Specifier

Editor: Tracey Stawnichy

Construction Specifications Canada is an organization representing diverse interests in the construction industry and related professions. It is dedicated to improving the quality and flow of information between these interests, whether in the form of specifications, contract administration or marketing.

October 2024 Edition

In This Edition...

Executive List	1
Chair's Message	2
Membership	2-3
Education	3-4
Princeton Researchers Develop Concre	ete 3D
Printing Method Inspired by Ancient Fis	sh
Scales	6
Joe Doucet's Airiva Wind Turbines are	Made
for City Streets and Buildings	7-8
Can You Grow the Bricks for a House?	l.
Research Team Aims to Find Out	8-10
Why Competent Workers Become	
Incompetent Managers	.11-15
Association Links & Liaison	15-16
The Bulletin Board	17
The Executive	18



STAY TUNED FOR UPCOMING EVENTS!





2024 Edmonton	Chapter Executive		Advertising Rates	
			Business Card: April 1 to May 30	
Director	Andrew Brassington	780 222 6732	Rates cover your ad on our website 24 hours per day, 7 days per week.	
Chairman	Dylan Leclair	587 335 9552	Business card on-line:	
Vice-Chairman	Abby Sharpe	780 953 2950	Annual \$100 if received by May 1; \$75 if received by August 1:	
Secretary	Jessica Prosser	587 340 7169	\$50 if received by November 1;	
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Architectural	Kevin Osborne	780 717 1007	the CSC Edmonton Chapter web page.	
Chapter Liaison	Position Open		Chapter Sponsor	
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Engineer	Jamie Murphy	780 983 0288	New Chapter Sponsor Bundles:	
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Manufacturer/Supplier	Mike Lafontaine	780 907 4920		
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Membership	Dave Lawrence	780 901 7260	Student Sponsor	
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Website Administrator	David Watson	780 758 4147		
Trade Contractor	Kevin Kramers	587 232 0613	Meeting Sponsor	
Program	Abby Sharpe	780 953 2950		
Owner's Rep	Cam Munro	780 231 1739	\$50 for Individual (personal) Sponsor	
Sustainability	Position Open		\$250 for Corporate Sponsor	
At Large	Dave Lawrence	780 901 7260		

FOR FURTHER INFORMATION

Contact any member of the Executive, attend one of our Chapter Meetings, send your name and address to CSC Edmonton Chapter, PO Box 35093 Mid Town PO. Edmonton, AB T5J 0B7, or go to edmonton.csc-dcc.ca for additional contact information.

GOALS OF CSC

Construction Specifications Canada is a multi-disciplinary non-profit association dedicated to the improvement of communication, contract documentation, and technical information in the Construction Industry. CSC is a national Association with Chapters in most major Canadian Cities.

To this end, CSC pursues the study of systems and procedures that will improve the coordination and dissemination of information relevant to the construction process.

We seek to enhance the quality of the design and management aspects of the construction activity through programs of publication, education, and professional development, believing that by so doing, we can contribute best to the efficiency and effectiveness of the construction industry as a whole.

OBJECTIVES OF CSC

To foster the interest of those who are engaged in or who are affected by the compilation or use any forms of specifications for the construction industry.

To publish literature pertaining to the construction industry.

To engage in activities to improve procedures and techniques related to the construction industry.

The opinions and comments expressed by the authors do not necessarily reflect the official views of Construction Specifications Canada. Also, appearance of advertisements and new product or service information does not constitute an endorsement of those featured products or services.

Page **1** of **18**

Announcements:

Congratulations to the 2024 CSC Life Member Award Recipients

Rick Hadubiak, CTR, CCCA and Robert Mercer, FCSC

Chair's Message



Dylan Leclair, CSC Edmonton | Chapter Chair

Hello CSC Edmonton Chapter,

It is with deep sadness that I start the monthly update with my deepest condolences to Mike Ewaskiw's family. Mike was one of my mentors for CSC and was an amazing guide that pushed me to where I am with the Chapter today and to become a CTR/CSP. He was an unparalleled strength for the association both professionally and personally and he will be greatly missed.

I do not like to leave items on a sad note, as I believe that through the dark times light does shine through. I would like to take this opportunity to congratulate Abby Sharpe on her marriage in September, she is a valued member of our team. The Edmonton Executive would like to wish her and her spouse all the best.

I would also like to congratulate Jason Ness on completing requirements and becoming the newest CCCA in the Edmonton Chapter.

As a side note, we're hoping in the next month to have an update regarding our 2025 Infonet and monthly lunch and learns at The Matrix.

Have an amazing October!

Membership in CSC

Dave Lawrence



In the construction industry's fast-paced environment, the need for and value of Construction Specifications Canada is greater than ever. CSC brings together individuals from all segments of the construction industry. All who have a vested interest in Canada's largest industry are invited to join CSC. When you join CSC, you become part of the only association that brings together professionals from all aspects of the construction industry.

DESIGN TEAM

CSC offers members of the Design Team the opportunity to meet with other members and exchange information. It also affords you the chance to help improve technology and its management, and the means to improve ways in which your ideals are translated into clear, concise, and complete documentation.

BUILDING TEAM

If you are a member of the Building Team, CSC offers you the opportunity to become involved in formulating specifications. Your valuable input into the programs can help generate time and cost savings, as well as improve performance.

Page 2 of 18

SUPPLY TEAM

The multi-disciplinary composition of CSC allows members of the Supply Team to meet with other members of the construction team. CSC programs in data filing and information retrieval are geared to present convenient and concise information on your products for proper evaluation and specification.

THE STUDENT

If you are a student of architecture, engineering, or construction technology, CSC will provide you with a greater exposure to, and a better understanding of, the construction industry, giving you an excellent opportunity if you plan a career in the construction field.

People and Places – Welcome to new and past CSC Edmonton Chapter Members!

Fresh Faces (New Members)

Claire Black

Specification Write, Reimagine Architects P: (780) 952-2525

E: cblack@reimagine.ca

Michael Belitsky Senior Technologist, Voshell Architecture and Design Inc. P: (780) 991-8805

E: mike.belitsky@vosharch.ca

Veronica Izmalli Hernandez Ibarra Architect. AAA

Reimagine Architects Ltd. P: (780) 700-2808

E: izmalli@hotmail.com

Debbie Jeannotte, Architectural Representative White Cap Supply P: (780) 278-3549 E: debbie.jeannotte@whitecap.com Stacy Kasnot Architect, Arc Studio P: (780) 809-2991 E: skasnot@arcstudio.ca

Jason Moulton

Chief Coatings Executive Officer, Performance Products International P: (780) 264-9982 E: jmoulton@ppinternational.ca

Jason Ness, CCCA

Arcadis Architects (Canada) Inc. P: (780) 860-2359 E: Jason.ness@arcadis.com

Yes, We've Moved (Contact / Mailing Address Update)

None this month.

Previous Members Re-Joining / Re-Activated

None this month.

CSC Education:



Principles of Construction Documentation

The PCD course is an introductory course that will enable the student to have a better understanding of construction documentation (specifications, drawings, and schedules), products, bidding procedures, and contracts. It is also a prerequisite to all the other CSC education courses. Specifier 1

Specifier 1 is an intermediate level course that will take the individual beyond the concepts previously introduced in the PCD Course. Although some of the same topics are included, the depth of comprehension and explanation exceed that of the PCD course. The Specifier 1 is a prerequisite for the Certified Specification

Page **3** of **18**

Practitioner (CSP) designation from CSC. Successful completion of the course may be credited toward the experience component requirements for the Registered Specification Writer (RSW) designation.

Technical Representative

The TR course provides a better understanding of contract documents and bidding procedures, product representation, professionalism, and ethics, and will provide a new depth of understanding and explanation of concepts beyond what was previously introduced in the PCD course. The course is designed for the individual involved in the supply section of the construction industry, such as manufacturer representatives, agents, or distributors of products. The student will have successfully completed the PCD course. Contact Mike for all your education needs. P: 780-237-7844 E: mewaskiw@stonhard.com

EDUCATION COURSES

Upcoming Classes:

Principals of Construction Documentation (PCD) – TBD Specifier – TBD Construction Contract Administration (CCA) – TBD Technical Representative (TR) – TBD

Upcoming Classes Online:

Principles of Construction Documentation (PCD) – TBD Construction Contract Administrator (CCA) – TBD Specifier – TBD Technical Representative (TR) – TBD

Upcoming Virtual Classes:

Principles of Construction Documentation (PCD) – TBD Construction Contract Administration (CCA) – TBD Specifier (SP) – TBD Technical Representative (TR) – TBD

Social Media:

Check us out:





Page 4 of 18

Michael Ewaskiw, CTR, December 30, 1964 – August 31, 2024



Mike joined the Construction Specifications Canada association (CSC) in 2005, and immediately made an impact within the association being the "go-to guy" for helping out on meetings, conferences and golf tournaments. In 2010 he joined the Edmonton chapter Executive Board, and he took over the reins of organizing the education sessions for the Edmonton chapter. In 2013 he joined the CSC National Board for Education as a committee member assisting in developing the courses and participating in many meetings. 2014 he started instructing two of the courses that CSC offers, and mentoring many of the students after the course was completed. Mike was an amazing, generous, thoughtful, passionate friend to many in our industry, his selflessness showed in his continued support of CSC and of the companies he represented. His honest and straightforward methods of explaining his company's products, as well as assisting students, and

participating in many CSC and other industry events really did make him the person that was trusted within the Alberta marketplace.

Rest in peace, Mike, you will be missed by your CSC family, and all who knew you.



Articles of Interest

Princeton Researchers Develop Concrete 3D Printing Method Inspired by Ancient Fish Scales

Sourced from: https://archinect.com / Niall Patrick Walsh

Image credit: Sameer A. Khan/Fotobuddy



Researchers at Princeton University's Engineering School have developed a method for 3D printing concrete with improved crack resistance. Taking inspiration from fish scales, the team led by assistant professor Reza Moini claims their design increases resistance to cracking by as much as 63% compared to conventional cast concrete.

Princeton's method drew inspiration from the double-helical structures that form the scales of an ancient fish lineage named coelacanths. The

resulting design sees concrete arranged into individual strands, with robotic 3D printing used to weakly connect each strand to its neighbor.

"The researchers used different design schemes to combine many stacks of strands into larger functional shapes, such as beams," Princeton explains. "The design schemes rely on slightly changing the orientation of each stack to create a double-helical arrangement (two orthogonal layers twisted across the height) in the beams that is key to improving the material's resistance to crack propagation."

Inspired by the ancient coelacanth fish, the researchers used a strand-by-strand, double-twisting architecture to enhance the concrete's toughness. Image credit: Princeton University



According to the team, the system's improved resistance to cracking revolves around a combination of shielding cracks from propagating, interlocking the fractured surfaces, and deflecting cracks from a straight path once they are formed. The team hopes that robotic 3D printing will further allow for the

creation of complex concrete shapes not possible through conventional casting.

News of the innovation comes one month after the University of Maine unveiled details of its experiments with 3D-printed floor panels made from recyclable natural materials. In July, meanwhile, ICON's first 3D-printed CODEX homes came onto the market in Texas. During the initial unveiling of CODEX, Archinect spoke with both Bjarke Ingels and ICON's Melodie Yashar on the topic of 3D printing in architecture.

Joe Doucet's Airiva Wind Turbines are Made for City Streets and Buildings

Sourced from: https//www.dezeen.com / Rima Sabina Aouf

Joe Doucet's Airiva wind turbines are made for city streets and buildings



Designer Joe Doucet has revealed his Airiva turbine – a modular wind power system that was conceived to have the necessary visual appeal to fit into urban settings.

Currently a prototype, the Airiva energy system features two-metre-tall vertical blades with a sculptural helix shape rather than the propeller style commonly seen on large wind farm turbines.

These blades create a mesmerising flowing movement as they spin, which is key to the design according to Doucet,

as it helps these systems to be seen as a desirable addition to buildings, campuses or roadsides.

"The elevated design plays a meaningful role in adoption and integrates within the architecture and infrastructure of our urban and suburban landscapes to bring clean energy closer to where we live and work," said Doucet.

Airiva is a form of distributed energy generation, which refers to the kind of energy production that happens on rooftops, gardens or other small sites for use by the property's owner or others in the surrounding area.

Proponents of distributed energy infrastructure argue that there is less power loss when energy is used locally and that these systems give their users resiliency against grid outages.

To make Airiva adaptable to many urban scenarios, the system is modular and scalable with four blades enclosed in square "wall segments" that can be joined together to make a unit of basically endless length.

The Airiva wind turbine is designed to have visual appeal



"The Airiva wind energy system complements and co-exists with other renewable energy systems while expanding the applications for distributed wind energy," Doucet told Dezeen.

Doucet first designed a version of the Airiva concept in 2021 after researching distributed energy products for a project and finding there weren't many made with attention to aesthetics.

Then called the Wind Turbine Wall, the concept design received enough attention online that Doucet was driven to launch Airiva in partnership with tech industry veteran Jeff Stone.

The current version of the design is the result of two years of engineering, development and testing, with the key change being to the shape and size of the blades.

Page 7 of 18

Their helical shape emerged as the most high-performing after 16 blade concepts were evaluated and three versions tested at wind tunnel facilities.

The turbines are not designed to be as powerful as the large industrial variety, with Airiva estimating that each wall segment of four turbines can provide 1,100 kilowatt-hours in annual energy production (AEP) based on initial testing.

To meet the total energy demands of the average US home, it would take a system with ten segments or 40 turbines.

The system is intended for use in locations like airports, commercial buildings, and roadsides



However, Airiva was designed to supplement rather than replace other energy sources such as grid electricity, and the company expects its systems to significantly contribute to meeting the energy demands of urban buildings.

In particular, the company plans to target the commercial market and has identified commercial buildings and campuses, municipal and public facilities, airports, road and rail infrastructure networks, and harbours and coastal areas as good potential sites for its units.

The Airiva segments are made of aluminium with injection moulded plastic for the blades. The company has a target of using 80 per cent recycled materials once it begins to manufacture.

Airiva will test a full-scale prototype of its unit later this year, which will consist of two wall

segments with four turbines each, plus an "end hub" to house the controls, communications and power management.

The company plans to conduct customer pilots in the second half of 2024, with the aim of taking the first orders in 2025.

Other projects aimed at squeezing turbines into dense urban contexts include the wind-powered Papilio street lamp and the multi-directional O-Wind turbine, which won the 2018 James Dyson Award.

Doucet is a New York-based designer whose practice focuses on innovation and sustainability. Another one of his ventures is Othr, a brand for 3D-printed homewares.

Can You Grow the Bricks for a House? Research Team Aims to Find Out

Sourced from: https://www.constructconnect.com / Evan Saunders

In a world of supply chain issues, rising material costs and housing shortages, a forward-thinking research team at the University of Manitoba is aiming to find out if mushrooms are the answer.

Page 8 of 18

SUPPLIED BY MERCEDES GARCIA-HOLGUERA — Close-up of a well-colonized mycelium sample made of straw, oats and water. One of the drives to incorporate mycelium as a building material in the research project was the idea of improving access to supplies for remote and Indigenous communities, who, in theory, could grow and dry mycelium products with relatively limited resources, said research lead Mercedes Garcia-Holguera.



Though still in the early stages of research, the team, led by Professor of Architecture Mercedes Garcia-Holguera, is exploring mycelium, the root-like structures of mushrooms, as a replacement for building materials like bricks and insulation.

"Our main goal has to do both with the exploration of biomimetic design and within biomimetic design there is this approach to

biomaterials," said Garcia-Holguera in an interview with the Journal of Commerce.

The university's location, surrounded by rural and Indigenous communities, inspired Garcia-Holguera to expand the scope of the research project to study the possible construction applications of mycelium.

"Access to materials in remote communities and Indigenous communities became a very strong reason to undertake this research," she said.

How it Works

SUPPLIED BY MERCEDES GARCIA-HOLGUERA — Early-stage growth of mycelium in a mason jar comprised of sterilized oats, sawdust and water. A University of Winnipeg research team are working with mycelium, the root-like structure of mushrooms, to see if it could serve as an alternative to building materials like insulation and bricks.



The first step in turning the mycelium into the desired product is to inoculate a substrate. The team is using sawdust from a local woodshop, but Garcia-Holguera said agricultural waste like flax and straw is equally viable.

The inoculated substrate goes in a bag until it is entirely colonized at which point it is transferred into a mould. This mould will be the final shape of the product and the mycelium is left to grow for two weeks, said Garcia-Holguera.

The mould then gets put in an oven to be dried out. "Once it's dried, the active

organism is dead and then it's like any regular inactive material," she said.

Garcia-Holguera emphasized the mycelium is a safe building product as well. "The mycelium that we use doesn't represent any harm to health," she said.

How it Can be Applied

Garcia-Holguera's team is looking at using the dried material for two different aspects of homebuilding.

"Using the mycelium as a material for insulation and exploring the compression strength of the mycelium to see if we can use it as bricks," said Garcia-Holguera.

The researchers have not yet tested the strength of their mushroom bricks yet, but Garcia-Holguera said the material's use for insulation is looking promising.

"That's where I think we will see it sooner in the commercial realm," she said.

If mycelium proves a viable replacement for bricks or insulation, it could be produced anywhere so long as a small, relatively climate-controlled space is available.

"If you wanted to grow 10,000 bricks it would take the same time (four weeks) as if you wanted to grow one as long as you had the space, the substrate and the mycelium ready," she said.

Part of the team's research includes using various species of mushrooms to see how each one's material properties differ.

The team is currently testing the resiliency of the mycelium against the bitter cold of Manitoba's winters by placing a large sample in an outdoor dome and working on practical applications for communities around Winnipeg and in Churchill.

"Slowly we are trying to increase the scale and bring this project and the research that we do closer to an actual application."

Environmental and Social Benefits

There are several clear benefits of growing mycelium into building materials for remote communities and the general public.

Mycelium grown products "are more environmentally responsible and more bountiful," said Garcia-Holguera.

She pointed out the embedded energy in mycelium is vastly lower than traditional construction materials like concrete or steel and is biodegradable. The mycelium can also be gown in a variety of waste products, creating a more sustainable cycle of production.

Garcia-Holguera sees her research as part of a larger emerging body of science and push "to go into a circular economy where whatever we think is waste today can become a material with value in the future." The possible social benefits are notable.

"We've been driving up to Churchill the past two years and we've seen, repeatedly, how hard and how expensive it is for people up north to get access to construction materials," she said.

Remote communities could one day be growing mycelium bricks and materials within their community reducing the cost and difficulty of accessing supply, said Garcia-Holguera.

"But the reality is, this is a wish. It is something that we've envisioned. We'll see in the future what could happen."

She thanked her team at the university for making the project a reality.

"Our undergrad and graduate students are the driving force behind all that we do. I wouldn't be able to do 1/10th of the work without them," she said.

Why Competent Workers Become Incompetent Managers

Sourced from: https://www.fastcompany.com / Tomas Chamorro-Premuzic and Sunny Lee

Managers play a crucial role in shaping an employee's experience. For example, research shows that nearly 70% of the variability in employee engagement can be predicted by their managers' behavior, decisions, and personality traits. In other words, whether people are happy, energized, or miserable at work depends mostly on their boss—and whether or not they're an incompetent manager.

Unfortunately, the impact of managers on employees often skews more detrimental than empowering. Many employees quit their boss, not their job. Indeed, a recent Gallup study of over 7,000 adults found that 50% of employees quit to escape an incompetent manager.

Naturally, the reasons why some managers are so incompetent have captivated researchers and practitioners, including us. Theories abound regarding the paradoxical fact that inept individuals somehow manage to advance their careers, climb the organizational ladder, and "fail upwards," to everybody else's peril.

Some incompetent managers get ahead due to their overconfidence or narcissistic traits, as discussed in Why Do So Many Incompetent Men Become Leaders? Likewise, some individuals can get ahead through their powerful connections, political skills, or purely by some luck theory can't explain.

Unsurprisingly, this is even more common in political elections, where voters are not always skilled enough to evaluate candidates' potential (or unwilling to scrutinize them properly) than in corporations.

Even more intriguing is that it's not uncommon for individuals who perform well in their jobs as individual contributors to fail to perform as expected when given managerial or leadership responsibilities, much like great individual athletes can disappoint after retiring and transitioning to team coaches or managers.

This phenomenon is well explained in The Peter Principle, by Laurence J. Peter and Raymond Hull in 1969. The core premise of the principle is simple: "In an organizational hierarchy, every employee tends to rise to his level of incompetence." That is, people get promoted until they are no longer worthy of promotion, which means that their actual potential is where they end up minus one level, or the role before their stagnation.

The Peter Principle

The Peter Principle is an old concept, but it still explains some of the biggest problems in organizations: The presence of incompetent managers who frustrate their subordinates and the leaks and silos in talent development.

You may not have heard about the term, but you'll likely agree with the concept once we explain it. You may have suffered the impact of the actual effect if you have worked or are working for someone who ended up as your boss without having the leadership or management skills to manage people, including you.

According to the original example from the authors' book, in a pill-rolling factory, a high-performing factory worker, once promoted to their first managerial role, would stay there until the end of their career because they did not have the people skills to manage effectively. Remember, these workers were promoted based on how fast they produced roll products but didn't know how to manage other workers.

Page 11 of 18

Yale Professor Kelly Shue and her colleagues' recent field study provides the first large-scale evidence for the Peter Principle, more than 50 years after the concept was introduced. This paper analyzed promotion practices in 153 different sales organizations over six years, covering nearly 40,000 workers considered for promotion to managerial positions. Their findings are fascinating and worth detailing.

First, they found that companies still prioritize employees' prior performance (individual sales performance in this case) over their managerial potential in their promotion decisions. It seems little has changed since the 1960s when many factories promoted workers into managerial roles based on manufacturing efficiency rather than managerial potential.

Second, they discovered that new managers' pre-promotion sales performance was negatively related to their effectiveness as managers, such as in team management and creating collaborative commissions. High-performing sales workers often turn out to be less effective or incompetent managers.

In their seminal book, Peter and Hull developed the principle as a satirical critique of the inefficiencies often found in management practices and relied heavily on hypothetical cases. However, emerging evidence supports the principle's core assertion by showing that promotions focusing on past performance can lead to employees reaching their level of incompetence. As Kelly Shue's research shows, this practice can be costly for organizations and individuals by promoting managers with inadequate skills or stripping promotion chances from those with excellent managerial skills who fall a bit behind in a cutthroat sales competition.

Not applicable to all promotion scenarios

There has been some criticism of the Peter Principle, arguing that it oversimplifies the complex dynamics of promotions, which are often specific to different contexts. We also acknowledge that the principle does not apply universally to all scenarios. For example, in highly technical roles such as software engineering or computer science, individuals can be promoted to increasingly complex stages within the same discipline for which they were initially hired. In this situation, career growth and promotion based on past performance can enhance workers' competence through continuous skill development and deepening expertise, rather than leading to a mismatch of skills.

However, the core mechanisms of the Peter Principle are useful and insightful by showing that incompetent managers sometimes emerge not solely due to toxic characteristics or nepotism, but also because of inefficiencies in organizational incentive systems. Moreover, the principle suggests that merit-based incentive systems can be problematic by promoting unprepared or unsuitable people into managerial positions in some cases.

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Stephenson prize for innovation in pancreatic cancer research launched with \$150 million gift to City of Hope

The prize, one of the largest privately funded awards for scientific investigation, will be given to the world's top researchers, regardless of institutional affiliation

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Page 13 of 18

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How to address the Peter Principle

Based on research insights on the fundamental roles of HR systems and emerging trends in the private sector, we suggest three ways that can help organizations address and mitigate the seemingly pervasive Peter Principle:

Broaden the aims of promotion: Conceptually, promotions within organizations serve to incentivize and reward employees, and match individuals to roles for future performance. While these two roles are both important, many organizations primarily use promotions as a tool to reward employees.

Recognizing high performers through promotions can motivate employees and boost morale. However, this approach can backfire if the promoted employees do not possess the necessary skills for their new roles. When promotions are based solely on past performance, organizations risk placing employees in positions where they may not thrive.

Thus, the first step to address the Peter Principle is to view promotions broadly as an important matching process to reduce the typical mismatch from overemphasizing a person's past performance.

Evaluate and develop leadership potential: One of the core mechanisms behind the Peter Principle is the gap between the skills needed in junior technical roles and those newly and additionally required in senior and managerial positions.

To improve the promotion system, especially for significant promotions for team leader or line manager roles, it's essential to consider a person's past performance or technical expertise and leadership potential, such as collaboration experience or services to the team.

Organizations can counteract the Peter Principle through comprehensive training programs that equip employees with necessary competencies, such as people management skills, strategic thinking, and emotional intelligence before promoting them to managerial roles.

Page 14 of 18

Separate career tracks: Modern organizational practices increasingly recognize the need for separate career tracks for individual contributors and managers. This approach allows employees to advance and be rewarded within their areas of expertise without being forced into managerial roles for which they might be unprepared. We have met many technical experts thriving in certain sectors and organizations that provide them with opportunities for career growth and development within the same or similar discipline.

The Peter Principle remains a significant challenge for organizations. Understanding and addressing the factors contributing to certain types of incompetent managers can foster a more effective leadership structure and talent development pipeline. After all, we all want our promotions to be more "escalator to continuous growth" and less "one step up to a plateau."

If you're a leader, don't just promote employees to the next level—give them the tools and training they need to thrive at every step of their career. Let's not turn our best engineers into our worst managers. If you're an employee stuck at your last promotion for decades, don't stay complacent. Actively identify the new skills and competencies you need to move to the next level or consider seeking growth opportunities elsewhere.

ASSOCIATION LINKS

- Alberta Construction Safety Association (ACSA)
 www.acsa-safety.org
- Alberta Building Envelope Council (ABEC)

www.abecnorth.org

- Building Information Modeling (BIM) Forum www.insightinfo.com/bimforum
- Biomimicry Guild
 www.biomimicryguild.com
- Canadian Green Building Council (CaGBC) www.cagbc.org
- CCDC Documents
 www.ccdc.org/home.html
- Construction Specifications Institute (CSI) www.csinet.org
- International Construction Information Society (ICIS) www.icis.org
- OmniClass
 www.omniclass.ca
 www.omniclass.org
- Uniformat
 www.csinet.org/uniformat
- Institute for BIM in Canada (IBM)
 www.ibc-bim.ca

- Architecture 2030
 www.architecture2030.org
- BuildingSMART Alliance (North American Chapter of BuildingSMART): www.buildingsmartalliance.com BuildingSMART International (formerly IAI) www.buildingsmart.com
- Biomimicry Institute
 www.biomimicryinstitute.org
- Canada BIM Council
 www.canbim.com
- Canadian Green Building Council (CaGBC)

 Alberta Chapter: www.cagbc/chapters/alberta
- Construction Specifications Canada (CSC)
 www.csc-dcc.ca
- buildingSMART Data Dictionary bsdd.buildingsmart.org
- MasterFormat (https://secure.spex.ca/siteadmin/freedocuments/images/1.pdf)
- buildingSMART Canada
 www.buildingsmartcanada.ca
- Ace BIM
 www.acebim.ca

ASSOCIATION LIAISONS

Alberta Association of Architects (AAA) <u>http://www.aaa.ab.ca/</u> Alberta Painting Contractors Association (APCA) www.apca.ca Alberta Wall & Ceiling Association (AWCA) http://awca.ca Alberta Roofing Contractors Association (ARCA) http://www.arcaonline.ca info@arcaonline.ca

American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) <u>http://www.ashrae.org/ / ashrae@ashrae.org</u>

The Canadian Wood Council (CWC) http://www.cwc.ca info@cwc.ca Portland Cement Association ConcreteTechnology@cement.org

Interior Designers of Alberta www.interiordesignalberta.com Alberta Painting Contractors Association (APCA) www.apca.ca

Association of Professional Engineers, Geologists, and Geophysicists of Alberta (APEGGA)

http://www.apegga.org/ dward@apegga.org

Association of Science and Engineering Technology Professionals of Alberta (ASET) <u>http://www.aset.ab.ca/</u> Russ Medvedev, russm@aset.ab.ca

Building Owners and Managers Association (BOMA) <u>http://www.bomaedmonton.org/</u> / <u>edmonton@boma.ca</u> Consulting Engineers of Alberta (CEA) <u>http://www.cea.ca/__info@cea.ca</u>

Edmonton Construction Association www.edmca/.com contact@edmca.com

Terrazzo, Tile & Marble Association of Canada (TTMAC) http://www.ttmac.com/ association@ttmac.com



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