CA115 Digital Innovation Management Enterprise

Week 3

2022-01-24

Dr. Niall McMahon

These notes will be posted to Loop.

Good Morning

- Thank you for submitting blogs on time.
- Another this week; more at the end of class.
- Thank you for all the emails; a lot of good interactions.
- Additional material - including media references - will be online later today.
- One other thing ...

Talking

- It was a bit disruptive last week.
- We have an exceptionally big class (270+); this is a third bigger than last year's.
- So, I propose ...

No Talking While I'm Talking

- As a courtesy to me and your classmates.
- And in return, I'll try to make the classes interesting enough to attract your attention.

Parallel Zoom Sessions

- This was suggested and given consideration.
- However, I won't do this for a few reasons - not least because these are in-person lectures.

This Week

Monday

- 10am - 10:50am: Lecture/tutorial.
- 11am - 11:50am: Lecture/tutorial.
- 5pm: Online material - no in-person lecture.

Thursday

- 9am - 11am: Same as last week - review material/prepare blog assignments.

Next week, practical session will be in the labs and there will be a multiple choice quiz and we will start to think about group work.

Today

- Re-cap on our introduction to innovation.
- Live blog reviews.
- Introduction to Startups.
- (and maybe) Startups #2.

But First: a Small Note

Writing and Email

- It was super to receive a lot of emails this week.
- Almost all were well-written and polite.
- A couple of points ...

Writing and Email

- Don't forget your audience, i.e. me, your lecturer.
- For example, it's good to begin formally, i.e. "Dear Niall" or "Dear Dr. McMahon". "Hi" is fine since I'm relatively casual about communication but if you're unsure, always default to "Dear".
- When you're writing emails, use each one as practice for good writing.
- In almost every situation, a well-written, polite email will fit best.
- Very good job overall.

Re-Cap: Innovation

Innovation

- Inventors come up with new ideas and create *things*.
- Innovation implies the *practical implementation* of new ideas that lead to *new or improved goods or services*, i.e. new products, new manufacturing methods, new markets, new sources of supply or reorganisation of an industry.
- Innovation is also used to describe new movements in art and other areas of endeavour.
- The words *invention* and *innovation* are sometimes used interchangeably.

How Innovation Changes the World

- Often slowly then quickly.
- The speed of diffusion of innovation depends on the innovation itself, the adopters (people or organisations), how communication of the innovation happens and what's happening in society, i.e. what the other influences are, e.g. video calling over the past two years.
- History is not a neat transition from one thing to another.
- Most innovations take some time to take hold. Some faster than others, e.g. smart phones.

Innovation Ecosystem

- Government often undertakes expensive, unprofitable innovation.
- In US, national laboratories and administrations, e.g. [NASA](#), [NREL](#), [Los Alamos](#)/[Sandia](#) build some of the fastest computers.
- University research is often done in partnership with government and industry.
- Large companies best placed to take risk on unprofitable enterprises.
- Start-ups have ideas and energy. Like shooting stars.
- This is an ecosystem.

Innovation Doesn't Happen in Isolation

On the Shoulders of Giants

- SpaceX's innovation would not be possible without the work of [NACA](#)/[NASA](#).
- Visionaries such as [Wernher von Braun](#).
- Decades of rocket and space technology development by NASA and large corporations, i.e. [Boeing](#) and [Lockheed Martin](#).
- These companies themselves were originally technology start-ups over a hundred years ago.

Important Areas of Innovation

- Slowing climate change and improving our environment.
- Solving the energy crisis.
- Fixing the social experience of the internet.
- Understanding the impact of the rise of artificial intelligence.
- Space, exploration and its utilisation for a better world.

Conclusion

This is an exciting time of renewed positivity about technology.

- It's a time of new discoveries.
- Significant investment in technology.
- Rapid adoption of new technology and ideas by consumers.

Startups

See separate notes for Startups #1 - Starting Up.

Blog, Week 3

Write about an idea for an innovation, specifically in computing or data.

This can be an app or an improvement of any sort - from interfaces to hardware. Your imagination is your only limit here!

Use notes and references for inspiration, if you need any.