

The professionalization of innovation management: Evolution and implications

Peter Robbins¹  | Gina Colarelli O'Connor² 

¹National Centre for Family Business,
Dublin City University, Collins Avenue,
Dublin, Ireland

²Babson College, Wellesley,
Massachusetts, USA

Correspondence

Peter Robbins, National Centre for Family
Business, Dublin City University, Collins
Avenue, Dublin 9, Ireland.

Email: peter.robbs@dcu.ie

Funding information

Open access funding provided by IReL

Associate Editor: Charles Noble

Abstract

Just over two decades ago, in a Perspective article in the *Journal of Product Innovation Management* (JPIM), Tomkovick and Miller, called for the professionalization of new product development (NPD). Professionalization of innovation management (as the broader function in which NPD is embedded) was posited to require a combination of scientific knowledge coupled with specific expertise. We revisit that call to (1) assess whether innovation management has established itself as a formal, professional function similar to human resources or marketing, and (2) critically discuss whether (and if so, how) the professionalization of innovation management impacts both academic research and professional practice in the field. We suggest four tests as hallmarks of a profession and apply them to the emerging field of innovation management. Based on our findings, we propose a set of actions for innovation management academics and practitioners. We also recommend directions for future research to promote discussion on this topic within the JPIM community.

KEYWORDS

corporate profession, innovation career pathways, innovation education, innovation management, professionalization

1 | INTRODUCTION

Innovation is a key driver of firm value (Rubera & Kirca, 2012; Sorescu & Spanjol, 2008) enhancing long-term growth and renewal (PwC, 2023). While many CEOs claim that innovation is a top priority, few organizations have developed the people and formalized the competencies necessary to create new streams of growth that will replace their current core business (Maier & Brem, 2018). In corporate innovation management, the stakes are high, but satisfaction with innovation efforts is low (Castellion & Markham, 2013; Marc et al., 2015; Nakata & Hwang, 2020). A critical factor

for successful innovation is people; the people who use their creativity to imagine and create new products and the people who bring them to life and, ultimately, to market (Weiss et al., 2022). Yet innovation roles are sometimes performed informally and voluntarily (Maier & Brem, 2018) and employees interested in making a career of innovation management often do not have a clear path to follow (O'Connor et al., 2009), unlike marketing, operations management, or human resource (HR) professionals (O'Connor et al., 2018). Greater professionalization of a function typically affords its members a stronger voice in organizational

This is an open access article under the terms of the [Creative Commons Attribution-NonCommercial](https://creativecommons.org/licenses/by-nc/4.0/) License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited and is not used for commercial purposes.

© 2023 The Authors. *Journal of Product Innovation Management* published by Wiley Periodicals LLC on behalf of Product Development & Management Association.

decision-making, allows firms to develop and retain talent, and improves functional capabilities in firms.

Managers of corporate innovation regularly lead their company's most critical projects along with some of its most passionate, valuable and technically competent people. Given the importance of these initiatives, it is striking that the selection process for innovation leaders seems often ad-hoc and is regularly based on volunteerism (O'Connor et al., 2018). The specific qualifications, body of knowledge, skills and experience needed for innovation management roles are beginning to be identified (Hoidn & Kärkkäinen, 2014; O'Connor et al., 2018) but have not been formally or widely codified (de Jong et al., 2015). Hence, recruiting for these roles remains challenging (Greer & Stevens, 2015).

In this Catalyst, we revisit Tomkovick and Miller's (2000) arguments for the professionalization of innovation management. We investigate whether and to what extent innovation management has emulated the mechanisms used by lawyers, doctors, IT and HR practitioners, among others, to achieve the status of a profession. The importance of this question is clear from its potential impact on three key stakeholder groups: practicing innovation managers, the organizations they work for, and the academic community consisting of innovation management researchers, educators, and students aspiring to a career in the field.

For the *practitioner*, professionalization provides key benefits, including a clear pathway to becoming a subject matter expert in innovation management, as well as the prestige of a professional credential (Alvesson & Robertson, 2006). In a changing world of work, where tenure in any single organization is decreasing and organizational affiliation is becoming blurred, professionalization offers an increasingly important occupational identity or "home" (Nicklich et al., 2020). Along with these benefits come enhanced financial rewards and considerable autonomy in carrying out their practice (Reed, 2018). For *organizations*, professionalization enables the development and continuous improvement of a specialized innovation management expertise as an organizational capability (Ackroyd, 2016). Professionalization allows organizational leaders to have a clearer understanding of the work to be done by innovation managers. Innovation concepts are more clearly defined and more widely understood within organizations with greater professionalization. The codification of skills also provides organizations with a framework against which to select, develop and retain innovation talent as well as providing guidance for measuring performance. This, in turn, allows organizational leaders to improve the likelihood of sustainable growth, defending against disruption through ongoing organizational renewal. *Students* of innovation management benefit from a codified

Practitioner points

- Innovation management has now cleared the hurdles to becoming an emerging corporate profession in the same way that marketing or human resources have done in the past.
- Previously, hiring managers saw experience as the defining qualification for a role in innovation management. Now, the development of a codified body of knowledge in innovation management (e.g., the ISO 56002 Guide Standard) as well as the widening provision of specialist courses, will expand the selection criteria for innovation roles.
- The professional designation for innovation management should lead to it having a louder voice and greater influence in organizational strategy.
- Professional status will also encourage organizations to develop more sophisticated role descriptions, performance criteria and career pathways which will, in the long run, increase organizational innovation capability.
- More and better academic research should be possible with a verifiably competent and professional innovation manager identifiable in organizations.

curriculum and the development of a professional capability maturity framework to guide their studies. Finally, for the *research community*, having a more easily identifiable, accessible and expert respondent pool within organizations is an advantage when conducting research. Definitional clarity and a common understanding of the phenomenon of interest is likely to improve the validity and reliability of studies (Baker & Sinkula, 2005).

Next, we determine the pathway through which emerging corporate professions develop and apply four tests of professionalization to innovation management, presenting evidence to show that innovation management has evolved from an occupation to becoming a corporate profession. Our evidence includes interviews with innovation and HR practitioners, reviews of university curricula and professional associations, job postings, and academic research on innovation management. We find that innovation management merits the designation of a corporate profession and conclude by raising questions for future research including considerations of the consequences, both positive and negative, of achieving professional status.

2 | INNOVATION MANAGEMENT AS AN EMERGING PROFESSION

Innovation is the driving force of superior business performance, with some firms launching upwards of 1000 new products per year (Biemans et al., 2016). Human capital is an essential part of innovation; it is people who provide competitive advantage for firms in terms of their skills and expertise in managing innovation (McGuirk et al., 2015). Two decades ago, a thought-provoking *Perspective* article in this journal asked, “What You Can Do to Help Professionalize NPD.” In it, the late Chuck Tomkovic and Christopher Miller (2000) introduced the idea of New Product Development (NPD) as more than simply a process, but a profession. More than a decade later, Brenton and Levin (2012) observed how little attention had been devoted to the human side of innovation management. Similarly, O'Connor (2012) suggested that scholars begin to consider Strategic Innovation as an organizational function, responsible for initiating, incubating and commercializing the game-changing innovations that create new streams of growth for organizations. Innovation expertise should be viewed as more than the collective output of a cross-functional team following a process. She drew a parallel to the way that Marketing had emerged as a legitimate corporate profession in the 1940s and predicted that innovation management would follow the same path.

2.1 | What are professions?

The concept of a profession originated with the medieval guilds. Practitioners of highly skilled trades came together to agree on standards of their craft which they then passed along to apprentices (Searle, 1982). The conditions for more widespread professionalism developed in Britain in the mid-19th century, with the Industrial Revolution. The associated rise of affluence, expectations, status and power of an urban middle class provided a dynamic and profitable market for various services (Johnson, 1972). Professional services such as law, accounting or architecture, which had been restricted to the upper tier of society, filtered down and outwards and were no longer exclusively provided to the elite. Professionals came to be recognized as providers of advice or action that rests upon some branch of specialist knowledge to which the professionals are privy by virtue of extensive study of specific material (Hughes, 1963). The need for specialized expertise as organizations grew larger and more complex was the principal driver for the emergence of new professions in the late nineteenth century (Ackroyd, 2016).

Professions are comprised of a limited group of subject matter experts from whom we seek advice and services because of their advanced and specialized knowledge and

skills (Barker, 2010; Reed, 2018). They are characterized by their access to and use of the best possible knowledge of the field in its different forms—whether that is scientific or experience based (Pohlenz, 2022). In performing their practice, a professional relies on this knowledge and the overarching principles that emanate from it but applies those principles within the specific context in which s/he is operating. This contextual adaptation is an “artistic task” (Tyler, 1952, p. 56) as it involves individual judgment and imagination as well as theoretical knowledge and skill. High levels of uncertainty and risk prevail in the complex world of corporate innovation management where there is no universal formula for success (Lehoux et al., 2021; Sivasubramaniam et al., 2012), yet organizational leaders consistently express the desire for improvement in their innovation capabilities (Nakata & Hwang, 2020), making corporate innovation management an ideal candidate for professionalization.

Within the sociology of professions (Adams, 2015; Freidson, 2001; Menger, 1999; Segrestin, 2000), one stream has focused on identifying definitional criteria by which professions can be distinguished from non-professions (Klegon, 1978). If an occupation is evolving towards a profession, evidence must exist that it exhibits certain traits or characteristics (Flexner, 1915). While few authors cite precisely the same characteristics, the range of such characteristics is narrow and there is considerable overlap (Hickson & Thomas, 1969; Millerson, 1964). Four attributes are mentioned by the majority of scholars:

1. prolonged education and training (Cooper, 2012; Hickson and Thomas, 1969; Macheridis & Paulsson, 2019; Reed, 2018; Saks, 2012; Wilensky, 1964) demonstrated by the awarding of degrees and other qualifications (Pohlenz, 2022);
2. specialized domain knowledge based on overarching theoretical principles (Barber, 1963; Curnow & McGonigle, 2006; Warda, 2022; Wiebe, 1967);
3. the presence of regulatory or umbrella associations promoting best practice within the profession (Cooper, 2012; Hickson & Thomas, 1969; Wilensky, 1964) that, in some cases, can sanction members who fail to uphold agreed standards (Greenwood, 1957; Pavalko, 1971); and
4. an audience for whom the expertise is valuable such that a demand exists for the service (Cooper, 2012; Turner, 2001; Wilensky, 1964).

2.1.1 | Collegiate and corporate professions

Scholars distinguish two types of professions, summarized in Table 1. Collegiate professions are self-governing and self-policing. Governance takes place through a

professional, peer controlled association, managed by colleagues, which is empowered to license competent practice (Lazega, 2001). For those deemed eligible to practice, membership in this association is obligatory (Ackroyd, 2016; Johnson, 1972). In addition, due to the peer-to-peer evaluation and control within collegiate professions, most of these professionals organize themselves as sole practitioners or partnerships, wherein the professionals own and control their own organizations. Examples of collegiate professions include medicine, law, accounting and, more recently, architecture.

By comparison, many contemporary professions (HR, IT, Marketing, etc.) neither own nor control their own

organizations and are not licensed by an independent body of experts. They are largely dependent on employment in large corporations, hence the designation of *corporate professions* (Ackroyd, 2016).

2.2 | Applying the four tests of a corporate profession to innovation management

To determine the current status of innovation management, we provide evidence on each of the four tests of a corporate profession, summarized in Table 2. In the following paragraphs, we assess and discuss the evidence.

TABLE 1 Distinguishing characteristics of corporate and collegiate professions.

Characteristics of corporate professions	Additional characteristics of collegiate professions
Skills based on Theoretical Knowledge	Code of Ethics
Prolonged Education and Training	Sanctions for non-adherence to standards
Professional Associations	Overriding sense of calling or vocation
Demand for the service	Competence regularly tested
	Mandatory continuing professional development
	Qualifying Professional Association
Examples: Marketing Manager, Human Resources Manager	Examples: Lawyer, Physician

2.2.1 | Test 1: Prolonged and specialized education

Professional education needs to satisfy at least two principal requirements: It must attract sufficient entrants to ensure an adequate supply of practitioners, and, from these entrants, must produce graduates of sufficient caliber capable of effectively fulfilling the duties of the profession (McGlothlin, 1964). To assess whether innovation management education meets these standards, we chose to examine the database of programs provided by the Association to Advance Collegiate Schools of Business International (AACSB International). AACSB accreditation acts as a quality signal (Okulova & Shakina, 2022) as it is an arduous process and requires innovative behavior from the management and academic staff teams within

TABLE 2 Assessment of innovation management as a profession: Four tests.

Criteria	Evidence	Source of evidence
1. Prolonged and specialized education and high-level qualifications.	Has there been an increase in the number of university programmes specializing in innovation management? Has the number of university and other post-graduate qualifications specializing in innovation management been growing?	AACSB Dataset of 17,000 Business School Programmes in three time periods: 2001; 2010 and 2021. Economist's Executive Education (2022) database
2. Skills based on theoretical knowledge.	Has the number of peer reviewed, 4-star, original research articles which feature <i>innovation management</i> increased?	Title, abstract and keyword search of the FT50 Journals and additional top rated Technology, Innovation and Management (TIM) Journals
3. Presence of professional associations.	Can we demonstrate that there is a growing number of professional associations helping to build community and identify common practices in innovation management?	Search for and review of innovation management specialist professional associations.
4. An audience for whom the expertise is valuable: sustained demand for the service.	Is the number of senior roles in Innovation Management growing?	LinkedIn Talent Insights Database. InnovationLeader benchmarking reports.

TABLE 3 Innovation management programs offered by AACSB Accredited Institutions.

Degree titles	2001	2010	2021
'Innovation management' in degree title	0	0	99
Graduate degrees	0	0	77
Undergraduate degrees	0	0	21
Major emphasis			
'Innovation management' as major emphasis	23	28	213
Graduate degrees	19	22	153
Undergraduate degrees	4	6	60
Minor or sub emphasis			
'Innovation management' as the program's minor or sub emphasis	8	12	158
Graduate degrees	5	8	90
Undergraduate degrees	3	4	68

business schools (Bos-Nehles et al., 2017). The AACSB database of degree courses extends to over 17,000, covering 952 accredited business schools across 59 countries.

Table 3 shows changes over time in the provision of AACSB accredited degree programs associated with innovation management at the undergraduate and graduate levels. In 2001, none of the AACSB member business schools included a degree with the words "innovation management" in the title, neither were there any in 2010. In 2021, however, nearly 100 degrees with this title were listed. At the undergraduate level, Temple University in Philadelphia, Colorado State University, and Pforzheim University in Germany, offer bachelor's degrees in innovation management and entrepreneurship, organization and innovation management and strategic innovation management, respectively. Graduate degree program examples include the UK's York University and Brown and Tufts Universities in the United States, all of which offer Masters of Science degrees in innovation management.

Similarly, innovation management was present as a specialization in only 22 master's degrees in 2010, but this has increased dramatically in the intervening years. Innovation as a theme is much more prevalent at the post-graduate level because it is believed that innovation requires some business experience before its skills can be acquired and then applied. These degrees are offered in universities and business schools across 31 countries. Table 3 also shows that innovation management is growing more quickly as a Major emphasis than a minor sub-theme. However, the latter also continues to grow. HEC

Montreal in Canada, for example, offers a certificate in innovation management.

Finally, to assess market demand for executive education in innovation management, we also examined the *Economist's Executive Education* (2022) database. The current listing shows 184 courses available with some creative titles, including *Unleashing Innovation* (London's Royal College of Art) to *Mastering Innovation* (Penn State's Wharton School). Interest in innovation as a professional topic in Business Schools is clearly growing.

In sum, academic certification in a field can be seen as an indicator of future performance which is acknowledged by recruiters (Farashah et al., 2019). It can also be seen as an approach to *being good* by improving professional competence and *looking good* by signaling the capabilities of the holder (Blomquist et al., 2018). We suggest that the domain of innovation management passes the first test of a corporate profession, having provided evidence of the growing provision of prolonged and specialized education.

2.2.2 | Test 2: Growing body of theoretical knowledge

Professions develop through intellectual advances and accumulated experience (Flexner, 1915). A systematically developed body of knowledge is a key marker of a profession (Dutton, 1965; Pavalko, 1971; Sexton, 2007). Research in the field of innovation has been escalating in recent years (Klarin, 2019). Evidence of substantial growth in the innovation discipline is provided through the increase in quality publications on the topic and by the number of dedicated innovation research centers appearing (Cancino et al., 2017; Kahn, 2022).

We use Scopus, the largest database of peer-reviewed literature (Randhawa et al., 2016), to conduct a keyword search of top-tier academic papers published between 2000 (the year of Tomkovick and Miller's JPIM Perspective article) and the end of 2021. To develop our list of journals, we considered both journal quality and mission/purpose. The FT50 list, which is widely used in literature reviews as a way to demarcate the business journal field, was our starting point. However, since it incorporates such a broad range of disciplines, including Accounting, Economics, Information Sciences, which may not have direct relevance to innovation management, we supplemented the list by adding Sarin et al.'s (2018) selection of "the top 6 dedicated Technology and Innovation Management (TIM) journals" (p. 2), five of which were not already included. Table 4 provides the complete list of 55 journals we used for our analysis.

TABLE 4 Journals reviewed for innovation management publication trends.

FT 50 journals	
Academy of management journal	Journal of management studies
Academy of Management Review	Journal of Marketing
Accounting, Organizations and Society	Journal of Marketing Research
Administrative Science Quarterly	Journal of Operations Management
American Economic Review	Journal of Political Economy
Contemporary Accounting Research	Journal of the Academy of Marketing Science
Econometrica	Manufacturing & Service Operations Management
Entrepreneurship Theory and Practice	Management Science
Harvard Business Review	Marketing Science
Human Relations	MIS Quarterly
Human Resource Management	Operations Research
Information Systems Research	Organization Science
Journal of Accounting and Economics	Organization Studies
Journal of Accounting Research	Organizational Behavior and Human Decision Processes
Journal of Applied Psychology	Production and Operations Management
Journal of Business Ethics	Quarterly Journal of Economics
Journal of Business Venturing	Research Policy
Journal of Consumer Psychology	Review of Accounting Studies
Journal of Consumer Research	Review of Economic Studies
Journal of Finance	Review of Finance
Journal of Financial and Quantitative Analysis	Review of Financial Studies
Journal of Financial Economics	Sloan Management Review
Journal of International Business Studies	Strategic Entrepreneurship Journal
Journal of Management	Strategic Management Journal
Journal of Management Information Systems	The Accounting Review
Additional TIM journals	
IEEE Transactions on Engineering Management	Technology Forecasting and Social Change
Journal of Product Innovation Management	Technovation
R&D Management	

Note: Keyword (innovation manag*) was searched in titles, keywords and abstracts.

Within these 55 titles we searched for papers with the term (innovation manage*) in the title, keywords or abstract. Scopus refers to this search technique as *Wildcard* as it will capture expressions including ‘innovation management’ and ‘innovation manager’. Results are shown in Figure 1. The search yielded 3436 results, and shows a significant growth trend in the number of publications over the observed period. This analysis provides unambiguous evidence that scholarly research on the topic of innovation management, published in high quality journals is increasing, thus expanding and renewing the store of knowledge and advancing theory on this topic. Hence, we conclude that the second test (growing body of knowledge) is also met.

2.2.3 | Test 3: Existence of professional associations

Associations provide communities, conferences, and forums through which best practices and contemporary insights are disseminated. They facilitate interaction between professionals from different companies, networking, sharing experiences, discovering commonalities and, over time, assembling a body of knowledge that is distinctive to the professional group (Morris et al., 2006). Table 5 reveals that the number of professional associations dedicated to the innovation management community has grown considerably, across many countries, especially over the last 15 years. The lower part of the table lists selected

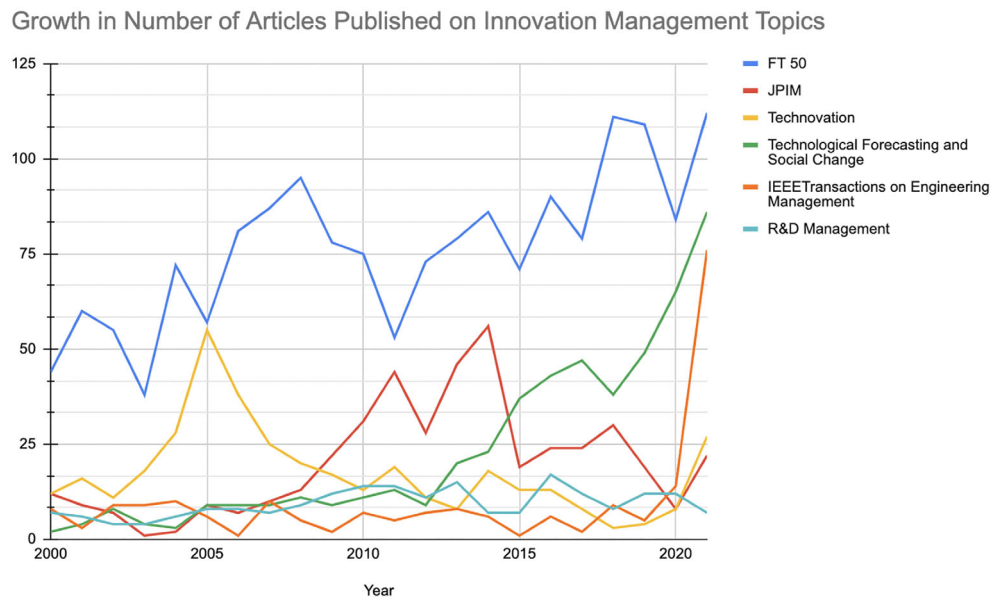


FIGURE 1 Growth in number of articles published on Innovation Management Topics. FT50 Journals plus top Technology Innovation Management (TIM) Journals with (Innovation Manage*) in Title, Abstract or Keywords from 2000 to 2021 within Scopus. [Color figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1111/jipm.12670)]

academic interest groups devoted to the topic. Entries in each of these two sections of this table are in chronological order and each organization listed is still operating. For the top section of the chart, listing the professional societies, we can see that six such organizations began operations in the most recent 10 years while only 5 were formed in the 50 years from the founding date of the first one.

In several cases, these associations are emulating the mechanisms of the qualifying association by providing certificates in innovation management (Kihlander et al., 2022), although no regulatory mechanisms or licensure are (yet) in place. A recent important development is the introduction in 2019 of an International (Guide) Standard for innovation management: ISO 56002. Although it is not yet widely adopted, Tidd (2021) acknowledges that the primary objective of the standard is to advance the professionalization of the field by providing a framework for the management and practice of corporate innovation. Thus, while there is no standard certification that meets the requirements of a collegiate profession, we argue that the third test of corporate professionalization is met based on the proliferation and the activities of associations dedicated to innovation management.

2.2.4 | Test 4: Sustained demand for the services of the profession

For evidence of demand for the services of innovation management, we used LinkedIn's *Talent Insights Tool*, which helps recruiters locate talent in particular fields. LinkedIn does not maintain historical data on job openings and thus

all we can retrieve from their database is the current number of roles with various innovation titles and the year-on-year change from 2020 to 2021. The timing of the data-point shows growth in demand for expertise in innovation management, despite being in the heart of the COVID pandemic, when concerns about daily operations were at their height.

These data, shown in Table 6, indicate that the demand for Innovation Managers, Innovation Heads and Innovation Leaders grew by 4% in 2021. The table also shows that the more senior roles in innovation management (such as CIO) are experiencing the highest growth. This is a further indicator that businesses are taking innovation management more seriously and hiring at more senior levels to build their organizations' innovation capabilities. In a benchmarking report on innovation impact, co-published by the professional association for innovation practitioners, *Innovation Leader* and KPMG (2023), they surveyed 216 innovation professionals and report that 43% of innovation teams are expecting to see headcount growth in their team in 2023 with another 43.1% expecting their numbers to remain stable. Therefore, we believe this test of a profession, that there is a sustained demand for the service, is also met. In sum, it appears that innovation management, therefore, merits the designation of a corporate profession.

3 | HUMAN RESOURCES MANAGEMENT PERSPECTIVE

The view of HR leaders is an important perspective in this discussion. To get their perspective we conducted

TABLE 5 A selection of professional bodies and academic associations for innovation management.

Organization name	Purpose or Mission: Text sourced from organizations' websites	Year founded & web address	Target audience/membership	Certification/training or education
IRI (Innovation Research Interchange)	We are home to a worldwide network of cross-industry leaders driving innovation and new growth—representing small specialty companies, large global corporations, government labs, and universities.	1938 Website: https://www.iriweb.org	Large corporations with significant innovation teams and budgets.	Yes, education but not certification
AIRG (Australian Innovation Research Group)	The AIRG is an industry led Association that supports the innovation and R&D initiatives of its members by increasing collaboration opportunities, facilitating peer-to-peer mentoring.	1964 Website: https://www.airg.org.au/	AIRG members are Australian companies who have a commitment to innovation and R&D.	No
PDMA (Product Development and Management Association)	The Product Development and Management Association (PDMA) is a global community whose skills, expertise and experience power the most recognized and respected innovative companies in the world.	1976 Website: https://www.pdma.org	Innovation managers, Product Managers, Consultants and Academics.	Yes: NPD Professional Certification
ISPIM (International Society of Professional Innovation Managers)	International Society for Professional Innovation Management—is a community of members all sharing a passion for innovation management.	1983 Website: https://www.ispim-innovation.com	Members from research, industry, consulting and the public sector. Stronger focus on Academics and Research.	No
Innovation Roundtable	Innovation Roundtable facilitates connections between innovation managers, in a setting where they can learn about best practices from executive speakers, discuss selected innovation topics, and share experiences with peers.	2008 Website: https://innovationroundtable.com	Senior leaders in large corporations.	No

TABLE 5 (Continued)

Organization name	Purpose or Mission: Text sourced from organizations' websites	Year founded & web address	Target audience/membership	Certification/training or education
GIMI (Global Innovation Management Institute)	The Global Innovation Management Institute (GIMI) is a global non-profit professional organization driving standards for innovation management.	2009 Website: https://www.giminsstitute.org	Innovation executives, Academics and Consultants.	Yes: Innovation Management Certificate
IKE (Institute of Innovation & Knowledge Exchange)	IKE is the UK's professional body for innovators. It accredits, certifies and benchmarks innovation.	2011 Website: https://ikeinsstitute.org	Senior leaders from Business, Government and Academia.	Yes: Innovation Accreditation aligned to ISO56002
Innov8rs	Connect and collaborate with other corporate innovators across diverse brands, companies, and industries.	2011 Website: https://innov8rs.co	Leaders, heads and managers of corporate innovation management.	Yes: Practitioner courses but no certification.
Innovation Leader	Create templates and tools to help power innovation within organizations as well as convening peers to share best practices, in conference calls, webcasts, and at live events.	2013 Website: https://www.innovationleader.com	Managers of Innovation inside large companies.	No
RISE (Innovationsledarna-Sweden)	Association for Innovation Management Professionals in Sweden.	2013 Website: https://www.innovationsledarna.se	Innovation Management Professionals, Consultants and Academics.	Yes: Innovation Accreditation aligned to ISO56002
IAOIP (International Association of Innovation Professionals)	The world's only innovation certification body and fully networked community to deliver innovation tools and collaboration across nations, industry, government and academia.	2013 Website: https://iaaip.org	Government, industry, and academia	Yes, closely aligned to ISO guide standard.
Academy for Corporate Entrepreneurship	Global innovation agency, typically mentoring teams of corporate entrepreneurs to develop, test and launch new business ideas.	2014 Website: aice.verhaert.com	Primarily Industry and teams of corporate entrepreneurs.	Yes: Programmes and Courses but no certification

(Continues)

TABLE 5 (Continued)

Organization name	Purpose or Mission: Text sourced from organizations' websites	Year founded & web address	Target audience/membership	Certification/training or education
Innovation Consulting Association (France)	The Association of Innovation Consultants brings together and represents companies practicing the profession of innovation consultant. It encourages the exchange of knowledge, experience and foresight, between its members and with the actors of the innovation ecosystems.	2019 Website: https://www.eaic.eu	Primarily Innovation Consultants	No
Innovation Island	Ireland's association to promote best practice in innovation management.	2020 Website: https://www.innovateisland.net	Industry, especially the consultant community, government and academia.	In progress
Selected Academic Associations' Special Interest Groups (SIGs)				
Academy of Management SIG	Technology and Innovation Management Division bring together scholars interested in innovation, research and development, and the management of technology-based organizations.	1987 https://tim.aom.org/home	Academics researching innovation.	No
American Marketing Association Innovation, Technology and Interactivity SIG	Serves members who are marketing academics and professionals interested in the confluence of technology and marketing.	1996 https://www.ama.org/innovation-technology-and-interactivity-tech-sig/	AMA Members	No
European Academy of Management SIG Innovation	SIG aims to facilitate the continued evolution of an open, inclusive, international and cross-cultural community of engaged scholars to support them in designing, producing and disseminating higher quality and impactful research at each stage of their career.	2013 https://conferences.euram.academy/2023conference/sig-06-innovation-inno/	Academics researching innovation.	No

TABLE 5 (Continued)

Organization name	Purpose or Mission: Text sourced from organizations' websites	Year founded & web address	Target audience/membership	Certification/training or education
ISPIM SIG for Innovation Leadership	The ISPIM Innovation Leadership group has been created to focus on the role of leadership in facilitating innovation. This requires attention to human-centric skills and competencies for empowering employees while creating value for customers around the world	2020 https://www.ispim-innovation.com/ispim-sig-innovation-leadership	Academics researching innovation.	No

Note: Professional Associations and Academic Special Interest Groups are listed in chronological order of their founding year.

TABLE 6 Number of senior innovation roles advertised on LinkedIn for year ending April 2022.

Job title	Total no. of professionals	Y/Y growth
Director of innovation	18,353	+4%
Head of innovation	11,740	+4%
Chief innovation officer	6268	+8%

Source: LinkedIn global talent insights database (April 2022).

two interviews. One was with an in-company, European HR director with a multinational Fast Moving Consumer Goods (FMCG) corporation and the second was a partner in a worldwide, executive search service. We asked about some of the hiring criteria for lead innovation roles and probed whether the possession of specialist qualifications in innovation management might be an important consideration in such hires. In the FMCG company the possession of specialist qualifications was not seen as important. Our interviewee mentioned that some of their HR directors were former chemists, and their sustainability director was trained as a physician. Indeed, in the emerging research on innovation roles we often find these varied backgrounds to be the case (O'Connor et al., 2018). More important, is the candidate's alignment to the corporation's values, its culture and principles.

People [in innovation] can come from many different paths in life. We find that we used to be very prescriptive about certain degrees as part of our entry criteria, but we don't do that anymore, because people evolve over time and their knowledge evolves over time.

On the question about whether, as in other professions, membership or affiliation to a dedicated professional organization was important: again, this was not seen as a core requirement.

I think that membership is important but it's not vital. What is vital is networking. We want to get people out; we don't want them to be siloed or internally thinking - The best kind of ideas come from networking.

Reflecting on the concept of professionalization for innovation management, the FMCG company tends to promote from within to innovation roles and prefers that their people acquire transversal skills in different

disciplines and areas—such as sales, marketing, project management and innovation to allow them to move sideways within the organization. They operate an *innovation marketplace* where ideas are posted and people let their line managers know if they are interested in getting involved in the new initiative or joining the innovation hub. Such engagement can be in addition to their current role or, if the new platform is sufficiently weighty that it needs full time commitment that too can be facilitated. They are not in favor of building another ‘ivory tower’ or ‘silo’ in the business. Functions like sustainability, regulatory and IT are seen as aloof from the operational demands of the firm, and they do not want to create yet another specialty. The idea of structural ambidexterity is not of interest, and, at least within HR, they do not appear to distinguish strategic or breakthrough from incremental innovation.

The international recruiter’s view, based on a broader lens of multiple clients across a range of industries, was, not surprisingly, more positive. When asked whether innovation management was becoming a stand-alone profession, the answer was ‘not yet.’ While increasingly recognized as a necessary addition to companies’ organization charts, it was more of a specialization than a mainstream function.

We’re looking at innovation management more and more and it’s becoming much more relevant. But innovation management is nowhere near marketing or HR - those are absolutely mainstream. A more relevant comparison would be a head of regulatory, head of governance or chief risk officer...or a director of sustainability.

When asked whether clients were insistent on specific qualifications in innovation management for job candidates, the recruiter said that clients generally ask for an MBA rather than any innovation qualification.

They often ask for an MBA, but they’re not fixated about the qualification the person has. It’s the background, the track record and the experience.

The recruiter acknowledged that hiring organizations are generally looking for candidates with roughly 15 years corporate experience to fill lead innovation roles and specialist degree courses in innovation management were not being offered when executives, with that level of experience, were in college.

We are generally looking for someone with 15 years of experience. So, 15 years ago when

that person was starting off, very few people started off in innovation and the courses in innovation management were probably not available back then either.

Still, he recognizes that this is a growing area and that the path is not a mainstream operational one like marketing or HR but more an emerging, specialist pathway:

Before 2008, a governance or risk person wouldn’t have been allowed in the door of a high-street bank - but now they are top tier, and this is likely to happen to innovation management.

In both cases, the interviewees considered innovation management to be growing in importance. The recruiter, who has a broader perspective, believes that more and more companies, just as they are with sustainability, are recognizing an increasing need for the professionalization of their innovation function.

4 | IMPLICATIONS FROM INNOVATION MANAGEMENT’S PROFESSIONALIZATION

What are the implications of innovation management’s emerging into the corporate profession status? What are the consequences of achieving corporate profession, but not collegiate profession status? What should be our objectives and next steps as a community? How can the academic community help and how might a combined academic/service provider/practitioner community, such as the PDMA, help to achieve our objectives and next steps as a community?

4.1 | Corporate profession

Our LinkedIn data show that there is buoyancy in the field and a sustained demand for innovation management services. Our small sample of data from the HR hiring community suggests that, at least for now, employers do not demand specific qualifications in innovation when they hire into these positions. Perhaps this is due to the newness of the emerging profession; years of experience within a company along with breadth of background are serving as proxies for specific innovation management qualifications. We expect that learning will accumulate about the work to be done in innovation management but until it becomes more explicitly described, corporate leaders and HR professionals will recognize innovation

management skills as positive additions to, but not yet replacements for experience. As learning accumulates, selection, development and retention mechanisms will need to be redesigned to ensure innovation professionals have a career path and can continuously improve their companies' innovation capabilities at different levels within the organization. Innovation management, as a beacon of competitive advantage in the near term and the future, should become a stronger strategic voice in the organization, aspiring to greater levels of influence and leading the effort to find solutions to some of society's most complex issues. The most recent data available indicates that, while the term Chief Innovation Officer was coined in 1998, in 2020 only 30% of the Fortune 500 companies had that role in place (Simkins, 2020) and the role is still not widely understood (Lovric & Schneider, 2019).

In higher education, opportunities to major in innovation are growing at a steady pace. Still, there is a gap for universities to fill in rationalizing their innovation management curricula, providing more degrees in this area and giving them more prominence with both applicants and employers. As the need arises in companies, the supply of graduates with specialized knowledge and expertise in innovation management per se, most likely at the post graduate level, can help companies develop this organizational competency. If worked in partnership between academia and the private sector, one can imagine an increase in company-based course projects, internships and hiring pathways that enable the intermingling of experiential learning-based education and scholarly research on challenging innovation management issues that this emerging profession desperately needs. Over time, the supply of students identified as desiring innovation management careers will be more aware of the work to be done in various innovation roles and will have the principles, theories and project-based experiences through courses and internships to help them build organizational capabilities for all types of innovation and to sense, serve and satisfy customer and societal needs (Raj & Athaide, 2022) in a more professional way.

4.2 | Collegiate profession status

Generally, collegiate professions evolve purposefully through the concerted and deliberate efforts of its practitioners to raise their status and to define services which only they can perform properly (Klegon, 1978). Professional associations have a key role in charting this pathway for their profession. The industry has spawned several umbrella associations and, particularly in the

United States, these are competing intensively. As yet, there is no clear-cut leader. In some countries, there are single, national associations dedicated to the advancement both of the profession and of the practice of innovation management, but they are at pilot stages of development.

In no instance, to our knowledge, is there a formal qualifying association which licenses practice or monitors standards of professional innovation management. The PDMA and the Global Innovation Management Institute offer their own certifications, each developed independently. The adoption of the ISO 56002 guidance standard in over 40 countries provides a clear and communicable body of knowledge for the profession that is teachable, and several professional organizations are developing certification programs based upon it. However, the body of knowledge available to inform the standard is substantial (Tidd, 2021) and somewhat unwieldy. Indeed, the reality of the many types and contexts of innovation management caused the ISO 56002 development committee to draft it as a guidance document rather than a standard.

Additionally, if Wilensky's (1964) pathway to professionalization still holds true, the development of a code of ethics must be the next step for becoming a collegiate profession (Backof & Martin, 1991). Professional codes of ethics require members to demonstrate and maintain a higher standard of conduct than that demanded by law. Innovation management has yet to see any formal attempts to develop or codify a set of ethics for its practice. In fact, some scholars posit that establishing an ethical culture and climate may restrict innovation in corporate networks (Gonzalez-Padron et al., 2008).

Without the development and enforcement of a code of ethics for innovation management, or a universally accepted certification and continuing education requirement, innovation management will not become a collegiate profession like medicine or law. Perhaps it is worth asking whether it should. Would there be any benefit to organizations and practitioners of becoming a collegiate profession? What might be the consequences of standardization and detailed codification of the innovation manager's job? What might be the consequences of requiring continuing education, testing and relicensing? Or of developing and enforcing a code of ethics? These are questions worth asking, investigating and debating among the innovation management community.

For now, it seems clear that innovation management will remain in the classification of corporate profession. Our discussions with innovation leaders and managers demonstrate that they are convinced that innovation management is of such strategic importance that it warrants being managed professionally and that their role merits the description of profession. They hope that the

professional designation for innovation management may lead to it having a louder voice, greater influence and clearer career pathways in the organization.

5 | CONCLUSION AND FUTURE RESEARCH DIRECTIONS

We hope the evidence provided in this article stimulates conversation about how innovation and innovation management might come to be perceived as a profession, leading to stimulating, satisfying careers and increased organizational capability. Our analysis shows that it meets the tests identified in the literature. We envisage the implications of this Catalyst and the future research directions that it crystallizes falling into the three categories mentioned in the introduction. There are implications for the innovation management practitioner community, implications for organizations, and implications for the academic community. Regarding innovation managers, the following questions would be of interest:

- What might be a comprehensive typology of innovation that allows a systematic approach to the identification of the work to be done in innovation management?
- Can we build a maturity framework for innovation practice to help scaffold careers and provide evidence of accomplishments within the field?
- Following from that, what are some logical career development pathways for those interested in pursuing innovation management professionally that benefit the individual as well as the organization?
- Will professionalization give innovation managers a more influential voice in the organization and more autonomy in how they perform their role?
- Will the barriers to entry implicit in professionalization close out highly creative but possibly unqualified individuals who could meaningfully contribute to the innovation effort?

For organizational leaders:

- Will the professionalization of the management of innovation lead to more effective, predictable, scalable and repeatable innovation outcomes?
- To what extent, if any, is professionalization likely to create organizational silos and be resisted by other corporate functions?
- How does the professionalization of innovation management impact the collaboration with RandD, corporate venture capital units and other forms of corporate new venture activities?

- In terms of innovation governance, what is the likelihood of a universal code of innovation management ethics being developed, and what would be the best mechanism for accomplishing this?
- How might a code of ethics for innovation management be enforced and what are reasonable sanctions for non-compliance?
- What will be the impact of strict codes of conduct on organizations' innovation outcomes?

Beyond these important questions, the academic community may wish to consider the following issues:

- Should innovation management be standardized and monitored and, if so, to what degree? What are the risks of standardization? What are the benefits?
- How might the recognition of innovation management as a profession impact the conduct of scholarly research regarding innovation management questions? How will it impact the nature and pace of theory development?
 - Will more and better research be possible now that there is a verifiably competent manager identifiable within organizations?
 - Will the clearer identification of innovation professionals provide benefits for sampling?
 - Can we expect greater validity of responses to survey questions given a more expert respondent pool?
 - Will we be able to tease out the effects of more nuanced constructs given a more standardized set of practices?
 - Will replication studies provide more reliable results than have been achieved to date?
 - If one were to add professionalization level in firms to extant models of innovation management, would the major relationships between innovation practice independent variables and outcome variables be affected?
- How can educators develop a curriculum that will enable learners to understand the full complement of innovation management theories, frameworks, skills and activities that will support this emerging profession?

JPIM has a proud record of providing value to the practice of innovation, consequently managerial relevance has always been a cornerstone of the journal (Noble & Spanjol, 2019). The practice of innovation management is increasingly becoming recognized as a distinct profession and is distinguished from other forms of value creation (Kahn, 2022). We hope this catalyst provokes thought, discussion and action to support the profession's progress.

ACKNOWLEDGMENTS

The authors thank the JPIM editors-in-chief for their guidance and helpful advice on the earlier versions of this article. Open access funding provided by IREL.

ORCID

Peter Robbins  <https://orcid.org/0000-0002-5223-7718>

Gina Colarelli O'Connor  <https://orcid.org/0000-0002-4878-1454>

REFERENCES

- Ackroyd, S. 2016. "Sociological and Organizational Theories of Professions and Professionalism." In *The Routledge Companion to the Professions and Professionalism* 15–30. Milton Park: Routledge. <https://doi.org/10.4324/9781315779447.ch1>.
- Adams, T. L. 2015. "Sociology of Professions: International Divergences and Research Directions." *Work, Employment and Society* 29(1): 154–65. <https://doi.org/10.1177/0950017014523467>.
- Alvesson, M., and M. Robertson. 2006. "The Best and the Brightest: The Construction, Significance and Effects of Elite Identities in Consulting Firms." *Organization* 13(2): 195–224. <https://doi.org/10.1177/1350508406061674>.
- Baker, W. E., and J. M. Sinkula. 2005. "Market Orientation and the New Product Paradox." *Journal of Product Innovation Management* 22(6): 483–502. <https://doi.org/10.1111/j.1540‐5885.2005.00145.x>.
- Backof, J. F., and C. L. Martin. 1991. "Historical Perspectives: Development of the Codes of Ethics in the Legal, Medical and Accounting Professions." *Journal of Business Ethics* 10(2): 99–110. <https://doi.org/10.1007/BF00383613>.
- Barber, B. 1963. "Some Problems in the Sociology of the Professions." *Daedalus* 92(4): 669–88. <https://www.jstor.org/stable/20026806>.
- Barker, R. 2010. "No, Management Is Not a Profession." *Harvard Business Review* 88(7–8): 52–60 169.
- Biemans, W. G., A. Griffin, and R. K. Moenaert. 2016. "Perspective: New Service Development: How the Field Developed, its Current Status and Recommendations for Moving the Field Forward." *Journal of Product Innovation Management* 33(4): 382–97. <https://doi.org/10.1111/jpim.12283>.
- Blomquist, T., A. D. Farashah, and J. Thomas. 2018. "Feeling Good, Being Good and Looking Good: Motivations for, and Benefits from, Project Management Certification." *International Journal of Project Management* 36(3): 498–511. <https://doi.org/10.1016/j.ijproman.2017.11.006>.
- Bos-Nehles, A., M. Renkema, and M. Janssen. 2017. "HRM and Innovative Work Behavior: A Systematic Literature Review." *Personnel Review* 46(7): 1228–53. <https://doi.org/10.1108/PR-09-2016-0257>.
- Brenton, B., and D. Levin. 2012. "The Softer Side of Innovation: The People." *Journal of Product Innovation Management* 29(3): 364–6. <https://doi.org/10.1111/j.1540-5885.2012.00910.x>.
- Cancino, C. A., J. M. Merigó, and F. C. Coronado. 2017. "A Bibliometric Analysis of Leading Universities in Innovation Research." *Journal of Innovation and Knowledge* 2(3): 106–24. <https://doi.org/10.1016/j.jik.2017.03.006>.
- Castellion, G., and S. K. Markham. 2013. "New Product Failure Rates." *Journal of Product Innovation Management* 30: 976–9. <https://doi.org/10.1111/j.1540-5885.2012.01009.x>.
- Cooper, J. E. 2012. "Reflections on the Professionalization of Occupational Therapy: Time to Put down the Looking Glass." *Canadian Journal of Occupational Therapy* 79(4): 199–209. <https://doi.org/10.2182/cjot.2012.79.4.2>.
- Curnow, C. K., and T. P. McGonigle. 2006. "The Effects of Government Initiatives on the Professionalization of Occupations." *Human Resource Management Review* 16(3): 284–93. <https://doi.org/10.1016/j.hrmr.2006.06.001>.
- Dutton, R. E. 1965. "Business Management: A Profession?" *Advanced Management Journal* 30(2): 59. <https://dcu.idm.oclc.org/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=bthandAN=4603939&site=ehost-live&scope=site>.
- Executive Education Directory|The Economist. 2022. The Economist Executive Education Navigator Retrieved July 27, 2022, from <http://execed.economist.com/>
- Farashah, A. D., J. Thomas, and T. Blomquist. 2019. "Exploring the Value of Project Management Certification in Selection and Recruiting." *International Journal of Project Management* 37(1): 14–26. <https://doi.org/10.1016/j.ijproman.2018.09.005>.
- Flexner, A. 1915. "Is Social Work A Profession? (1915) [History Project]." *Social Welfare History* 42: 576–590. <https://socialwelfare.library.vcu.edu/social-work/is-social-work-a-profession-1915/>.
- Freidson, E. 2001. *Professionalism, the Third Logic: On the Practice of Knowledge*. Chicago: University of Chicago Press. <https://press.uchicago.edu/ucp/books/book/chicago/P/bo3621932.html>.
- Gonzalez-Padron, T., G. T. M. Hult, and R. Calantone. 2008. "Exploiting Innovative Opportunities in Global Purchasing: An Assessment of Ethical Climate and Relationship Performance." *Industrial Marketing Management* 37(1): 69–82. <https://doi.org/10.1016/j.indmarman.2007.06.013>.
- Greenwood, E. 1957. "Attributes of a Profession." *Social Work* 2(3): 45–55. <https://doi.org/10.1093/sw/2.3.45>.
- Greer, C. R., and C. D. Stevens. 2015. "HR in Collaborative Innovation with Customers: Role, Alignment and Challenges." *The International Journal of Human Resource Management* 26(20): 2569–93. <https://doi.org/10.1080/09585192.2014.1003086>.
- Hoidn, S., and K. Kärkkäinen. 2014. "Promoting Skills for Innovation in Higher Education: A Literature Review on the Effectiveness of Problem-Based Learning and of Teaching Behaviors." *OECD Education Working Papers, No. 100*. Paris: OECD Publishing. <https://doi.org/10.1787/5k3tsj67l226-en>.
- Hughes, E. C. 1963. "Professions." *Daedalus* 92(4): 655–68. <https://www.jstor.org/stable/20026805>.
- Hickson, D. J., and M. W. Thomas. 1969. "Professionalization in Britain: A Preliminary Measurement." *Sociology* 3(1): 37–53. <https://doi.org/10.1177/003803856900300103>.
- Innovation Leader. 2023. Benchmarking Innovation Impact Report Accessed February 27th, 2023. <https://www.innovationleader.com/research-reports/benchmarking-innovation-impact-2023/>
- Johnson, T. J. 1972. *Collegiate: Professionalism Revisited. Professions and Power (Routledge Revivals)*. London, UK: Routledge.
- Jong, M. de, N. Marston, and E. Roth. 2015. "The Eight Essentials of Innovation, McKinsey & Company." McKinsey & Company Accessed March 22, 2023. <https://www.mckinsey.com/capabilities/strategy-and-corporate-finance/our-insights/the-eight-essentials-of-innovation>.

- Kahn, K. B. 2022. "Innovation Is Not Entrepreneurship, nor Vice Versa." *Journal of Product Innovation Management* 39(4): 467–73. <https://doi.org/10.1111/jpim.12628>.
- Kihlander, I., M. Magnusson, and M. Karlsson. 2022. "Certification of Innovation Management Professionals: Reasons for and Results from Acquiring Certification." *Journal of Innovation Management* 10(1): 58–75. https://doi.org/10.24840/2183-0606_010.001_0004.
- Klarin, A. 2019. "Mapping Product and Service Innovation: A Bibliometric Analysis and a Typology." *Technological Forecasting and Social Change* 149: 119776. <https://doi.org/10.1016/j.techfore.2019.119776>.
- Klegon, D. 1978. "The Sociology of Professions: An Emerging Perspective." *Sociology of Work and Occupations* 5(3): 259–83. <https://doi.org/10.1177/073088847800500301>.
- Lazega, E. 2001. *The Collegial Phenomenon: The Social Mechanisms of Cooperation among Peers in a Corporate Law Partnership*. Oxford, UK: Oxford University Press on Demand.
- Lehoux, P., H. P. Silva, J.-L. Denis, F. A. Miller, R. Pozelli Sabio, and M. Mendell. 2021. "Moving toward Responsible Value Creation: Business Model Challenges Faced by Organizations Producing Responsible Health Innovations." *Journal of Product Innovation Management* 38(5): 548–73. <https://doi.org/10.1111/jpim.12596>.
- Lovric, D., and G. Schneider. 2019. "What Kind of Chief Innovation Officer Does your Company Need?" *HBR Online*. <https://hbr.org/2019/11/what-kind-of-chief-innovation-officer-does-your-company-need>.
- Macheridis, N., and A. Paulsson. 2019. "Professionalism between Profession and Governance: How University teachers' Professionalism Shapes Coordination." *Studies in Higher Education* 44(3): 470–85. <https://doi.org/10.1080/03075079.2017.1378633>.
- Maier, M. A., and A. Brem. 2018. "What Innovation Managers Really Do: A Multiple-Case Investigation into the Informal Role Profiles of Innovation Managers." *Review of Managerial Science* 12(4): 1055–80. <https://doi.org/10.1007/s11846-017-0238-z>.
- McGlothlin, W. J. 1964. "The Professions." *The Journal of Higher Education* 35(5): 286–8. <https://doi.org/10.2307/1978777>.
- Marc de J., Marston, N., and Roth, E. 2015. Growth and Innovation <https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/how-we-help-clients/growth-and-innovation>
- McGuirk, H., H. Lenihan, and M. Hart. 2015. "Measuring the Impact of Innovative Human Capital on Small Firms' Propensity to Innovate." *Research Policy* 44(4): 965–76. <https://doi.org/10.1016/j.respol.2014.11.008>.
- Menger, P.-M. 1999. "Artistic Labor Markets and Careers." *Annual Review of Sociology* 25: 541–74. <https://www.jstor.org/stable/223516>.
- Millerson, G. 1964. *The Qualifying Associations: A Study in Professionalization / by Geoffrey Millerson*. Paul: Routledge and K.
- Morris, P. W. G., L. Crawford, D. Hodgson, M. M. Shepherd, and J. Thomas. 2006. "Exploring the Role of Formal Bodies of Knowledge in Defining a Profession—The Case of Project Management." *International Journal of Project Management* 24(8): 710–21. <https://doi.org/10.1016/j.ijproman.2006.09.012>.
- Nicklich, M., T. Braun, and J. Fortwengel. 2020. "Forever a Profession in the Making? The Intermediate Status of Project Managers in Germany." *Journal of Professions and Organization* 7(3): 374–94. <https://doi.org/10.1093/jpo/joaa020>.
- Nakata, Cheryl, and Jiyoung Hwang. 2020. "Design Thinking for Innovation: Composition, Consequence, and Contingency." *Journal of Business Research* 118: 117–28. <https://doi.org/10.1016/j.jbusres.2020.06.038>.
- Noble, C. H., and J. Spanjol. 2019. "Opening Thoughts from the New Editors." *Journal of Product Innovation Management* 36(1): 2–4. <https://doi.org/10.1111/jpim.12480>.
- O'Connor, G. C. 2012. "Innovation: From Process to Function." *Journal of Product Innovation Management* 29(3): 361–3. <https://doi.org/10.1111/j.1540-5885.2012.00909.x>.
- O'Connor, G., A. Corbett, and R. Pierantozzi. 2009. "Create Three Distinct Career Paths for Innovators." *Harvard Business Review* 87(78–79): 128.
- O'Connor, G. C., A. C. Corbett, and L. S. Peters. 2018. *Beyond the Champion: Institutionalizing Innovation through People*. Stanford, CA: Stanford University Press.
- Okulova, O., and E. Shakina. 2022. "Is There Value in International Accreditation beyond Quality? An Empirical Analysis of the AACSB Accredited Schools." *Higher Education Quarterly* 76(3): 612–25. <https://doi.org/10.1111/hequ.12331>.
- Pavalko, R. M. 1971. *Sociology of Occupations and Professions*. Itasca: FE Peacock Inc.
- Pohlenz, P. 2022. "Innovation, Professionalization and Evaluation: Implications for Quality Management in Higher Education." *Quality in Higher Education* 28(1): 50–64. <https://doi.org/10.1080/13538322.2021.1951452>.
- PricewaterhouseCoopers. 2023. "PwC's 25th Annual Global CEO Survey." PwC Accessed January 16, 2023. <https://www.pwc.com/gx/en/ceo-agenda/ceosurvey/2022.html>
- Raj, S. P., and G. A. Athaide. 2022. "Innovation's Domain: The Need for a Sharper Yet Broader Focus." *Journal of Product Innovation Management* 39(4): 485–8. <https://doi.org/10.1111/jpim.12638>.
- Randhawa, K., R. Wilden, and J. Hohberger. 2016. "A Bibliometric Review of Open Innovation: Setting a Research Agenda." *Journal of Product Innovation Management* 33(6): 750–72. <https://doi.org/10.1111/jpim.12312>.
- Reed, C. 2018. "Professionalizing Corporate Professions: Professionalization as Identity Project." *Management Learning* 49(2): 222–38. <https://doi.org/10.1177/1350507617751344>.
- Rubera, G., and A. H. Kirca. 2012. "Firm Innovativeness and its Performance Outcomes: A Meta-Analytic Review and Theoretical Integration." *Journal of Marketing* 76(3): 130–47.
- Saks, M. 2012. "Defining a Profession: The Role of Knowledge and Expertise." *Professions and Professionalism* 2(1): 1–10. <https://doi.org/10.7577/pp.v2i1.151>.
- Sarin, S., C. Haon, and M. Belkhouja. 2018. "A Twenty-Year Citation Analysis of the Knowledge Outflow and Inflow Patterns from the Journal of Product Innovation Management." *Journal of Product Innovation Management* 35(6): 854–63. <https://doi.org/10.1111/jpim.12469>.
- Searle, C. 1982. "The Evolution of a Profession." *Curations* 5(3): 4–7. <https://doi.org/10.4102/curationis.v5i3.415>.
- Segrestin, D. 2000. "Claude Dubar, Pierre Tripier, Sociologie des professions: Armand Colin, coll. «U», Paris, 1998, 256 p." *Sociologie Du Travail* 42(2): 347–8. <https://doi.org/10.4000/sdt.37858>.
- Sexton, M. 2007. "Evaluating Teaching as a Profession—Implications of a Research Study for the Work of the Teaching

- Council." *Irish Educational Studies* 26(1): 79–105. <https://doi.org/10.1080/03323310601125310>.
- Simkins, T. n.d. Does your Organization Need a Chief Innovation Officer? Entrepreneur.com, Sept 7, 2020. <https://entm.ag/a1i1>
- Sivasubramaniam, N., S. J. Liebowitz, and C. L. Lackman. 2012. "Determinants of New Product Development Team Performance: A Meta-Analytic Review." *Journal of Product Innovation Management* 29(5): 803–20. <https://doi.org/10.1111/j.1540-5885.2012.00940.x>.
- Sorescu, A. B., and J. Spanjol. 2008. "Innovation's Effect on Firm Value and Risk: Insights from Consumer Packaged Goods." *Journal of Marketing* 72(2): 114–32. <https://doi.org/10.1509/jmkg.72.2.114>.
- Tidd, J. 2021. "A Review and Critical Assessment of the ISO56002 Innovation Management Systems Standard: Evidence and Limitations." *International Journal of Innovation Management* 25(01): 2150049. <https://doi.org/10.1142/S1363919621500493>.
- Tomkovick, C., and C. Miller. 2000. "Perspective—Riding the Wind: Managing New Product Development in an Age of Change." *Journal of Product Innovation Management* 17(6): 413–23. <https://doi.org/10.1111/1540-5885.1760413>.
- Turner, S. 2001. "What Is the Problem with Experts?" *Social Studies of Science* 31(1): 123–49. <https://doi.org/10.1177/030631201031001007>.
- Tyler, R. W. 1952. "Distinctive Attributes of Education for the Professions." *Social Work Journal* 33(2): 55–94. <https://www.jstor.org/stable/23705999>.
- Warda, T. 2022. "Interspecies Emotion Management: The Importance of Distinguishing between Emotion Work and Emotional Labor." *TRACE: Journal for Human-Animal Studies* 8: 82–101. <https://doi.org/10.23984/fjhas.111345>.
- Weiss, Matthias, Markus Baer, and Martin Hoegl. 2022. "The Human Side of Innovation Management: Bridging the Divide between the Fields of Innovation Management and Organizational Behavior." *Journal of Product Innovation Management* 39(3): 283–91. <https://doi.org/10.1111/jpim.12624>.
- Wiebe, R. H. 1967. *The Search for Order, 1877–1920*. New York: Hill and Wang.
- Wilensky, H. 1964. "The Professionalization of Everyone?" *American Journal of Sociology* 70: 137–58.

AUTHOR BIOGRAPHIES

Peter Robbins is one of Ireland's foremost experts in innovation and new product and service development. He earned his PhD in Dublin City University where he now lectures. He was global head of innovation excellence for GlaxoSmithKline. His area of research is how firms organize for innovation. He is a former

head of the Department of Design Innovation in Maynooth University. He is a member of the Government's National Design Forum and a member of the National Standards Agency which has helped develop the ISO Innovation Guide Standard. He is on a number of innovation advisory boards in business and the third sector. Peter has trained in design thinking at the renowned Stanford D School and has published in *R&D Management*, *International Journal of Innovation Management*; *London Strategy Review*, the *Journal of Small Business and Entrepreneurship* and the *Irish Journal of Management*.

Gina Colarelli O'Connor is Professor of Innovation Management and Fischer Family Chaired Professor at Babson College. She conducts research and teaches on the topic of Corporate Innovation. She has published numerous scholarly papers and co-authored three books for organizational leaders on managing breakthrough innovation in large mature companies. Five of her papers have received best paper of the year awards. The second book, *Grabbing Lightning* was named one of the top books of the year by *Strategy + Business Magazine* in 2009 and the third, *Beyond the Champion: Institutionalizing Innovation through People*, was nominated for the Academy of Management's Best Book of the Year in 2019. In 2018, Gina was honored to be named a Crawford Fellow by the Product Development & Management Association. She has worked with many mature organizations to help them build Strategic Innovation capabilities, and now is converting her research into Executive Education as the academic leader of Babson's Corporate Innovation Practice area.

How to cite this article: Robbins, Peter, and Gina Colarelli O'Connor. 2023. "The Professionalization of Innovation Management: Evolution and Implications." *Journal of Product Innovation Management* 1–17. <https://doi.org/10.1111/jpim.12670>