Tear Down Silos-of-One and Spark Teamwork for Lasting Success

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Organizational silos hinder teamwork, slow progress, and trap knowledge. Learn from real-life examples, community feedback, and practical strategies to break down these barriers and build stronger teams.

Ready to eliminate silos and foster collaboration? Discover personal stories, community insights, and actionable tips for overcoming these challenges, and create connected, empowered, and adaptive teams.

Join us to unlock your organization's potential. The future of work is collaborative – let us build it together!

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Silos

In today's dynamic organizations, success thrives on effective collaboration, seamless communication, and unified goals. Yet, many organizations encounter **organizational silos** - those invisible barriers that emerge when teams, departments, or even individuals operate in isolation. These silos fracture workflows, stifle innovation, and create missed opportunities, resulting in a fragmented work environment. Understanding and dismantling these challenges is vital for achieving long-term success and your “dream team”.

Organizational Silos

Organizational silos arise when teams or individuals become insular, focusing solely on their specific tasks with limited interaction with other groups. These divisions can be structural, functional, or cultural, leading to:

- **Limited Information Flow**, where teams hoard or fail to share valuable insights.
- **Redundant Efforts** when multiple groups unknowingly duplicate work due to poor communication.
- **Stalled Innovation**, causing invaluable ideas to struggle to surface when collaboration is discouraged.

- **Reduced Morale** when employees can feel isolated and disconnected from the organization's overarching mission.

The impact of silos reaches far beyond team boundaries. If left unaddressed, they foster a divided organizational culture, making it challenging to adapt to shifting market conditions or capitalize on new opportunities.

Hidden Threat of the Silo-of-One

Among the various organizational silos, the most crucial and often ignored is the **silo-of-one**. Imagine a lone superhero in your team, holding all the secret powers and skills. While this might seem like an easy fix temporarily, it harbors significant long-term perils, including:

- **Knowledge Bottlenecks**, where entire workflows stop if our solitary hero takes a day off or decides to leave. Processes freeze, decisions are postponed, and precious time vanishes into thin air.
- **Burnout Risk** because our hero, though strong, is not invincible. The weight of excessive reliance can lead to stress, overwork, and eventually burnout. Without teammates to share the load, the hero's energy drains, impacting productivity and well-being.
- **Scalability is Challenged** and growth becomes elusive when critical knowledge is trapped within one individual. Projects hinge on the hero's availability, stunting the organization's ability to scale, manage greater tasks, or seize new opportunities.
- **Dependency Anchor,** where productivity and efficiencies can be hindered due to an overreliance on the knowledge and skills that are encompassed by an organization's hero. This not only produces significant delays but reduces collaboration and limits innovation.

In essence, while our siloed superhero may save the day now, relying on a single champion can spell trouble for the future.

Silo of One Personas

Are you grappling with **"silo-of-one"** personalities - individuals whose exceptional expertise, distinctive responsibilities, or rare skills make them invaluable yet isolated. Each type carries unique traits and hurdles, influencing team chemistry, knowledge diffusion, and overall efficiency. Recognizing these common personas helps pinpoint potential roadblocks and craft strategies to disseminate knowledge, lessen reliance, and bolster organizational resilience.

Legacy System Keeper

Meet the **Legacy System Expert**, the guardian of an old yet vital system that keeps the organization's wheels turning. With years of experience under their belt, they are the keepers of an arcane knowledge—a blend of wisdom and intuition—that is neither written down nor easily shared. Their mastery makes them indispensable, often regarded as the irreplaceable wizards of system management and troubleshooting.

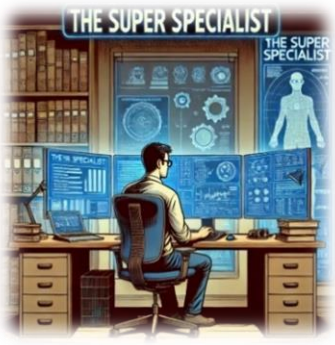
However, this revered role is not without its hurdles. Legacy system experts tend to cling to the familiar, shunning newfangled methods in favor of tried-and-true processes. This resistance to change can create **bottlenecks**, as teams find themselves in a queue, waiting for their turn with the wizard to solve issues or roll out updates. The weight of this unique expertise can also lead to **burnout**, dimming the once-bright spark of productivity and well-being.

Lone Innovator

Some individuals are natural-born mavericks, conjuring and executing inventive ideas in splendid isolation. These **Lone Innovators** often sidestep rigid team processes or standards, driven by a relentless inner spark that propels them from inspiration to implementation at lightning speed. These solo innovators can be like shooting stars in fast-paced settings, dazzling with their brilliance. Yet, their lone-wolf style can mean fewer chances for collaborative brainstorming and shared ownership of breakthroughs.

This self-reliant approach, though swift and bold, might stumble over long-term success hurdles. Without the tempering influence of peer feedback, their sparkly ideas risk missing the polish needed for scalability or broader impact. Moreover, if their brainchildren go unnoticed or unadopted, these creative dynamos could become disheartened, stressed, and feel undervalued.

Super Specialist



Individuals embodying the **Super Specialist** personality are often like hidden wizards, holding unrivaled mastery in a specific area - be it a niche programming language, a proprietary tool, or a unique process. Their technical prowess is nothing short of magical, solving complex problems that stump everyone else. However, this deep specialization tends to make them lone operatives, rarely stepping out of their expertise to engage in broader team activities or cross-functional projects.

Their specialized role can create a fascinating yet perilous dependency loop where they are repeatedly summoned to tackle critical tasks, further cementing their solitary status. The challenges that come with these specialists are not trivial. Their knowledge

is so unique that finding a replacement or covering their responsibilities during their absence feels like an impossible quest without extensive onboarding. Teams become heavily reliant on their wizardry, causing delays when they are unavailable or drowning in tasks.

Moreover, organizations might overlook the necessity of crafting a succession or backup plan, thereby creating a single point of failure that threatens long-term stability.

Process Gatekeeper

The **Process Gatekeeper** personality often find themselves as the linchpin of pivotal tasks and approvals, like managing CI/CD pipeline configurations or giving the green light for deployments. Their team trusts them implicitly for their vast expertise and historical knowledge of crucial processes. However, these gatekeepers can become extremely cautious or rigid about making changes within their domain, clinging to the status quo to dodge any risks or disruptions. Although their role is vital, their hesitance to delegate responsibilities can inadvertently isolate them from the rest of the team, stifling chances for collaboration and knowledge transfer.

This dependency poses significant challenges for both the individual and the team. Since this Silo-of-One holds the keys to critical workflows, their absence - whether due to vacation, illness, or departure - can bring key processes to a grinding halt, causing delays and frustration. These individuals often struggle with delegation and scaling responsibilities, feeling that no one else can grasp the nuances of their tasks. This lack of knowledge sharing and trust can create hurdles in training others or developing a backup plan, jeopardizing process continuity if they leave the organization. In the end, while indispensable to daily operations, their isolated stance can spell long-term risks for the team and organization.

Data Wizard

The **Data Wizard** is a star in any organization, wielding mastery over intricate data structures, diverse sources, and crucial reporting systems that steer decision-making. This virtuoso can seamlessly manage complex data requests, perform advanced analyses, and deliver precious insights with an almost magical touch. Their knack for navigating and interpreting data like a maestro often comes with a catch - they tend to operate solo, rarely documenting their ingenious problem-solving methods. This creates a mysterious aura around them, as their unique skills become the lifeline of the organization.

However, when the Data Wizard vanishes - be it for a well-deserved vacation, due to illness, or even permanent departure - the entire organization feels the tremors. Reporting and analytics face significant hiccups, as there is often no one else who knows the ropes of these complex tasks. Without proper knowledge sharing, the risk of data mismanagement looms large, as the secret recipes for managing, cleaning, and analyzing data are locked away in one mind. The endless deluge of urgent data requests can lead the Data Wizard to burnout, burdened by the inability to

delegate or share the workload. This blend of pressure, isolation, and lack of backup can spell trouble for both individual well-being and the organization's productivity.

Reliance on the Data Wizard can lead to significant issues when errors occur in data manipulation without cross-validation, potentially affecting business decisions.

Firefighter

Lastly, the unsung hero who thrives in chaos and is always ready to tackle technical emergencies. This dynamo shines brightest under pressure, swiftly dismantling complicated problems with the precision of a seasoned detective. They often work solo, deftly resolving urgent matters with their quick wits and resourcefulness. Their talent for instant solutions makes them indispensable in high-stakes scenarios. But, alas, this knack for rapid fixes often overshadows the need for long-term strategies or preventive measures.

The true test for a **Crisis Resolver** lies in the team's over-reliance on their firefighting prowess, which can easily lead to burnout. Their role becomes an all-consuming whirlwind, leaving scant time for rest or personal growth. Given their fast-paced, reactive nature, they might not pause to document solutions or establish knowledge-sharing frameworks for others. This lack of documentation stifles team learning, keeping valuable insights locked away. Furthermore, focusing on temporary patches rather than addressing root causes means recurring issues continue to plague operations, spinning a never-ending web of crises without strengthening the underlying system.

So, how many of these characters have you spotted within your team and organization?

Silo-of-One Community feedback

We embarked on a quick poll adventure to bolster our research, gathering insights from twenty-nine innovative engineers in our DevOps custom software development team and twenty-three expert voices from the wider realm of Microsoft Most Valuable Professionals (MVPs) and other esteemed subject matter experts. This exciting journey brought us fifty-two valuable responses. Each participant navigated through the same set of questions, starting with unveiling their primary role, as detailed below.

The goal of this validation poll was to capture a kaleidoscope of views from our team and esteemed industry veterans. By blending these diverse voices, our research gains credibility and a rich tapestry of insights drawing from real-world expertise and varied experiences.

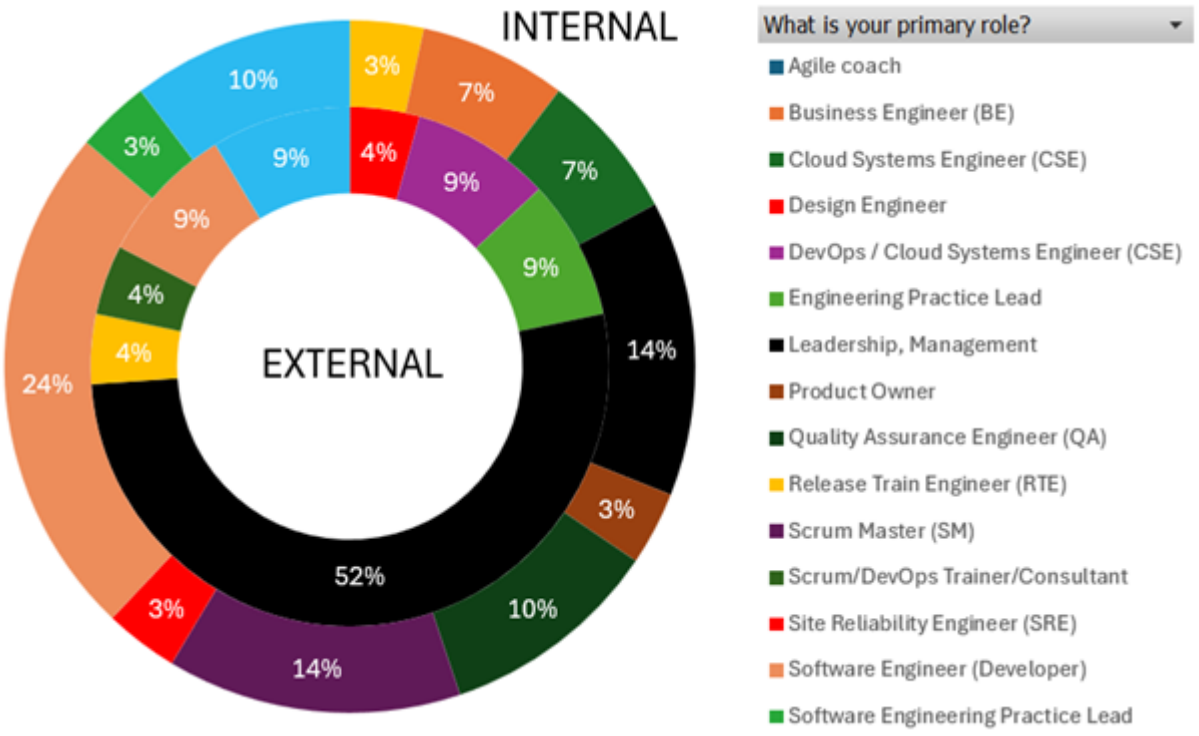


Figure 1 - What is your primary role?

When asked if they knew a silo-of-one engineer, 62% of our DevOps audience said "Yes," compared to 96% of the broader engineering community. This shows a difference in awareness about siloed roles between internal teams and the wider engineering community.

Figure 2A - Are you aware of an engineer who is a "silo of one"? (Internal)

Figure 3B - Are you aware of an engineer who is a "silo of one"? (External)

Left images refer to internal teams and right images to the engineering community.

Interestingly, both our DevOps insiders and the broader engineering community agree that lone-wolf engineers with indispensable expertise are pretty much a staple in their world. When asked about it, most respondents from both camps admitted that these crucial knowledge guardians are quite common, often holding the keys to their team's success.

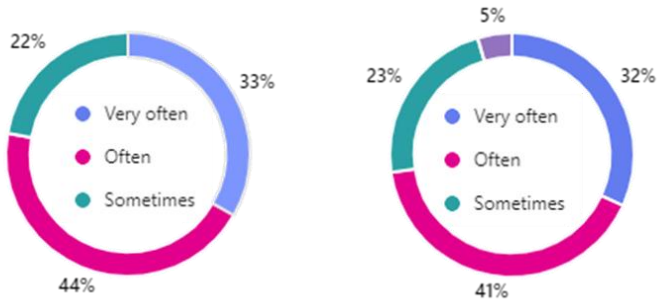


Figure 4 - How often do you encounter situations where a single engineer holds critical knowledge or expertise? (Left=Internal, Right=External)

When asked, "What do you think are the main culprits behind 'silos of one' in your team?" both groups pointed to specialized knowledge and insufficient cross-training as primary suspects. Furthermore, engineers from outside the company spotlighted team structures as another major villain, showing how organizational design can foster isolated pockets of expertise.

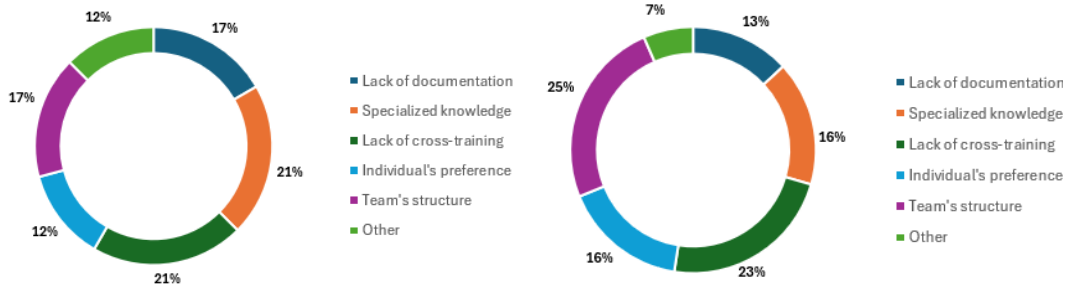


Figure 5 – What are the main reasons you think lead to the formation of 'silos of one' in your team? (Left=Internal, Right=External)

External engineers found it easier to approach individuals working alone. Yet, when considering both "Yes" and "Sometimes" responses, it becomes clear that both groups showed nearly equal eagerness to seek assistance from their colleagues. This reveals a mutual willingness to collaborate, despite initial variations in confidence.

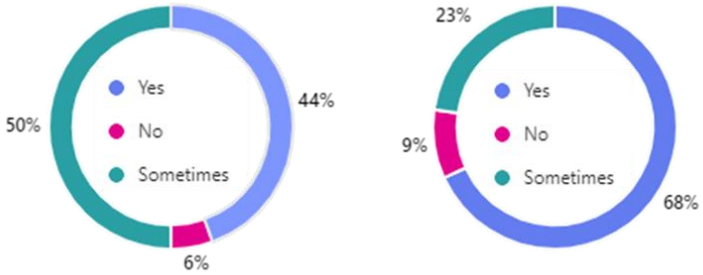


Figure 6 - Do you feel comfortable approaching these key individuals for help or knowledge sharing? (Left=Internal, Right=External)

Both known and community stakeholders have expressed concerns regarding the risks associated with knowledge silos within organizations, which often stem from over-reliance on a limited number

of key individuals. The first segment focuses on the operational repercussions of losing essential expertise, such as project delays, technical backlogs, and diminished development efficiency. This highlights the necessity for proactive knowledge transfer strategies, team-wide skill enhancement, and reducing reliance on outdated technologies.

The known group of users identify underlying causes, including inadequate documentation, lack of cross-training, individual preferences, and team structure issues that impede collaboration and knowledge sharing. Collectively, these segments emphasize that addressing these risks requires fostering a collaborative culture, enhancing documentation practices, enabling comprehensive cross-training programs, and optimizing team structures to facilitate better knowledge flow.

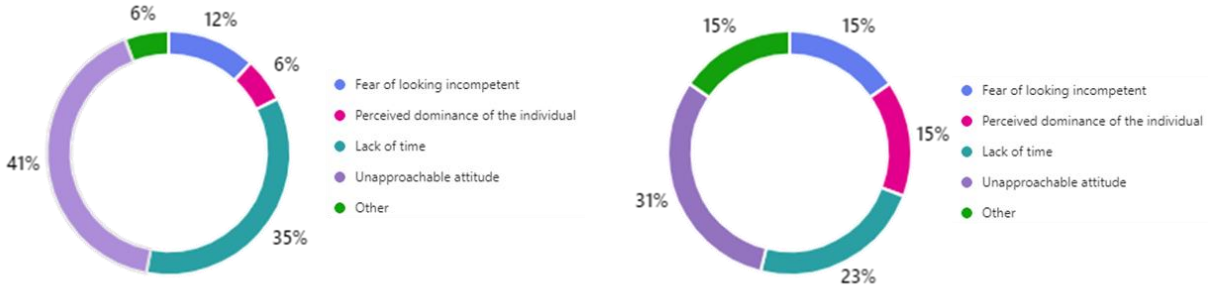


Figure 7 - If you answered 'No' or 'Sometimes', what are the reasons for your hesitation? (Left=Internal, Right=External)

Individuals often rationalize their hesitation to approach those working solo, as they often blame it on an unwelcoming vibe and a jam-packed schedule. These challenges underscore the need for a friendly team atmosphere and balanced workloads, which can spark knowledge sharing and teamwork.

Both the known engineers and community engineers underscore the importance of eliminating knowledge silos through collaboration, cross-training, and thorough documentation. They emphasize the significance of T-shaped skills, where engineers cultivate deep expertise in a specific domain while acquiring a broad understanding of other areas, thereby enhancing teamwork and mitigating bottlenecks. Key strategies include job rotation, mentoring programs, centralized knowledge platforms, and succession planning to ensure business continuity. Management assumes a pivotal role by investing in training initiatives, endorsing peer reviews, and fostering a culture of shared ownership. Regular audits of documentation, collaborative team structures, and automation are crucial to sustaining an adaptable and resilient organization.

When asked for other, closing feedback, both groups of respondents address the issue of "silo of one," emphasizing the necessity for effective knowledge sharing and cross-training to mitigate operational risks. The first passage underscores the importance of fostering a resilient team environment, overcoming reluctance stemming from job security concerns, and reducing dependence on isolated experts, particularly in legacy systems. It highlights management's role in empowering team members and modernizing systems to facilitate collaboration. The second passage focuses on strategic discussions aimed at mitigating silos, referencing "Brent" from The

Phoenix Project (Gene Kim , Kevin Behr, George Spafford, 2013) as a cautionary example. It also acknowledges the consultant's challenge of balancing transparency with business interests while expressing a willingness to engage in further dialogue.

Analysis of polls from a psychological perspective

Internal versus External

Community feedback draws insight into the disparity between the views and values of one distinct team or organization (DevOps) versus the collective view of a diverse sample of professionals. Using the internal sample, about 38% of respondents (Figure 2A) were not aware of an engineer that represents a “silo of one”, while this number was as low as 4% for the external respondents (Figure 2B) be statistically significant but raise questions as to why the internal respondents had a lower rate of individuals reporting an active “silo of one”. The lower representation of individuals that agree a silo of one exists can represent either a positive or a negative. Are internal responders’ part of an organization or team that fosters and reinforces an open and collaborative knowledge sharing environment or do these individuals share a common belief that knowledge silos are not as significant or commonly found in their organization.

Communication practices and one’s sense of ownership over a project or task (Debora Jeske, Deborah Olson, 2024) could be factors that help explain the disparity between the two groups. The way an organization or team chooses to collaborate and share knowledge can have an incremental impact on the types and number of silos that are formed, such as that a culture of proactive and deliberate knowledge sharing minimizes the existence of silos or the emergence of silos. The internal responders could be exposed to a rudimentary framework of communication that fosters collaboration, maximizes teamwork, and ensures that they understand what projects or tasks they are responsible for. The second factors touch on an individual or a team’s sense of ownership over a project or task. Collective or shared ownership versus individual ownership tends to lead to a more positive outcome and reduces the number of individuals “silos of one”. Shared ownership can lead to considerable changes (Debora Jeske, Deborah Olson, 2024), if the responsibility to reduce silos is collectively shared by all, then they will be rectified by everyone and not just leadership or those holding positions of specialized knowledge. Everyone, no matter their hierarchical position within a team or an organization, should hold the responsibility to minimize knowledge silos, specifically ensuring they themselves do not slip into a “silo of one”.

Figure 1 also shows that about 52% of the external respondents hold a leadership or management position, which is interesting to include as part of this analytical review. Leaders are often individuals in positions that have access to sensitive or significant knowledge that is not commonly known amongst their organization or team, ultimately making them the “silo of one”. Alternatively, these individuals also have a strong influence on the culture of their teams and how they operate, either facilitating a reduction or increase of organizational silos. Taking this view can also explain the high rate of external respondents agreeing that they are aware of an individual that is a “silo of one”, creating a direct correlation between these two variables.

Recognizing Organizational Silos

The first step in trying to minimize “silos of one” is recognizing that one exists. As the community survey shows, in neither of the groups did we receive a 100% agreement that “silos of one” exist. Figure 3 shows that 77% of the internal and 73% of the external respondents often (or more) encounter situations where a single engineer holds critical knowledge or expertise. This shows that amongst the two groups there is a clear recognition of existing knowledge silos, which usually precedes the act of deliberate knowledge sharing, documentation, cross-training, and job rotation, leading to reduced knowledge silos.

Recognizing silos is critical because they create substantial risks to an organization’s long-term stability, both in terms of business success and creating a productive and motivated workforce. Silos essentially represent a knowledge gap and only once a knowledge gap is recognized is training usually implemented. Along with other factors, a lack of cross-training was recognized by the engineers as one of the top reasons that lead to the formation of “silos of one”, which was found in both the external and internal engineers. Could cross-training solve the mystery of knowledge silos, unfortunately not. Knowledge silos are much more complex than we think, as there are several factors that can influence the number of silos that are present at one time. The engineers provided insight into other factors, such as team structure, specialized knowledge, and a difference in individual’s preferences (personality), therefore training on its own will not reduce the emergence of “silos of one”.

Knowledge is Power

A silo mentality is where “teams [or individuals] stop communicating or sharing information with others” (Debora Jeske, Deborah Olson, 2024). This mindset or lack of communication can lead to organizational issues affecting productivity, collaboration, and long-term stability. Why would an individual adopt a silo mentality and jeopardize the success and potential of their team? In the famous words of Francis Bacon “knowledge is power”. Individuals may simply fear that sharing too much knowledge can jeopardize their positions and diminish the value they have in their team, and they become powerless. Individuals often take on a “us versus them” mentality, which can be attributed to individuals, but can often be found amongst different teams or organizational departments. Rather than working in collaboration with one another, there is an underlying motive to compete versus collaboration.

The engineers indicated that they sometimes or never feel comfortable approaching key individuals for help or knowledge sharing, and one of the reasons was due to an unapproachable attitude. This is significant to understand, as those individuals are either choosing not to be approachable or are being perceived as unapproachable. Nevertheless, they are not deliberately engaging in behaviours that make them approachable, which would otherwise reinforce knowledge sharing practices. This can be due to several factors of course, but it is important when considering the culture of a team, which leaders and managers have a strong influence on.

The second most predominant reason engineers did not feel comfortable approaching key individuals was due to a lack of time. We cannot conclude if the individual lacks the time to reach out, or whether the individuals holding the knowledge are limited with their time. Either way, a lack of time represents a culture that values other activities over knowledge sharing practices, which

may still be predominant in the teams that the engineers are a part of. Leaders and knowledge bearers play a significant role in fostering a culture and climate that allows the time for knowledge sharing and a culture that creates dedicated time for peer-to-peer learning and mentoring.

Psychological Safety

Psychological safety is grounded in the belief that individuals feel empowered and can take interpersonal risks without fear of shame, negative criticism, or backlash. This sense of psychology safety can encourage team members to create communication openly, build trust with their peers and contribute effectively. The engineers shared other reasons for hesitating to reach out to key individuals which include the fear of looking incompetent and a perceived dominance (Figure 6). This is important to understand as knowledge sharing involves two actors, the one who provides the knowledge and the one who acquires the knowledge. Often knowledge sharing occurs because one of these actors identifies a knowledge gap and seeks to address it. For the actor, that is to acquire the knowledge, they may fear asking for help admitting that they do not know something or fear they may be scrutinized for not having acquired that knowledge. Leadership and management are critical factors in ensuring they foster a culture of psychological safety, where leaders encourage team members to ask questions, look for guidance and are not afraid to ask for more training.

Eliminating or Reducing Silos?

How do teams and organizations eliminate silos of one? Silos are integral to organizations as they provide structure for vertical, horizontal, and functional frameworks that can create both positive and negative outcomes for an organization's effectiveness. Knowledge silos are an essential component of growth, leadership and implementing structure within teams and organizations. Based on this, silos but specifically silos of one are not absolute, meaning silos cannot be indefinitely eliminated at one point in time, and teams should therefore be focusing on reducing silos of one, rather than eliminating them. One individual will always hold specialized knowledge at one point or another. As demonstrated in the
Figure 4, both groups pointed out that specialized knowledge and insufficient cross-training are primary catalysts to creating "silos of one". Silos should not be viewed as problematic in nature, but rather as a natural phenomenon that enables teams and organizations to have various levels and functions. An oversaturation of silos swings the pendulum and creates negative and long-term pain points for individuals, teams and entire organizations.

We covered several factors and examples that can impact the emergence of "silos of ones" or knowledge silos. A culture that aims to reduce silos is created when there is a high sense of psychological safety, self-confidence, self-resilience, a growth mindset, and a leadership team that enables team members to recognize the emergence of silos prematurely and provides training on how to address them. Additionally, focusing on a collective culture of collaboration versus competition can have a critical impact on the number of knowledge silos that exist.

Further Understanding "Silo-of-One"

Organizational silos are a human centred phenomenon or in simpler terms, the presence or absence of silos is dependent on the behaviours of people. For example, we often view technology as a vehicle for innovation and change, meaning as we face new challenges throughout the years, the presence or absence of innovative solutions in modern day society is reliant on technology. In

the context of an organization, the different behaviours and cultures that reduce or increase the presence of silos are affected by leadership styles, team dynamics and an organizations culture.

Leadership styles is the important piece of the puzzle to focus on, as leaders have a direct and indirect influence on both individuals and their teams, which inevitably trickles down and contributes to the organizational culture. David Marquet's book "Turn the Ship Around" reflects directly on the impact and importance of what it means to be an effective leader, defining leadership as a means of "communicating to people their worth, and potential so clearly that they are inspired to see it in themselves". Therefore, the leadership style that a manager, supervisor or even individual team member chooses to embody, can promote or reduce information sharing behaviours such as knowledge sharing, cross-training, documentation and building mentorship relationships. David Marquet focuses on the idea of a leader-leader leadership style, meaning it is a means of giving others control, recognizing that we can all be leaders. Rather than telling them what to do, we ask questions on how they would approach a problem. Using this leadership style, as leaders we avoid becoming the central hub of information and control, and therefore rather encourage collaboration, which indirectly reduces the presence of knowledge silos. In contrary a dependent centered leadership style that follows a leader-follower model may be successful in the short-term but in the long-term it damages the success of an organization. In this model if a leader goes on leave, is absent or entirely leaves an organization, the performance of the organization tends to drop. This falsely represents good leadership, because under competent and effective leadership, a team would thrive in the absence of set individual, demonstrating that they were an effective teacher and ensured the success of the team was not dependent on their presence.

Team dynamics are the various behavioural and social interactions that are present amongst team members. How a team approaches the way they communicate, how they make decisions, resolve conflict, or share responsibilities can increase or decrease the presence of a "silo-of-one." As individuals, we often tend to gatekeep our own ideas with fear of having them stolen or unrecognized, and this fear can lead to silos of one. Team dynamics, therefore, can reduce this fear and promote a collaborative idea and knowledge sharing environment. Leaders have a great effect on these dynamics that take place within a team, such that they can promote group-discussions versus brainstorming silos, and they can even impose various mechanisms that promotes knowledge and idea sharing. For example, David Marquet's book defines the mechanisms "Thinking Out Loud", which aims to maximize the potential of the team, strengthens technical competence and creates organizational clarity by reinforcing a culture of collaboration and idea sharing.

An organizations culture is composed of the mutually shared values, beliefs and mechanisms for control that help create a collective understanding on how individuals and teams are set to work together within the organization. Often this organizational culture is rooted in the origins of the organization and the leadership styles that have become part of the organizations identify and way of working. The culture provides individuals an understanding on how to interact with others, the accepted standards of working, and the general attitudes that are deemed appropriate, which all have an indirect effect on organizational silos and whether it is important for the organization to reduce them. Organizations can also be distinguished through three different managerial strategies, classical organizations, human relations, and high involvement. The managerial strategy that an organization chooses to embody is deliberate and either increases or decreases membership behaviour, dictates how much input individuals have and the types of leadership

styles that are critical to the success of that organization. In clear terms, an organization may choose to implement values and structures that either reinforce silos or reduce them, depending on the organizational strategy. But when focusing on engineers, developers and high-involvement work environments, the strategy and culture that reduces silos of one is a vital component that contributes to the long-term success of the organization. Each of these approaches does come with different effects on individuals' motivation, work stress, group norms, cooperative or innovative behaviour and even perceived job effort. This affects how much the individuals wants to participate within the organizational culture and contribute to knowledge sharing and reducing silos of one.

Organizations Responsibility in Addressing Silos of One

As mentioned in the previous section, whether organizations view silos as harmful is dependent on their managerial and business strategy – recognizing that knowledge sharing can be harmful to their business success, demonstrated by low-involvement organizations. But when considering high-involvement organizations, which engineers are typically a part of, what responsibilities do these organizations have in addressing and providing opportunities for knowledge sharing?

Adam Grant (Grant, 2016) and Daniel Pink (Pink, 2009) both highlight Google's concept of allowing employees a percentage of their work time to be spent on developing and implementing their own ideas, known as the "twenty percent time". A business considering giving back 20% of an employee's time to allow them to pursue or develop their own ideas in the interest of the business may feel counterproductive, but it proved to be effective for certain companies such as Google, ultimately leading to the development of Google Mail.

The concept of "twenty-percent time" that was implemented by Google is an example of an organization creating and reinforcing deliberate and dedicated time to innovation and idea formation, while giving their employee autonomy. This can be further injected into how organizations that seek to reduce silos (i.e. engineers) should be implementing policies and processes that create dedicated time for employees to focus on knowledge sharing and learning opportunities. Enforcing an idea like the twenty-percent time, but for continuous learning, knowledge sharing, skill development, cross-training and fostering psychological safety, would be in the best interest for organizations to actively and deliberately address the issues of silos within their organization.

Organizations always strive to maximize profits, growth, and organizational success, but often profits overshadow what could be an optimal growth rate or essentially creating policies that mandate dedicated time to non-profit generating activities. Therefore, an organization would need to avoid striving for maximum profits and rather creating high involvement working groups that ensure organizational success in the long-term. Provincial or government ruling bodies can enforce the requirement for organizations to allocate a percentage of their payroll to training activities, which is becoming more common within the Canadian workforce.

Break Free from the Silo-of-One

Addressing a silo-of-one situation necessitates the development of strategic plans that foster knowledge sharing, establish backup solutions, and cultivate a collaborative team environment.

This approach aims to achieve beneficial outcomes such as increased **innovation**, improved **efficiency**, and enhanced **employee satisfaction**, thereby providing a more balanced perspective.

Knowledge Sharing & Documentation

Knowledge sharing and documentation are vital for breaking down silos in organizations, including silos-of-one. By freely sharing and documenting information, collaboration and transparency are enhanced, allowing people to access necessary knowledge regardless of their role. This eliminates barriers between teams and promotes collective goal achievement. It also ensures that valuable insights and expertise are available organization-wide, fostering innovation and continuous improvement.

Additionally, knowledge sharing and documentation maintain organizational continuity. Documented information reduces the risk of knowledge loss due to attrition and helps new employees quickly onboard. It provides a reliable reference for resolving issues, making decisions, and driving progress. Prioritizing these practices creates a resilient and adaptable environment capable of meeting changes and challenges.

Deliberate Knowledge Sharing

The concept of proactive and deliberate knowledge sharing is grounded in the idea that knowledge sharing must be a deliberate and conscious decision. In an organizational setting, individuals may share knowledge through various methods, such as interpersonal communication, collaboration, training, or other group-based events.

Individuals and teams adopt certain behaviours and mannerisms over time that become habitual and rigid. Deliberate knowledge sharing includes having awareness and understanding one's own behaviours and mannerisms and how they contribute to either reducing or reinforcing organizational silos. Recognition and awareness of one's own behaviours creates the ability for individuals to change their behaviours and reactive tendency, leading them to develop more deliberate methods of communication and knowledge sharing, thereby reducing organizational silos through deliberate knowledge sharing practices.

Cross-Training & Job Rotation

Training is usually implemented to address problems or fill knowledge gaps. Engineers should engage in continuous training due to the complexity of their work. Organizations should create a culture that addresses "silos of one" by educating and training employees on how to minimize them. Teams should take end-to-end responsibility for applications, making decisions and owning outcomes. Failures should be viewed as learning opportunities, promoting a growth mindset.

Job rotation includes stages of collaboration maturity, from "Crawl" where functions are isolated, to "Fly" where there is fully shared accountability for product delivery across various functions. This involves regular team-building sessions and clear knowledge transfer of critical applications.

Management should invest in training, allocate time for exchange, and support peer reviews of tactics and strategies. To reduce risk, avoid relying on one person and replace legacy silos with collaborative teams.

Mentorship & Pair Programming

Mentorship breaks the "silo of one" mindset by promoting collaboration, knowledge sharing, and learning. It allows experienced engineers to pass on skills and information to junior team members, preventing knowledge from being concentrated in one person. Strong mentor-mentee relationships build trust and enhance communication, making teamwork more effective. By encouraging collaborative practices, mentors ensure knowledge flows freely, reducing reliance on any single individual.

Mentorship helps engineers develop T-shaped skills, gaining deep expertise in one area and broadening their understanding of other domains. Mentors support mentees in taking on responsibilities and sharing knowledge, fostering a culture of continuous learning. This creates adaptable, collaborative teams that prevent knowledge bottlenecks and ensure long-term success.

Process Transparency

Process transparency is crucial for organizational success. It improves decision-making, defines roles, clarifies accountability, enhances collaboration, and builds trust. Regular reviews and updates are needed to maintain it. An example includes one of our team's working agreements that emphasizes transparency, teamwork, and continual learning – see Figure 8 on page 17.

This visual agreement commits to optimizing meetings, valuing work-life balance, and promoting Agile and DevOps principles. It helps break down silos by encouraging open communication and teamwork.

Conclusion - Embrace Collaboration for Lasting Success

In conclusion, breaking down isolated roles enhances efficiency, collaboration, innovation, and resilience. Addressing these silos enables organizations to unlock their full potential and develop an adaptive workforce. This process involves knowledge sharing, cross-training, and fostering psychological safety, yielding substantial benefits.

To build a connected and empowered team, implement these strategies, incorporate generative artificial intelligence (AI) – a subject worthy of further exploration – and promote continuous learning and collaboration. It is essential to ensure that engineers have the time, capacity, and encouragement to engage in ongoing learning and knowledge sharing. They need to recognize the advantages for themselves, whether through career growth, skill development, or greater impact within the organization. By doing so, organizations create an environment where continuous improvement can flourish.

Not everyone will be able to contribute to a silo-free environment. To prevent the spread of toxic behavior, these individuals should be isolated or managed separately from the rest of the organization.

This collaborative and silo-free approach equips your organization to face challenges and seize opportunities. For a checklist, references, and works cited, please refer to the appendix.

We appreciate your interest in addressing isolated roles within organizations.

Figure 8 - Common Engineering Team's Working Agreement Poster

Appendix

Closing Checklist of Success

Here is a checklist to help you remember key focus areas and action items for breaking down the "silo of one" phenomenon:

Focus Areas

☑	Category	Actions
☐	Knowledge Transfer	Ensure that critical information is communicated effectively across the team. Document all processes and procedures thoroughly.
☐	Building Relationships	Build trust and camaraderie, promote open communication and collaboration.

☑	Category	Actions
☐	Encouraging Collaboration	Encourage teamwork and collaborative problem-solving. Remove obstacles to knowledge sharing.
☐	Developing T-shaped Skills	Encourage team members to gain deep expertise and broad understanding through cross-training and skill development opportunities.
☐	Providing Support and Guidance	Mentor and support team members. Assist them in overcoming challenges and growing in their roles.
☐	Promoting a Culture of Continuous Learning	Promote continuous learning and foster a culture of knowledge sharing.

Table 1 - Key Focus Areas Checklist

Call to action!

☑	Initiative	Action
☐	Mentorship Programs	Pair experienced engineers with less experienced ones. Arrange regular mentorship sessions.
☐	Cross-Training Sessions	Organize training sessions to share knowledge. Encourage team members to develop new skills.
☐	Document Processes and Procedures	Document critical processes thoroughly. Make sure documentation is easily accessible.
☐	Open Communication	Utilize collaboration tools to enhance communication effectiveness.
☐	Team Building Activities	Organize team-building events to foster relationships and encourage social interactions.
☐	Skill Development	Provide training and promote professional development.
☐	Feedback Loop	Consistently solicit feedback from team members. Utilize this feedback to enhance processes and address any challenges that arise.
☐	Containment / Quarantine / Training	Not everyone will be able to contribute to a silo-free environment. To prevent the spread of toxic behavior, these individuals should be isolated or managed separately from the rest of the organization. Further training on how to break out of a silo mentality may be necessary to introduce these individuals back into a collaborative team environment.

Table 2 - Call to Action Checklist

Use these checklists to overcome the "silo of one" and build a more collaborative, resilient team.

References

- Images created by DALL-E, https://chartgpt.com and https://m365.cloud.microsoft.
- Working Agreement Poster from the Common Engineering Team, WorkSafeBC.

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