

Bond University  
Research Repository



## Projectized Career Planning: Thriving in the Gig Economy

Skulmoski, Gregory James; Langston, Craig; Patching, Alan; Ghanbaripour, Amir

*Licence:*  
CC BY-NC-ND

[Link to output in Bond University research repository.](#)

*Recommended citation(APA):*  
Skulmoski, G. J., Langston, C., Patching, A., & Ghanbaripour, A. (2019). *Projectized Career Planning: Thriving in the Gig Economy*. International Project Management Association 31st World Congress, Merida, Mexico.

### General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

For more information, or if you believe that this document breaches copyright, please contact the Bond University research repository coordinator.

## **Projectized Career Planning: Thriving in the Gig Economy**

# Projectized Career Planning: Thriving in the Gig Economy

Gregory J. Skulmoski<sup>1</sup>, Craig Langston<sup>2</sup>, Alan Patching<sup>3</sup>, Amir Ghanbaripour<sup>4</sup>

<sup>1</sup>Bond University, Robina, Australia, gskulmos@bond.edu.au.

<sup>2</sup>Bond University, Robina, Australia, clangsto@bond.edu.au.

<sup>3</sup>Bond University, Robina, Australia, apatchin@bond.edu.au).

<sup>4</sup>Bond University, Robina, Australia, aghanbar@bond.edu.au.

**Abstract:** An area of interest for project participants is one's career. It may be as simple as looking for the next consulting contract in the Gig Economy or planning the next 5-10 years to accommodate external considerations such as retirement. Those project participants that take a sustainable approach to career management may enjoy better outcomes. We look at the sustainable project-oriented career concept and propose key error messages that signal risks to one's career, such as the absence of substantial training or education within the past ten years. We examine the sustainable project-oriented career framework within the Gig Economy, including the need for periodic renewal through education and training. We review key innovations in education and training that project participants can leverage to improve career sustainability. The paper combines just enough theory with practical advice to develop sustainable project-oriented careers and to thrive in the Gig Economy.

**Keywords:** Sustainable project-oriented career, gig economy

## 1. The Classic Project-Oriented Career

Modern project management is a relatively new phenomenon despite the long history of projects throughout millennia; we did not use modern terms to describe what was happening (e.g. even though we had a project sponsor for building the pyramids, they were not called project sponsors; they were simply called pharaohs). It was not until the 20<sup>th</sup> Century that modern project management emerged as we know it today. Carayannis, Kwak, and Anbari (2005) reviewed the history of project management and traced the shift of focus from tools (e.g. PERT and Monte Carlo) to the human element (e.g. matrix organization and human resource management). We see professional organizations like the International Project Management Association form, grow and offer certifications to foster project management competence and the project-oriented career.

During this time, organizations also long relied on projects to bring new products and services to customers. Favaro (2015) distils the history of business strategy, moving from efficiency targets, through to increasing scale and improving quality, to the rise of integrated networks and ecosystems to serve customers. To achieve the strategy, organizations would plan for five to ten years and then launch a series of carefully and fully planned projects. Many organizations transitioned to a project-oriented organization to help achieve their strategy (Gemünden, et al., 2017).

### 1.1 Accidental Project Manager

The project-oriented career began to evolve in this time of change. In the past, a typical career in projects began when a person joins a project team as a junior member. If they do well, then they might be promoted to a "senior" project participant (e.g. Lead Engineer). Then if they succeed, we stop them from what they do well and then give them the new role of project manager often without formal training (or they attend project scheduling software training). There is little wonder looking back that we have not equipped our project teams to succeed

(Hartman, 1999) since they are often led by “accidental” project managers (Young & Sexton, 2018).

Professional organizations offer project-oriented certifications to address competency gaps:

- International Project Management Association (IPMA) – Certified Project Manager,
- Project Management Institute (PMI) – Project Management Professional,
- Global Association for Quality Management (GAQM) – Certified Project Director,
- British Computer Society (BCS) – Chartered Professional,
- Association for the Advancement of Cost Engineering International (AACEI) – Certified Cost Professional,
- EC Council - Project Management in IT Security.

Therefore, we see that the project-oriented career has become more formalized, requiring training and education in areas in addition to technical competence like engineering and project management tool proficiency like schedules (Young & Sexton, 2018). Planning a career in projects has become much more complex due to significant changes occurring in the business world.

To achieve the strategy, organizations, in relative stability, would plan for five to ten years and then launch a series of carefully planned projects; however, the timelines now are much more compressed, and the business environment is anything but stable. Agility, disruption, data analytics and integration are the new business mantra (Favaro, 2015).

## 2. The Gig Economy and Other Systemic Changes

Long-term planning and a stable workforce were characteristics of the business environment that have long since passed. Now, we have a Gig Economy at the front end of the 4<sup>th</sup> Industrial Revolution. In this changing time, project-oriented people may re-examine their career path to be contributors rather than sidelined.

The Gig Economy is simply temporary employment where contractors contribute to an organization’s efforts through hourly or piecemeal work. For example, an independent contractor may join a project to set up and test a computer server, then leave the project when this task is successfully completed. Or the Gig Economy worker may be paid on a piece-by-piece basis such as delivery drivers (e.g. Uber drivers). The Gig Economy is also referred to as the sharing or collaborative economy (e.g. Airbnb would be an example). Organizations now have more opportunities to hire temporary workers when required and minimize a core structure of fulltime/long term employees (Kobie, 2018).

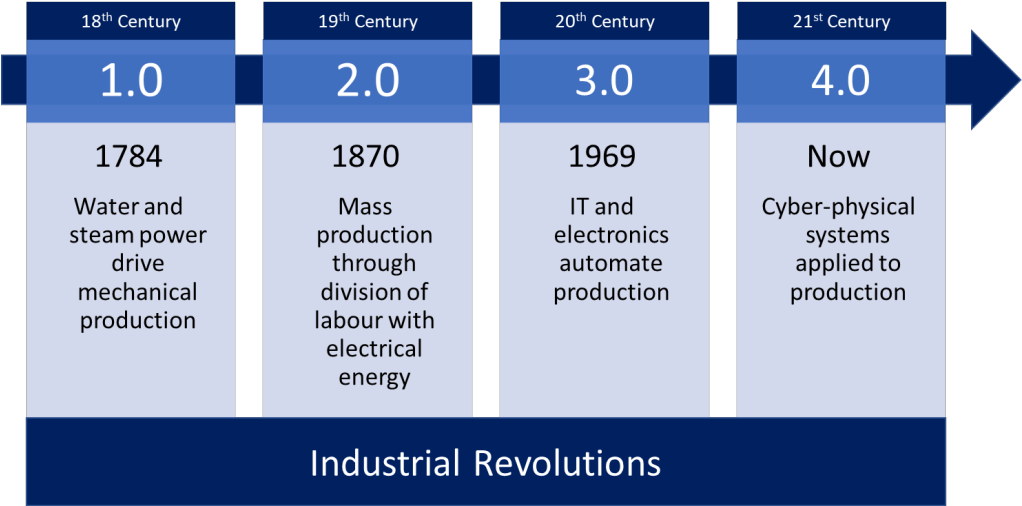
Organizations increasingly are hiring temporary workers when needed; some in-house services are contracted to external contractors to improve organizational effectiveness and efficiency; by having non-core activities performed by contractors to allow organization to focus on core activities. However, some organizations choose the outsourcing model to bring in highly skilled contractors to bring innovation to core areas of business (Erdogmus et al., 2018). The global demand for outsourcing in 2015 was \$524.4 billion and rose to \$565 billion two years later. This growth has been primarily in logistics, IT (information technology) and business processing such as financial, human resource and call centres (Ikediashi & Aigbavboa, 2019). Indeed, IT outsourcing on a global level is expected to grow; such as in 2017, when outsourcing grew by 5.7 percent in that single year (Erdogmus et al., 2018). Indeed, some industries prefer the outsourced model rather than relying on in-house services: by 2020,

72 percent of all global clinical trials of pharmaceutical products is expected to be conducted by contract organizations with an annual growth rate of 6.9 annually (Wilkinson et al., 2019).

**2.1 4th Industrial Revolution: Challenges and Opportunities**

At the same time that the Gig Economy offers increased employment options, and business is more favourable to outsourcing, technology advances promise great change, opportunities and challenges. The 4<sup>th</sup> Industrial Revolution (also known as Industry 4.0) is the linear progression of significant changes to business beginning with the 1<sup>st</sup> Industrial Revolution (Figure 1). We have progressed by applying steam, electricity and basic IT technologies to production. Now we see disruptive technologies being applied to virtual and physical activities on a global scale to allow organizations to cooperate to deliver new products and customizations in ways never before imagined possible or even demanded by consumers (Avis, 2018).

**Fig. 1: Four Industrial Revolutions (Adapted From 123RF, 2019)**



Disruptive technologies are those resources or tools used to produce things (e.g. artificial intelligence) or a finished product with disruptive characteristics (e.g. self-driving car). Other disruptive technologies include blockchain, gene sequencing, large-scale energy storage, building information modelling (BIM), nanotechnology, biotechnology, quantum computing, robotics, the Internet of Things, and other transformative technologies that can have dual potentialities to help and/or harm (Schwab, 2016). For example, we may see ingestible robots that repair injuries from within, and we may see jobs displaced by these disruptive technologies. Indeed, a recent survey of 17,30 project participants reported that 91 percent of them were impacted by disruptive technologies (PMI, 2018). Indeed, there are technical “pessimists” who predict severe net job loss due to these disruptive technologies with significant impacts on society (Schwab, 2016). How is business impacted beyond the common challenges of global competition, shorter production cycles, and consumer demand for customization? What is the impact to project participants?

The 4<sup>th</sup> Industrial Revolution will likely impact the business by changing consumer expectations (e.g. sustainability), product enhancement (e.g. add digital capabilities to products), collaborative innovation (e.g. work with others), and the very way organizations form and organize (Schwab, 2016). The news media is ripe with businesses who have not been successful with disruptive technologies: we know about the drastic decline of Kodak, Blackberry and Blockbuster. These laggards are more likely to lack a mature digital business strategy, are risk averse and technology adoption is a low priority (PMI, 2018). Many organizations may struggle

against competitors who are agile and innovative, and harness global digital platforms for research, development, marketing, sales and distribution to outperform digital laggards (Schwab, 2016). Unfortunately, even if organizations have a digital strategy to deliver innovation, approximately one in 10 organizations fail to deliver that strategy (PMI, 2018). That is, even if an organization has a well-thought-out strategy delivered through innovation, they are likely to struggle to deliver that strategy through a project approach. But it is not organizations that deliver; it is people who deliver innovations through projects to achieve the strategy. Therefore, Gartner (2019) recommends internal renewal of skills to remain competitive rather than hiring externally or through outsourcing for these rare and expensive skill sets.

## 2.2 New Project-Oriented Opportunities

Within these changes – Gig Economy, globalization, outsourcing, disruptive technologies, 4<sup>th</sup> industrial revolution, and more – project-oriented workers who desire to succeed, may think strategically about their careers. What does the project-oriented work forecast look like? Are there jobs in project management despite job loss predictions associated with the 4<sup>th</sup> Industrial Revolution? A recent study found that global organizations (chiefly in the financial services, industrial and manufacturing, consumer services, government and nonprofit, and retail and hospitality sectors) involved in delivering innovative projects rank the technical talent shortage as their top risk to strategy success (Gartner, 2019). Indeed, this shortfall is validated in a PMI (2018) study that also looked at the supply and demand of project-oriented people and projected a talent shortage:

- By 2027, organizations will need 87.7 million people in project-oriented roles;
- The talent gap could result in a loss of \$207.9 billion in GDP through 2027;
- On an annual basis, organizations will need to fill 2.2 million project-oriented jobs each year through to 2027.

Thus, while there could be an overall net job loss, there appear to be opportunities in technical areas, and especially in project management for people with the right skills. Technical proficiency (“Project Management Technical Quotient” – PMTQ) with disruptive technologies is an emerging project-oriented skill set: the ability to select, modify, manage and integrate technologies to solve problems and add value to specific projects (PMI, 2018). Those with PMTQ competencies have three distinctive characteristics in addition to long-standing competencies like soft skills, project management tools and process expertise in traditional and adaptive delivery methods like Agile, and business strategy skills (PMI, 2018):

- Curiosity: they welcome new ideas and ways of doing things wherever it may lie on the low to high technology continuum. They have an open mind, tempered with some scepticism.
- Inclusive Leadership: they look after not only their team but their team’s resources such as technology and robots.
- Future-Proof Talent Pool: they recruit and nurture those who embrace these digital skills, and keep up with trends and adapt their own skill sets accordingly; there is a regular renewal of skills.

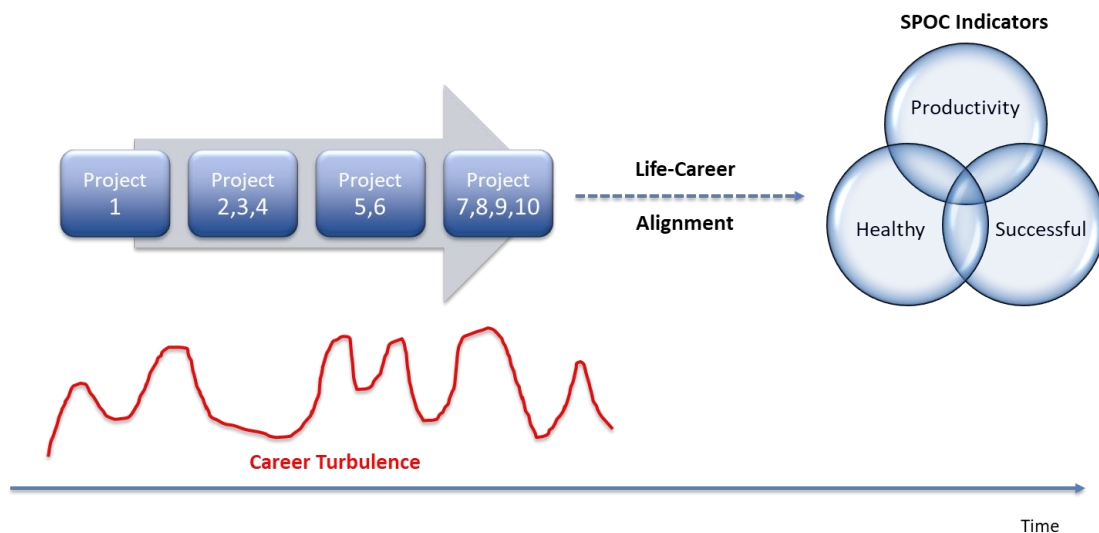
When a project-oriented person has these updated skills including PMTQ, then they are more likely to find and keep jobs in project-oriented organizations or to deliver value through an outsourcing arrangement.

### 3. Sustainable Project-Oriented Career

At some point in our careers, we were hired or brought onto a project team; we had the necessary competencies to add value. However, with time comes unpredictability, change and new technology; not all project participants have kept up with advances and are at risk of not being selected for future projects if they do not have the right skills (e.g. their PMTQ is weak). What has to happen for career continuity? Is there such a thing as a sustainable project-oriented career (SPOC)?

Sustainable careers are becoming an increasingly pronounced concern for many as evidenced in the recent growth of research papers in scientific journals and conferences (De Vos et al., 2018). One emerging career sustainability model incorporates agency theory from psychology (the individual obeys the organization in exchange for the organization taking responsibility for their actions); it brings together the dimensions and indicators of career sustainability (De Vos et al., 2018). We adapt this model (Figure 2) to specifically apply to a sustainable-project-oriented career with the agency theory details omitted.

Fig. 2: Sustainable Project-Oriented Career



The De Vos model of career sustainability begins with the concept of time in that sustainability is related to what happens over time to protect and foster human and career development. We have modified the model to substitute a project-oriented career occurring over time. It is over time that we can better assess sustainability rather than during a discrete moment of analysis.

Career sustainability is indicated by three measures: i) *Productivity*, where the individual performs successfully in their current role as well as having a high potential for future employability. New joiners and existing workers may need to learn new skills to complete tasks. ii) *Health*, where mental and physical health fit with the demands of one's career. With time, health can change: one may be able to initially meet the demands of a job, but with age, one may be less capable impacting health such as not being able to sleep as well (e.g. a job in construction where it becomes more difficult with time to complete tasks requiring manual labour). iii) *Happiness*, where the subjective elements related to holistic satisfaction and feeling successful in one's career – past and present, and one's life outside the career occur. An important concept is a fluid fit between these three career sustainability indicators: all three may be in flux and impact each other over time (De Vos et al., 2018). Thus, if the person has

the right amount of success, health and productivity over time, that person has a sustainable career.

Unfortunately, we may have a fit between these indicators, but something mostly outside of our control occurs that impacts our career (e.g. our company has merged with another and some positions become redundant, or a death in the family, or a pregnancy leave). These career shocks or career turbulence vary in intensity (moderate to severe), valence (positive or negative effects), frequency, and duration (De Vos et al., 2018). These career shocks may also be predictable or unpredictable, as well as originate from multiple sources such as geopolitical, environmental, organizational, interpersonal and family-oriented (Akkermans, Seibert & Mol, 2018). Given enough time, most working people face a career shock; how a person reacts or indeed, plans for the career shock, impact career sustainability.

### **3.1 Sustainable-Project Oriented Career Model**

Our key modification to this career sustainability model is to replace the individual's agency modelling from a vocational psychology perspective, with a person in a project-oriented career working on a series of projects. Those projects may be a single project or a series of multiple projects either on the contractor's or owner's side of the project. That is, a person may join an organization for five years and work on multiple concurrent and consecutive projects and then leave the company for a different opportunity. Or the person may be a contractor who joins an organization to provide contracted deliverables and then will leave the organization.

Thus, the Sustainable Project-Oriented Career model includes at its core, the project participant who works in a project-oriented organization either as a contractor or as an internal employee. This person works on a series of projects over time, and this is called a project-oriented career. During this career, there are most likely career shocks (positive and negative, that vary in intensity) that face the project participant. If the person makes the right decisions, then there will be a fit between the career and the career sustainability indicators of being successful, healthy and productive will be positive. If the person does not respond appropriately to career shocks, then a sustainable project-oriented career is in jeopardy. Increasingly, a self-directed or "protean career" is the responsibility of the individual rather than the organization (Akkermans, Seibert & Mol, 2018).

### **3.2 Three Career Sustainability Elements**

There are three key areas of response a person can take to improve the probability they have a sustainable project-oriented career. Repeatedly, the notion of career renewal is highlighted as critical to a sustainable career (Mayrhofer, 2016; Adams, 2006; Valcour, 2013; McDonald, Hite, 2018). It has been long recognized that individuals will be well served to complete formal training or education in areas of demand or future demand so that one's skills align with the needs of the organization (Skulmoski, 2001). Second is that one's career is more likely to become sustainable if one is flexible and adaptable to new opportunities; simply, the more one can do, the more opportunities there will be to choose, resulting in career continuity (Valcour, 2013; McDonald & Hite, 2018). Finally, building upon work-life balance research, career sustainability is more likely if the career is integrated with one's home life, the community and society (Witzig & Smith, 2019; Overbaugh, 2011; Osif, 2009; Adams, 2006; Valcour, 2013). Therefore, a sustainable career is more likely if one takes time for periodic renewal, one is flexible and adaptable to leverage new opportunities, and one's career is holistically integrated to achieve an acceptable work-life balance trajectory.



We believe that a perceptive project participant can see error messages related to a project-oriented career that is unsustainable: that is, there may be error messages that one's project-oriented career is unsustainable reflected in areas of renewal, flexibility and integration.

#### **4. Error Messages Your Career is in Trouble**

We offer error messages as indicators that one's career may not be sustainable. While no one error message may be the "nail in the coffin", a sustainable project-oriented career is in jeopardy the more error messages one may experience. We have categorized these error messages into i) renewal opportunities, ii) Adaptability, and iii) holistic integration (e.g. work-life balance).

##### **4.1 Error Messages: Lack of Flexibility**

- Assigned the same types of projects time after time,
- Haphazard and infrequent networking to uncover new opportunities,
- Did not get the promotion, job or contract,
- Shut out from similar activities (e.g. not invited or contracting meetings),
- Works on the same aspects of PM on all projects (scheduling for example, without cross-fertilisation of competence in other knowledge areas),
- Does not contribute to professional activities outside the workplace,
- Does not promote the company he or she is working for in meetings or conferences outside of the organization,
- Does not update the work procedures according to the lessons learned or from reading new PM literature,
- Can only work with particular types of people,
- Is not open to new ideas coming from subordinates or the project team.

These types of error messages may indicate that your career may benefit from being open to new opportunities to expand career flexibility.

##### **4.2 Error Messages: Lack of Holistic Integration**

- Clinically depressed,
- No longer exercise as often as you would like,
- Unplanned career absences,
- High annual leave balance,
- Does not take advantage of employer-offered stress avoidance or stress management schemes or employee assistance programs,
- Regularly works more than 50 hours per week,
- Regularly works at home after a full day of work for more than an hour or more than two evenings a week,
- Consistently works at least half a day on weekends for more than one weekend a month,
- Thinks about the undesirable things that occurred in the workplace,
- Stressed about the risks that are extremely unlikely to happen.

These types of error messages may indicate that your career may benefit from more work-life balance to have a more holistic integration.

##### **4.3 Error Messages: Lack of Renewal Opportunities**

- Long time since your last formal class that had an assessment component,

- Infrequent professional development other than mandatory learning requirements (e.g. Fire Safety),
- Unfamiliar with Adaptive Project Management methods (Agile, Scrum, #NoProjects, Kanban, Lean),
- CV is out of date,
- Lack of professional institution membership (e.g. IPMA, PMI, etc.),
- Infrequently reads journals or magazines from your industry,
- Headhunters seldom contact you,
- Infrequent and irregular online professional social network participation (i.e. LinkedIn, ProjectManagement.com, GanttHead.com, etc.),
- Unfamiliar with emerging PM computer/ mobile applications. (i.e. Slack, Monday, WorkflowMax, Wrike, Trello, Mavenslink, Asana, etc.).

These types of error messages may indicate that your career may benefit from renewal efforts. At the same time that we see disruption and transformation in project management, we also see a great change in education and training that will be of interest to those who seek formal renewal.

## 5. Renewal: Innovations in Training and Education

One can renew their skill set through education and training. Training involves attaining specific and practical skills, usually through relatively short term learning experiences. Education involves more theoretical learning in a classroom type of setting about a wide variety of topics gained over a relatively long term. Training often prepares a learner for the present while education prepares an individual for a future job (Oancea, 2013). While the focus of this paper is about preparing for the future by having a sustainable career, we do want to emphasize the importance of training in project management. Project-oriented participants will do well to review the wide variety of training opportunities offered by professional organizations like the IPMA, AIPM, PMI, Association for the Advancement of Cost Engineering International (AACEI), British Computer Society (BCS), and others!

There has been a significant change to the higher education sector that better support successful renewal opportunities:

- **Multiple Degree Options:** There is greater diversity within degrees so that a learner can find a better fit with the degree and their goals (Kofinas et al., 2017). Take the MBA (Master of Business Administration) degree, it was not long ago that an MBA was generic rather than specialized. Now, one can get an MBA in Project Management, MBA in Project and Operations Management, MBA in Business Project Management, etc.
- **Combined Degrees:** Universities increasingly offering combined degrees (e.g. a Master of Project Innovation and Master of Project Management ) where the learner graduates with two degrees in a shorter period since electives and core classes are shared between the two degrees.
- **Accelerated Programs:** Universities are finding ways to deliver the full degree but within compressed time frames so that the learner achieves the learning outcomes but over a shorter period (Kitchener, 2017). For example, some universities offer classes three rather than the typical two semesters per year, resulting in students graduating sooner.
- **Intensive Classes:** Students can attend intensive classes (e.g. Thursday, Friday and Saturday) so that they can work most of the week and attend classes at the end of the

week and on the weekend. Intensive classes improve access to educational renewal (Kofinas et al., 2017).

- Problem-Oriented: More educational programs are supplementing theoretical learning with problem-oriented thinking supplemented with design thinking (Linton & Klinton, 2019); that is, they use newly acquired theory to solve problems. By doing so, learning is reinforced.
- Personalized Learning: Students have more choice within courses to personalize learning and more electives to achieve their learning outcomes often through academic mentorship (Celuch et al., 2017).
- Interactive: More and more, lectures are replaced with interactive learning (Kofinas et al., 2017) activities like discussions, role plays, peer to peer, board rotation, etc.
- Flipped Classroom: The flipped classroom is a relatively new teaching approach where the traditional classroom activities are flipped with students complete assigned learning activities before they attend the class. The key advantage is that students in a flipped classroom, have more guidance with higher order learning activities like analysis and evaluation, to improve learning.
- Outdoor Learning Spaces: Universities are adding outdoor learning spaces to bring additional diversity to the educational environment (Cassidy et al., 2015). Rather than self-directed group learning and discussions occurring in classrooms, this type of learning environment is especially welcomed by adults who enjoy getting out of the classroom to learn.
- Workplace Readiness/Authentic Assessment: Perhaps one of the largest changes is that many university programs have adapted their curriculum so that the content is more likely to be used in practice (Kofinas et al., 2017, Celuch et al., 2017). Students increasingly ask that they become workplace ready as they progress through their program. This has triggered a rethinking of how to assess student learning. This might mean a decline in exams and essays, and an increase in reports, problem-solving exercises and other types of assignments to approximate what is done in business. More institutions are addressing workplace readiness and including authentic assessment (Wiewiora & Kowalkiewicz, 2019).
- Digital Badges: Digital badges (micro-credentials) are an emerging online system to recognize accomplishments and competence (DiSalvio, 2016). An awarding organization offers a learning opportunity for a student. Successful students are awarded a digital badge to recognize their competence. The online badge includes key information such as badge name and description, awarding criteria, issuer, learning evidence, date issued, etc. Some universities issue digital badges (e.g. Design Thinker) after one or two classes are completed to a certain standard (e.g. 65 percent). The student can add this digital badge to their CV and to an online platform like LinkedIn rather than waiting until graduation to show the fruit of their efforts.

Therefore, while there is great change occurring in the project environment, there are also increased opportunities and modes of learning for those project-oriented participants who are looking for renewal opportunities to boost their sustainable project-oriented career.

## 6. Conclusion

Long gone is the norm that one had a job for a lifetime – a career. More project-oriented participants understand the simple concept of supply and demand: if one has competencies that are in demand, then one will likely remain employed. However, such arrangements are fragile given changes brought about to how we work (disruptive technologies brought about by the 4<sup>th</sup> Industrial Revolution) and how we organize for work (more outsourcing in the Gig Economy). Add to this career turbulence external shocks (e.g. family or financial problems) then the project-oriented participant may feel out of equilibrium with an unsustainable career; lacking is

being productive, successful and healthy. One may have a respected project-oriented job but may need to work long hours to meet deadlines resulting in stress. Such imbalance is usually not sustainable. One may also have a good project-oriented job but has not expanded their skill set to be able to contribute to projects involving disruptive technologies.

Career sustainability is more likely if one addresses three key elements: i) holistic integration with one's life, ii) career flexibility, and iii) career renewal. There may be career messages if any of these areas are weak. We concluded this paper with an overview of new trends occurring in education that make renewal more attractive. Project-oriented career sustainability is the individual's responsibility according to a protean view; there are positive actions one can take to have a sustainable career in projects.

## 7. References

- 123RF (2019). *Industry 4.0 The Fourth Industrial Revolution*. Available: [https://www.123rf.com/photo\\_105817423\\_stock-vector-industrie-4-0-the-fourth-industrial-revolution-colorful-pyramid-chart-useful-for-infographics-and-pr.html](https://www.123rf.com/photo_105817423_stock-vector-industrie-4-0-the-fourth-industrial-revolution-colorful-pyramid-chart-useful-for-infographics-and-pr.html) [2019, 15 May].
- Adams, R.M. (2006). "Sustainable career management in the pharmaceutical industry — Lessons and insights", *Journal of Medical Marketing: Device, Diagnostic and Pharmaceutical Marketing*, vol. 6, no. 1, pp. 74-76.
- Akkermans, J., Seibert, S.E. & Mol, S.T. (2018). "Tales of the unexpected: Integrating career shocks in the contemporary careers literature", *SA Journal of Industrial Psychology*, vol. 44, no. 6, pp. 1-10.
- Asuquo, P.N. & Inaja, A.E. (2013). "Fostering sustainable career development and employability among young people in the changing world of work: Employers' perspective", *Procedia - Social and Behavioral Sciences*, vol. 84, pp. 1492-1499.
- Avis, J. (2018). "Socio-technical imaginary of the Fourth Industrial Revolution and its implications for vocational education and training: A literature review", *Journal of Vocational Education and Training*, vol. 70, no. 3, pp. 337-363.
- Carayannis, E.G., Kwak, Y.H. & Anbari, F.T. (2005). *The story of managing projects: An interdisciplinary approach*. Westport, Conn: Praeger Publishers.
- Cassidy, A., Wright, A., Streat, W.B. & Watson, G. (2015). "The interplay of space, place and identity: Transforming our learning experiences in an outdoor setting", *Collected Essays on Learning and Teaching*, vol. 8, pp. 27.
- Celuch, K., Bourdeau, B., Khayum, M. & Townsend, L. (2017). "The role of the university in accelerated learning and innovation as a regional ecosystem integrator", *Journal of Research in Innovative Teaching & Learning*, vol. 10, no. 1, pp. 34-47.
- De Vos, A., Van, D.H. & Akkermans, J. (2018). "Sustainable careers: Towards a conceptual model", *Journal of Vocational Behaviour*, In Press.
- DiSalvio, P. (2016). "New pathways to credentialing: The digital badge", *New England Journal of Higher Education*, viewed 20 May 2019, <<https://nebhe.org/journal/new-pathways-to-credentialing-the-digital-badge/>>.
- Erdogmus, T., Czermak, M., Baumsteiger, D., Kohn, D., Boller-Hoffecker, A., Schmidt, N. & Linden, R. (2018). "How to Support Clients and Vendors in IT Outsourcing Engagements:

The Different Roles of Third-party Advisory Services", *Journal of Information Technology Teaching Cases*, vol. 8, no. 2, pp. 184-191.

- Favaro, K. (2015). *A Brief History of the Ways Companies Compete*, Harvard Business Review, viewed 20 May 2019, <<https://hbr.org/2015/04/a-brief-history-of-the-ways-companies-compete>>.
- Gartner (2019). *Predicts 2019: Establish the Foundations for Next-Generation Digital Government Success*, Gartner INC, viewed 20 May 2019, <<https://www.gartner.com/en/documents/3895088>>.
- Hartman, F.T. (2001). *Don't park your brain outside: a practical guide to improving shareholder value with SMART management*. Newtown Square, PA: Project Management Institute.
- Ikediashi, D. & Aigbavboa, C. (2019). "Outsourcing as a strategy for facilities management provision in Nigerian universities", *International Journal of Construction Management*, vol. 19, no. 4, pp. 281-290.
- Kitchener, I.L. (2017). "Are Accelerated Degrees the Future for Higher Education?", *Compass: Journal of Learning and Teaching*, vol. 10, no. 3.
- Kobie, N. (2018). *What is the gig economy and why is it so controversial?* Kobie, viewed 20 May 2019, <<https://www.wired.co.uk/article/what-is-the-gig-economy-meaning-definition-why-is-it-called-gig-economy>>.
- Kofinas, A., Bentley, Y., Minett - Smith, C. & Cao, G. (2017). 'Block teaching as the basis for an innovative redesign of the PG suite of programmes in University of Bedfordshire Business School', Third International Conference on Higher Education Advances, Valencia, Spain, 21-23 June, 2017.
- Linton, G. & Klinton, M. (2019). "University entrepreneurship education: a design thinking approach to learning", *Journal of Innovation and Entrepreneurship; A Systems View Across Time and Space*, vol. 8, no. 1, pp. 1-11.
- Mcdonald, K.S. & Hite, L.M. (2018). "Conceptualizing and creating sustainable careers", *Human Resource Development Review*, vol. 17, no. 4, pp. 349-372.
- Osif, B.A. (2009). "Work/life balance", *Library Leadership and Management*, vol. 23, no. 1, pp. 42-46.
- PMI (2018). *Maximizing the benefits of disruptive technologies on projects*, Project Management Institute, viewed 20 May, 2019, <<https://www.pmi.org/learning/thoughtleadership/pulse/benefits-disruptive-technologies-projects>>.
- PMI (2017). *Job Growth and Talent Gap: 2017-2027*, Project Management Institute, viewed 20 May, 2019, <<https://www.pmi.org/learning/thought-leadership/pulse/talent-gap-2020>>.
- Schwab, K. (2016). *The Fourth Industrial Revolution: what it means, how to respond*, World Economic Forum, viewed 20 May 20, 2019, <<https://www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/>>.
- Skulmoski, G. (2001). "Project maturity and competence interface", *Cost Engineering*, vol. 43, no. 6, pp. 11-18.
- Valcour, M. (2013). *Craft a Sustainable Career*, Harvard Business Review, viewed 20 May, 2019, <<https://hbr.org/2013/07/craft-a-sustainable-career> >.

Wilkinson, M., Harper, B., Peacock, J., Morrison, R. & Getz, K. (2019). "Assessing outsourcing oversight practices and performance", *Therapeutic Innovation & Regulatory Science*, pp. 1-9.