



tu-e4040 opportunity prototyping

fall 2021 (tuesdays 14.00 – 16.00)

3 ects

your mentor

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covid considerations

Life is full of risks and uncertainties and especially so given present circumstances. Our primary concern at Aalto and my primary concern as your mentor is to ensure, as best we can, an impactful and safe learning experience for you. Customer facing industries, universities among them, are rapidly rethinking strategies on how to compete. Social distancing measures impact a high touch, improvisational experience like higher education especially hard. Transforming this experience to digital is a long term undertaking and while the technology enablers are there, the ongoing challenge is to figure out what to migrate online, creating the intimate touch and feel of a classroom "on screen", while retaining the ability to impart knowledge and develop talent face-to-face as conditions allow.

This course is an **advanced prototype** – an experiment with an "e" to validate whether if we build a digital version of Opportunity Prototyping, student learning will be positively impacted. Put another way, you will be putting your creativity to work within a course that itself is a prototype in the making.

Operating conditions might change very quickly, but at this moment the evolving redesign of this course will be guided by the following principles:

1. Course encounters will be conducted online through **Zoom**. Traditionally a time slot has been reserved in your schedule – in this case Tuesdays 14.00 – 16.00 – online **meetups** will be scheduled at this time through Zoom.
2. You will note that I had scheduled this class in **Aalto Design Factory**. This was a deliberate decision as I consider this space to be among the most creative and stimulating on campus. If conditions permit, we may have opportunity to meet as a group or in smaller cohorts this fall. We will operate in adherence to Aalto COVID guidelines.
3. A significant part of the course is group related involving me deeply as a team mentor, Students in past years said this was the MOST impactful aspect of the experience. I want to keep this element intact through using **Zoom**. (Although I still don't know how to digitally recreate the experience of conversing with you over coffee in my office!)
4. We are all “kids again” – we are experiencing the world with fresh eyes and creative perspectives. Uncertainty creates nervous energy but, to those who embrace it with creative and open minds, it also creates conditions where transformational opportunities emerge and can be brought to life, albeit in challenging circumstances.

overview

At its core, the entrepreneurial process deals with the dynamic challenges faced by individuals who wish to pursue an opportunity but do not have the necessary resources at hand. Many individuals mistakenly equate entrepreneurship with starting a business of their own. Starting up may very well be the most appropriate way to pursue an opportunity but entrepreneurial process thinking is context blind. “Starting up” happens in established businesses, family businesses, not-for-profits, and even universities, in fact anywhere where opportunity pursuit is bounded by resource constraints.

The design of this course is deliberately provocative and challenges much of the conventional wisdom as to the theory and practice of entrepreneurship:

- 1) In essence, the entrepreneurial process is an exercise in design thinking; how to create a compelling solution to a customer's problem. Perhaps more than any other discipline, design looks at problems from a deeply customer empathetic perspective.
- 2) The linear logic of “have idea”, “write plan”, “raise money” is entirely misplaced. Ideation is defined as a process of forming ideas or images --- note the visual imagery to design disciplines. In my experience, too little effort is placed on creatively exploring how problems can be solved from the outset. Piquing the imagination of others is the hallmark of individuals that can and do push innovation solutions forward
- 3) Pursuing opportunities is a tough endeavor; resource providers are skeptical as are target customers. Anyone can do it but the alignment of personalities, opportunities and resources rarely fall into place as neatly and quickly as aspiring entrepreneurs hope. The fear of failure is often a big inhibitor for individuals to step out of their comfort zone. One of the greatest innovators of all time, Thomas Edison, considered failure as learning insights. In keeping with this spirit, the philosophy of the course is a “failure tolerant creativity zone”.

course objectives

We will introduce you to an approach called **effectuation**, a set of decision-making principles that **expert entrepreneurs** use in situations of high uncertainty:

- 1) Action is initiated based on means available and not pre-set goals
- 2) Limits of investment both in terms of time and money are set up front
- 3) Opportunities are explored and developed in co-creation with outside parties
- 4) Surprise opens up new possibilities if you are open to reshape the opportunity
- 5) The future is shaped by the actions you take

Using available means as a starting point, expert entrepreneurs create an artifact (idea), set limits on how much time/money to spend evaluating the opportunity potential, engage the outside world with an open mind to shape the opportunity with an aim to secure pre-commitments from some to take an opportunity forward. All the while, they are open to insights from surprises they encounter along the way demonstrating a knack for "turning lemons into lemonade".

Expert entrepreneurs are the epitome of intentional learners continually honing their skills and abilities by treating every experience, conversation, meeting and moment as a **learning opportunity**. The fuel that drives their intentional learning is adopting a growth mindset that considers intelligence and capability as traits to be developed coupled with a determination to feed their innate curiosity.

With the aim of stimulating the intentional learner in you, the course objectives are for students to:

- 1) Exercise their inherent "curiosity muscle" on a challenge, COVID19, that arouses fear, is shrouded in uncertainty, and, yet paradoxically full of opportunity potential
- 2) Gain insights into how experienced entrepreneurs go about the task of solving challenges (effectuation)
- 3) Enhance your ability to distinguish between ideas & opportunities
- 4) Develop your ability to communicate with impact and confidence

deliverables & evaluation

Course deliverables involves both **individual tasks (50%) and group project (50%)**

Each participant will need to complete the following:

1. **For the Rethinking Air Travel Creativity Challenge (Week 2), we will examine an industry that has been severely impacted by the COVID19 pandemic, airlines. Based on your experience as an air traveler, what can the airline industry do to increase consumer confidence to fly again? Each student needs to propose at least 20 creative ideas AND from among them pick one providing a convincing pitch as to why it should be taken up and how it is should be adopted. 10%**
2. For the R&R case (Week 3), address the question "To what extent does Robert Reiss behave according to the principles of effectuation?" (3 pages maximum excluding exhibits) **15%**
3. **Watch the "Mission to the Edge of Space: The Inside Story of Red Bull Stratos (2 hour video) at: <https://www.redbull.com/car-en/films/mission-to-the-edge-of-space> - and address the following question: "What insights can aspiring**

entrepreneurs take away from the Red Bull Stratos project to guide their pursuit of entrepreneurial opportunity? (4 pages maximum excluding exhibits) Over the summer we saw two high profile entrepreneurs realize their dreams of flying into “space” ; Richard Branson aboard Virgin Galactic Unity on July 11th followed 9 days later by Jeff Bezos aboard New Shepard! (Week 5) 15%

4. Ideation Learning Diary - to gain insights into the process of ideation I would like you to provide me with a personal (your own words) perspective on how you and your group approached the task of Longevity is the “New Normal” . What worked especially well and why? What aspects did not work well at all and why? What would you have done differently? In my experience, keeping brief notes as you go through the process stimulates and enhances the reflection process. There is no page limit per se but you get out of it what you put into it ! (Week 6) 10%

Longevity is the “New Normal” (Group Task 50%)

The **group task** will be discussed at length in the introductory session but will be focused on the challenges (opportunities in disguise) being experienced in societies around the world as we adapt to a rapidly evolving “new” normal.

“New Normal”

When we speak of normal, we think of something that “conforms” to a standard, common type, or regarded as regular or usual in nature. Adding the modifier “new” denotes a process of change from an existing to an imagined future state. This is exactly the context within which creativity is most needed and fresh perspectives sought.

In the Tipping Point: How Little Things Can Make a Big Difference (2000), Malcolm Gladwell explored how pandemics start. Talk about being ahead of your time, but even he would be surprised by the breathtaking pace of societal change we are navigating as we speak.

I see strong parallels between the COVID19 pandemic and weather forecasting. Meteorologists try and predict the weather based on sophisticated models. The predictive models are “noisy” given the complexity and uncertainty associated with the weather. One prominent meteorologist never used the word guaranteed on air!. Adverse weather events can be very stressful (ask me how it feels when a tornado hits!). Weather is something we pay close attention to as it alters our own behavior (choosing what to wear for example).

“COVID19 Weather Bulletin”

COVID19 fits the bill as an extended adverse event – consider the following:

- Governments worldwide have been responding with relief and stimulus spending that according to Statista (2021) have pushed the Global Government Fiscal Balance (% GDP) from -3,9% (2019) to -13,9% (2020) “improving” to only -8,2% in 2021.
- Combined with a slump in tax revenues, this translates into a worldwide \$10 trillion deficit in 2020 growing to \$30 trillion by 2023 (McKinsey July 2020)

- The speed of COVID vaccine development has been breathtaking. While the early signs are encouraging, the hard reality is variants constantly challenge our ability to vaccinate quickly enough to achieve herd immunity and large parts of the world are still largely unvaccinated. A Finnish company, Rokote is exploring the development of an effective nasal vaccine – this could be a real game changer both in terms of overcoming “injection hesitancy” and as a means for boosting solution capacity if it can be produced at scale and deployed quickly and cost effectively.

- Customer facing industries (travel, leisure, education) have been particularly affected by lockdown and social distancing measures:
 - Finnair's revenue for the first half of 2021 is down 64%, operating losses of almost €300m and an 80% drop in passenger numbers. According to YLE, the tourist industry in Finland took a 40% hit in 2020 which translates into a €7 billion revenue loss.

 - I have not set foot in an Aalto classroom since March 2020. Moving education online proved relatively trouble free but transforming education into hybrid is work in progress, or more accurately discovery in process. The just released UK National Student Survey, student satisfaction hit an all-time low with only 48% saying they were content with the delivery and teaching of their courses this past year.

 - Financial sustainability of universities has also been put into question. Forbes recently released its 2021 College Financial Grades Table assessing the financial health of US universities. The financial impact of COVID was widespread; overall grades for most colleges fell, with almost 1 in 5 (18%) receiving a barely passing grade of D+ or less.

 - The toll on individual mental health and well-being as the pandemic drags on is a widespread problem and a huge stimulus for startups that support individual needs remotely. Some of my former students are involved in a very exciting venture in this space, Meru Health among many others.

 - Like ducks to water, the Finnish workforce adapted and developed an appetite for remote work; 60% want to continue working entirely/mostly from home post pandemic.

 - Speaking of remote, Zoom has “zoomed” – their stock price is up by a factor of 5x+ since the start of 2020. Commercial real estate has “cratered” – IWG's (Regus) stock price is off 30%. If people don't want to or cannot go to the office for health related reasons or prefer to work from home – demand for office space will likely fall. The more interesting creative question to ask is “what is the office for?”

- According to <https://ourworldindata.org/covid-vaccinations> (8 August 2021), 30% of the global population has received at least one dose of COVID-19 vaccine, with more than 4,5 billion doses administered at a rate of 38 million doses a day. **Only 1,1% of individuals in low-income countries have received at least one dose to date.** According to Nature, 11 billion doses are required to vaccinate 70% of the global population but at current rates of production, vaccination efforts in low-income countries won't be able to ramp up until 2023. Progress is being made but we are a long way off to returning to conditions of “normality” – however you want to interpret that term.

The “New Normal” of Longevity

While the pandemic has focused our minds on how quickly and dramatically situations can change, profound transformative forces also appear as powerful undercurrents, one of which being that we are living longer.

In **The 100-Year Life: Living and Working in an Age of Longevity**, Lynda Gratton and Andrew Scott think through some of the implications for what they term “the gift of longer life”. Consider this, my father has a 1:33 chance of living to 100. 28 years later, my odds increased to 1:10. 35 years later, my son's odds improved to 1:5. And females are expected to outlive males. The odds of my wife living to 100 is 1:5. And talk about long odds, my late grandmother lived to almost 109!

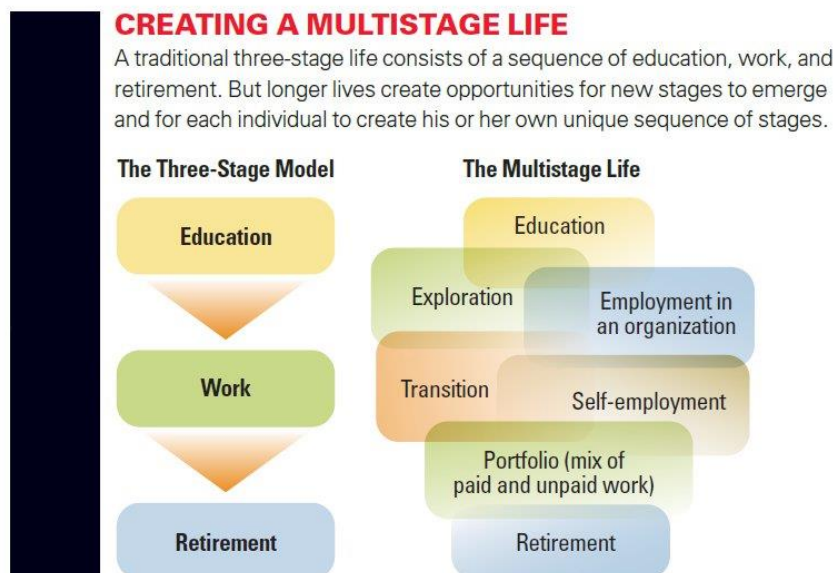
A link to an extract of the book is here:

<https://www.100yearlife.com/resourceposts/read-an-extract-of-the-book/>

Check out your “odds” of becoming a centenarian here:

<https://discovertheodds.com/what-are-the-odds-of-living-to-100/>

Creating what they call a **Multistage Life** is an imperative because there is **more time to fill** (we are living longer and longer), **endless opportunities available to fill that time** and the challenge associated with **financing longer lifespans**, particularly given the systemic and sustained shocks to government budgets of COVID-19. The elements of a multistage life are captured in this visual:



Many aspects of current societal design in developed economies seem to be firmly anchored in Three-Stage Model thinking. Go to school, go to work and then retire. Straightforward enough, but ...

- In a recent study, the overriding priority for individuals to go to universities is to acquire both knowledge and skills to improve their career prospects: <https://www.ellucian.com/assets/en/white-paper/credential-clout-survey.pdf> But, as the study points out, there appears to be a big disjoint in terms of skills development. Moreover, when you factor in longevity, what is the shelf life of knowledge? The Multistage Life model has a period of exploration that implies choices (plural) yet most university programs often

focus on choice (singular). For example, you choose to enroll in **a** Mechanical Engineering program, you choose **a** major and choose **a** thesis topic (lots of **a**'s!). For an insightful perspective on prototyping possible life paths have a look at: <https://designingyour.life>

- NY Times awarding winning opinion columnist, Thomas Friedman, forecasts a revolution in the concepts of education and work as we know it post pandemic. Continual learning and skills development will become the “new pension”. The full article is in the course home page.
- According to the US Department of Labor, individuals (18-50 years old) will have **12 jobs** on average <https://www.bls.gov/news.release/pdf/nlsoy.pdf> This number is seriously understated given the lower and upper age bounds of those surveyed! My grandfather had 1, my father 2 and by my count I have had 13, so far!
- Pension systems were created in the mid 20th century and designed for work patterns and life expectancy at the time. The design of pension systems continually evolves, albeit slowly, to deal with the implications associated with changes in work patterns and increased longevity. System sustainability is crucial but are we missing even a bigger opportunity, does the concept of retirement need a rethink? As opposed to viewing retirement as an “off/on” switch (binary lighting) should we consider the possibilities of a “dimmer” switch (multivariate lighting)?

Embracing a multistage life frame implies complexity and uncertainty but, in essence, is a creative endeavor full of both possibilities and opportunities to proactively develop that most precious asset, you. Effectual entrepreneurs actively create the future by asking “what if?” and “why not?” as opposed to “why bother?”

You have complete freedom to interpret the brief “rethink the concept of longevity” any way you want. You can focus on any stage(s) of the Multistage Life of interest. To guide your ideation efforts, you will conduct empathy interviews, ideally across a spectrum of interviewees in different stages of the Multistage Life. For example, if your group focuses on the retirement stage, it would be invaluable to garner insights from individuals in and/or soon approaching that stage of life. We are all immersed in a transgenerational challenge!

Opportunities never appear as pre-packaged Ikea furniture with clear assembly instructions. Together we will uncover a destination and create a roadmap – that is where the key learning of the course lies. You will discover that good ideas are not necessarily the same as genuine opportunities and together we will work through this challenge.

The Team

- 1) You will be working in teams of ideally 6 students – “founding teams” display diversity and this will be no different in terms of gender, nationality and discipline (to the extent possible);
- 2) Each group member is expected to conduct a minimum of 2 empathy interviews to support group ideation efforts – who you need to speak with and what you need to speak with them about (interview structure) should

be coordinated as a group but completed individually.

- 3) I join each team as a mentor providing constructive guidance and feedback throughout the process.

The Task

- 1) By the end of the course, your team should be prepared to present an opportunity nugget to the class; the challenge that all entrepreneurs face is that opportunities are perceived and the lens through which they are seen are utterly unique to every person. Successful entrepreneurs explore possibilities (creativity) **before** deciding what to do (innovation). The best opportunities are those that resonate deeply with the passions, skills, experience, and networks of the team (is it worth doing?) **and** can be activated (is it doable?)
- 2) As mentor, I will guide teams through the discovery process and we will work "in camera"; I will be the only person who knows what each team is working on throughout the course until the "final reveal".
- 3) Final presentations will be arranged through Zoom in the form of Pecha Kucha – a highly visual story telling format that requires you to communicate messages in 20 second sound bites. Some examples and guidelines of this format can be found at: www.pechakucha.org.
- 4) **ABOVE ALL ELSE HAVE FUN WITH THIS AND DON'T CONSIDER IT A "TASK"!**

Schedule of Coming Attractions (subject to revision) ALL SESSIONS WILL BE HELD ONLINE

14 September	Course Introduction Means: Your Personal Lens of Opportunity
21 September	Rethinking Air Travel Creativity Challenge
28 September	Shaping Opportunity Co-Creation Co-creation Challenge Case: R&R (Harvard Business School)
5 October	Executing Opportunity The Art of Lean
12 October	Team Consultations
19 October	Final presentations