the zoo?
- Company Organizational Structure
- Who to talk to?
Manager

- What is success for your manager?
- How can you meet manager expectations?
- How do you communicate with your manager?
You

- SELF assessments
  - DISC, Briggs Meyer, 360 Assessments, Strength Finders
- What do you stand for?
- What is success to you?
  - PE
  - Chief Engineer
  - Becoming the CEO
  - Owning an Audi E-Tron
What is a brand?

- A brand outlines your principles and is the value you offer to the people you serve
- A brand outlines your personal strengths and talents and your behaviors
- In effect a brand is your reputation!
Brands in Your Life

- What is your favorite brand?
- What does that brand promise/deliver?
- How is that brand different from competitors?
Think about people you admire
- Who has been an influence in your career?
- Who is the most effective leader you have known?
- Who is the best engineer you have worked with?

How do these people make you feel?

What do you think they stand for?
Activity Time!

- Start your ‘Personal Brand’
Personal Brand

- Cassie’s Example
  - I am a highly intuitive leader who is committed to developing and delivering effective and innovative business solutions. I am courageous in my beliefs and willing to go the extra mile. I am dedicated to inspiring and developing myself and others to achieve our peak performance, enabling Ulteig to be known as the best in the industry.
Planning your career path
Planning your career path
Goal Setting

- “Setting goals is the first step in turning the invisible into the visible.” – Tony Robbins
- Set your goals high and don’t stop until you get there.” – Bo Jackson
- “My goals are so high that I don’t have time to relax in any way, shape or form.” – Kevin Hart
- “Stop setting goals. Goals are pure fantasy unless you have a specific plan to achieve them.” – Stephen Covey
SMART Goals

- Specific
- Measurable
- Attainable
- Realistic
- Timebound
Activity Time!

- What’s your goal?
- Let’s make it SMART!
Professional Engineering License

Teresa Donhaiser, PE–NY, MD
Tanner Voss, PE–MN
What is the PE?

- PE: Professional Engineer
- State Level Professional License
- Required Exams:
  - Principles and Practice of Engineering Exam – PE
  - Fundamentals of Engineering Exam (FE) – EIT
- Attained by Comity
Why get the PE?

- More responsibility
  - Sign & seal project documents
  - Career growth
  - Sometimes a career requirement

- Recognition
  - Proof of business/engineering ethics
  - Proof you are educated in engineering
  - Proof of experience in your work
  - Proof of dedication

- Continuing Education (CEUs)
  - Fun and required. Required Fun.
How We Prepared for the Exam

**Tanner**
- At home
- Started 3 weeks before
- Took 3 full practice tests on Saturdays
- Resources: Colleagues, YouTube, Books, Practice exams, Google
- Study frequency: Every day, 2 hours+

**Teresa**
- On train commute
- Started 3 months before
- Took 4 full practice tests on Saturdays
- Resources: Colleagues, YouTube, Books, Podcasts, Practice exams, Google
- Study frequency: 4 days/week, 2 hours

Everyone is Different!
Exam Prep Tips

- Practice taking the test
  - Time yourself
  - Avoid verifying answers until completion
- Follow NCEES for topics
- Know your references
  - Get a copy of all NCEES recommended standards
  - Use the index!
- Use tabs to your advantage
- Use a binder to make a “cheat sheet”
- Ensure all your material is “Exam day Approved”
Exam Day Tips

- Relax the day before
- Bring practice exams as a reference
- Bring a spare calculator
- Know your exam center policies
- Go through the test and mark problems
  - Ones you do not immediately know
  - Mark by code book
- Don’t leave early
- Use lunch to relax, not study
Forget About Networking

- Networking is too often treated like a transaction
Building Relationships
Focus on Relationships

- Relationships are about…
  - People
  - Trust
  - Two-way Communication
  - Mutual Benefit
  - Common Interests
  - Curiosity in Others
Your Personal Network

- Its who you know…
- and how you know them…
- and what you know about them…
- and why you care about them…
- and where you can take each other!
Mentoring

- A long term relationship focused on supporting the growth and development of the mentee
- How to get a mentor
  - Company programs
  - Ask your manager for a suggestions
- How to make it a success
  - It's takes two, both parties need to be committed
  - Set clear expectations
The Mentor

- Takes a long-range view of your development
  - Help to see the destination
- Some one with experience in your industry
  - If inside your org, not in your direct reporting path
- Not a Coach or Teacher
  - But maybe sometimes
The Mentee

- Share your goals
- Open to feedback
- Ask
- Listen
- Realistic expectations
Teaming

- Team Mentality
  - Most projects involve a team
  - Need to focus on consensus

- Team Work
  - Gain experience in different roles
  - Get more done together than as an individual

- Team Player
  - Self sacrifice
Activity Time!

- Listen, Ask, Be Curious
- Panel Demo
- Instructions:
  - Find someone near you – someone you don’t know
    - Introduce yourselves
    - Someone lead, take 2–3 minutes to learn about your partner
    - Switch roles
Making a Change

When?
How?
I am READY!

- When is the right time?
  - Completion of a big project or initiative
  - Mastery of a position/role
- Say YES to opportunities
  - Take a leap of faith on new/big projects
- Move within a Co or go somewhere new
I am stuck...

- How do you feel?
  - Bad day versus wrong job?
  - Is your manager your advocate or a wall?
  - Do you want to go to work or have to go to work?

- Check your plan
  - On or off track?
  - Realistic expectations?

- Who can you talk to?
  - Get feedback on your performance
  - Get input on your plan
Continuing Education

- Advanced degrees
  - Masters in your discipline
  - MBA
  - Other BS degree

- Certifications
  - PE
  - PMP

- Technical Advancement
  - Writing Papers
  - Technical Presentations
  - Industry associations (ex IEEE, ASCE, etc..)
Community Involvement

- Charity Volunteering
  - Day of Service
- Technical Volunteering
  - MIPSyCON Planning Committee
  - Helping at a Science Fair
- Being a volunteer Leader
  - Leading volunteers is hard!
Getting Hired

- Cover Letter vs Resume
- Using your network
- Interviews
  - You are selling yourself
- Question the Interviewer
Not Getting Hired

- Take a deep breath
- Send a thank you note
- Ask for feedback
- Reflect
- Keep looking

- Don’t Give Up!
Activity Time!

- The Right Job
- Questions for the interviewer
  - This is your interview, what do you need to know to decide if this job & Co is right for you?
Starting A New Job

- Understand/Set expectations of performance
  - 1st 90 days
- Know the Company & mgr
- Manage your transition from one job to another
  - This can affect your brand (don’t burn bridges)
  - Change within Co or a whole new Co (how to cope)
Revisiting Your Plan
Planning your career path

- Engineer 1
- MSEE
- Engineer 2
- Engineer Supervisor
- Engineer 3
- PHD
- Engineer Manager
- MBA
- Engineer 4
- Chief Engineer
- Engineer 5
- Mostly Good Looking
- Sales Engineer
- Vendor Rep
- Industry Expert
- Tenured Professor
- Director
- VP
- Board of Directors
- CEO
- Mostly Good Looking

Mostly Good Looking
Revisiting your plan

- Change your plan as you learn and grow
- Work life balance – this changes!
- Check your plan
  - Does it still fit? If not, change it!
  - Keep the objective in mind, change the plan to suit new information and surroundings
- Communicate your plan
Resources

- John C Maxwell Books
  - 17 Essential Qualities of a Team Player
  - Leadershift
- The Career Guide for Engineers, by John Hoschette
- Crucial Conversations
- The First 90 Days
- Strength Finders
- Center for Creative Leadership, [www.ccl.org](http://www.ccl.org)
Presenters

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HANDBOUTS

- Career Path Template
- Personal Brand
- SMART Goals
- Common Interview Questions
- More Resources
Planning your career path
PERSONAL BRAND WORKSHEET

1. What do you WANT to be known for?

2. What do you think you ARE known for today?

3. What inspires you?

4. What do you offer that sets you apart?

5. What do you want to deliver?

6. What goals and behaviors do you need to build your brand?

Draft Personal Brand Statement:

I want to be known for __________, so that I can deliver __________.
S.M.A.R.T. GOALS WORKSHEET

Crafting S.M.A.R.T. Goals are designed to help you identify if what you want to achieve is realistic and determine a deadline. When writing S.M.A.R.T. Goals use concise language, but include relevant information. These are designed to help you succeed, so be positive when answering the questions.

<table>
<thead>
<tr>
<th>INITIAL GOAL</th>
<th>Write the goal you have in mind</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>What do you want to accomplish? Who needs to be included? When do you want to do this? Why is this a goal?</td>
</tr>
<tr>
<td>M</td>
<td>How can you measure progress and know if you’ve successfully met your goal?</td>
</tr>
<tr>
<td>A</td>
<td>Do you have the skills required to achieve the goal? If not, can you obtain them? What is the motivation for this goal? Is the amount of effort required on par with what the goal will achieve?</td>
</tr>
<tr>
<td>R</td>
<td>Why am I setting this goal now? Is it aligned with overall objectives?</td>
</tr>
<tr>
<td>T</td>
<td>What’s the deadline and is it realistic?</td>
</tr>
<tr>
<td>SMART GOAL</td>
<td>Review what you have written, and craft a new goal statement based on what the answers to the questions above have revealed</td>
</tr>
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Common Interview Questions – Prepare for these and be ready for anything!

1. Tell me about yourself
2. Why do you want this job?
3. Why are you a fit for this job?
4. What are your career goals?
5. Describe a difficult work situation or project and how you overcame it.
6. Tell me about an achievement you are proud of.
7. What are your greatest strength and weakness?
8. Do you have any questions?

Questions to ask the Interviewer – Show your interest and be sure this one fits!

1. What is your management style?
2. How is success measured and rewarded?
3. What is the size of your group?
4. What is the culture of your team?
5. What ability do I have to make change at this company?
1. John C Maxwell Books (there are a lot!)
   a. 17 Essential Qualities of a Team Player
   b. Leadershift
3. Crucial Conversations
4. The First 90 Days
5. CliftonStrengths (formerly known as Strength Finders)
   a. Online Talent Assessment tool
6. Center for Creative Leadership
   a. Website with lots of Leadership trainings & tools for purchase
   b. www.ccl.org
7. 7 Habits of Highly Effective People, by Stephen Covey
8. How to Win Friends and Influence People, by Dale Carnegie
9. Jim Collins Books
   a. Good to Great: Why Some Companies Make the Leap and Others Don’t
   b. Built to Last: Successful Habits of Visionary Companies
10. Your University
11. Your Coworkers
12. Your Manager/Company
13. Your Mentor
14. Google