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FEATURE

Superlearning

Reskilling, upskilling and outskilling for a future-proof workforce

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The World Economic Forum sounded an alarm in January 2020 by announcing: "The world is facing a reskilling emergency. We need to reskill more than 1 billion people by 2030."[1] The underlying message was that organisations, governments and society need to work together to ensure people around the world are not left behind.

THIS EMERGENCY DIDN'T come out of nowhere. Disruptors to the nature of work have been delivered by technology innovation, a growing demand for new competencies, changing employee expectations, shifting labour demographics and inclusion/diversity strategies, new workforce models, and the evolving business environment with all its regulatory changes. And more recently the COVID-19 pandemic, which is forcing a rethink on the role of Learning and Development (L&D) in organisations and how learning can be delivered in the more immediate term. Many chief learning officers and L&D teams have already realised that reskilling, upskilling and outskilling[2] present the answer to these problems, but that learning as we know it will not suffice.

A learning transformation is needed – one that focuses on the connection between continuous re/up/outskilling, on the one hand, and actual work, on the other: They are two sides of the same coin. The challenge for L&D teams is to prepare for a *superlearning* future, centred on skills and capabilities[3] at the individual, team and organisation levels; powered by data; and integrating 'learning in the flow of work' across functions and businesses. To make this transformation is to embark on a journey involving several well-calculated steps, and the only place to start is at the beginning. At the end is a 'super' workforce: resilient and adaptable to current and future disruptors.

WHY TRANSFORM LEARNING?

The business value offered by transforming learning comes in two forms. The first[5] is brought by **cost and value**: seeking to optimise efficiency by increasing consistency, quality and productivity (cost), and expanding opportunities that drive individual, team and organisational performance (value). This helps a business realise its full potential by building strategic capabilities that improve organisational agility.

The second[6] is finding **meaning** in work, stemming from better understanding workers. When meaning is achieved, the resulting cost and value improvements benefit a company directly (amplification) but also enhance the business's reputation – potentially attracting new talent – and create a more purpose-driven organisational culture.

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Learning in the flow of work

In 2019, Deloitte[4] highlighted a new way for learning to happen: *learning in the flow of work and life*. Integrating learning into the flow of work and life, and empowering people to actively develop throughout their lives would require development, learning and new experiences weaved into the day-to-day (often real-time) flow of work.

The concept is already in application today, in some situations. Imagine that a pump in a machinery room needs fixing but, previously, in that same room, two serious accidents occurred, and workers were injured. So the business sets employees up with handheld devices, to warn them about not touching the hot pipe before working on the pump, and then to guide them through processes and procedures. In this case, relevant and contextualised learning has been brought as close as possible to the moment of need, when the worker is about to enter the machinery room.

Now consider an employee who needs to add a new client in a Customer Relationship Management (CRM) tool. They're guided through the process via pre-programmed intelligence that appears in an overlay for web-based services. Specific call-outs or pop-ups appear on screen when the tool detects that the user is stuck in the process or is entering incorrect information. This kind of digital adoption support, or digital enablement tooling, is often used to support users in executing tasks in software.

These instances of learning in the flow of work present a positive business case in terms of incident avoidance, reduced time to execute processes and improved data quality. They show how appropriate, contextualised content is pushed to users based on an interaction that's facilitated by a technology or tool. However, despite their great impact, these examples remain isolated practices in only parts of a business. There is the potential for so much more.

Orchestrating a successful learning transformation

Successfully scaling up learning in the flow of work – to bring value to a much wider audience and in many more contexts – requires a well-prepared, well-orchestrated learning transformation. The end goal is what we define as a superlearning environment that fosters skills-based growth, is data driven and offers flexible career opportunities. But to get there, the L&D team needs to set a strategy for a continuously evolving infrastructure that frequently adapts as the future unfolds.

Deloitte's 2020 Global Human Capital Trends[7] report shows that leading organisations are focusing on *superjobs* and *superteams* as a manifestation of the relationship between technology and people "evolving from a focus on automating work to replace workers, to augmenting workers with technology to create superjobs, to collaborating with technology to form superteams". To progress with these concepts, an organisation needs superlearning endeavours that exploit the potential of learning in the flow of work and apply the concept entity-wide.

Successfully making the shift to superlearning requires organisations to anticipate the moment that L&D professionals' manual curation of learning content will no longer be efficient or effective: There will simply be too much content for this approach. This is the moment to have automated and digitised processes in order, data and recommender models ready and learning professionals reskilled to implement data-driven L&D in the context of a new technology landscape, as detailed later in this article.
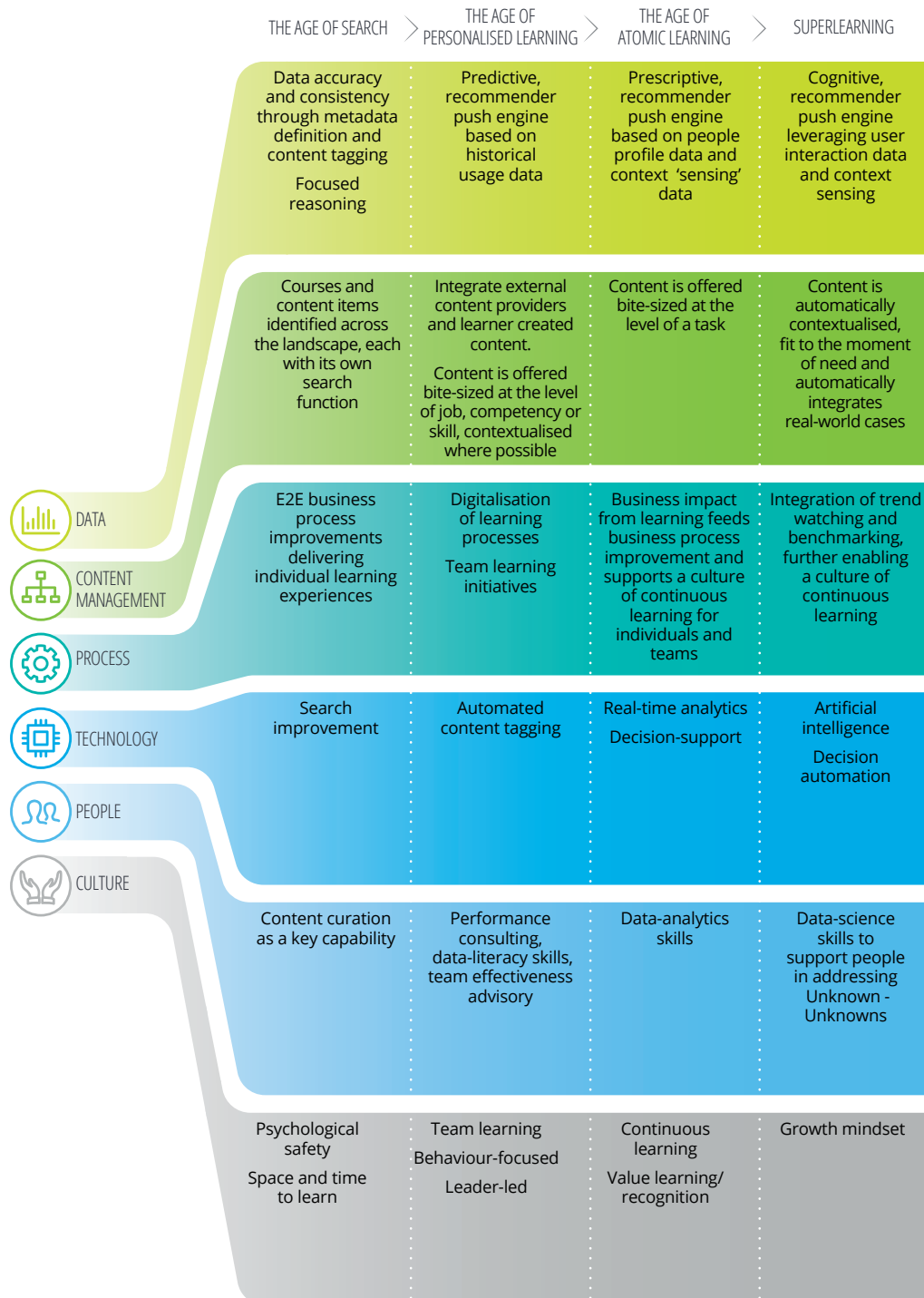
That point is not reached in one swift leap. Recent conversations with chief learning and chief technology leaders indicated to Deloitte that an entity must move through four 'ages' as it carefully enhances capabilities in terms of data, content, process, technology, people and culture (see figure 1).

At one end of the evolution is 'pull' learning, whereby an employee must search for and sign up for content within one or multiple systems. At the other end is superlearning: a feedback loop; content updates that are informed by real-world cases, feedback or experiences; and artificial intelligence algorithms that make it easier to find content, provide contextual relevance, and streamline editing to ensure content matches the target audience.

FIGURE 1

Progression needed for an organisation to transform the learning experience

	THE AGE OF SEARCH	THE AGE OF PERSONALISED LEARNING	THE AGE OF ATOMIC LEARNING	SUPERLEARNING
DATA	Data accuracy and consistency through metadata definition and content tagging Focused reasoning	Predictive, recommender push engine based on historical usage data	Prescriptive, recommender push engine based on people profile data and context 'sensing' data	Cognitive, recommender push engine leveraging user interaction data and context sensing
CONTENT MANAGEMENT	Courses and content items identified across the landscape, each with its own search function	Integrate external content providers and learner created content. Content is offered bite-sized at the level of job, competency or skill, contextualised where possible	Content is offered bite-sized at the level of a task	Content is automatically contextualised, fit to the moment of need and automatically integrates real-world cases
PROCESS	E2E business process improvements delivering individual learning experiences	Digitalisation of learning processes Team learning initiatives	Business impact from learning feeds business process improvement and supports a culture of continuous learning for individuals and teams	Integration of trend watching and benchmarking, further enabling a culture of continuous learning
TECHNOLOGY	Search improvement	Automated content tagging	Real-time analytics Decision-support	Artificial intelligence Decision automation
PEOPLE	Content curation as a key capability	Performance consulting, data-literacy skills, team effectiveness advisory	Data-analytics skills	Data-science skills to support people in addressing Unknown - Unknowns
CULTURE	Psychological safety Space and time to learn	Team learning Behaviour-focused Leader-led	Continuous learning Value learning/ recognition	Growth mindset

Source: Deloitte analysis.

To complete the ideal evolution, three aspects should be considered in planning: 1) preparing L&D for the future, 2) transforming culture, and 3) stepping up capabilities to nurture the flow.

1. PREPARING L&D FOR THE FUTURE

In anticipation of a future of learning that revolves around skills and capabilities, is data powered and integrates learning in the flow of work, an L&D team must set out a new vision and a holistic strategy to realise it. Designing a future-proof L&D structure offers manifold benefits: credibility within the business as a trusted advisor regarding performance challenges, efficiency and effectiveness in terms of L&D costs and efforts, and preparation for growth or innovation in the long term.[8] A strategy that can weather change and be adapted should incorporate the following four aspects.

L&D Governance

Covering the system through which decisions are made, L&D governance defines how the learning strategy, programmes and operations are embedded in an organisation through roles, responsibilities and processes. It includes planning, budgeting and managing the ongoing priorities of the L&D organisation in a way that allows the business to maximise its return on investment in L&D.[9]

Businesses that implement an effective, efficient and business-focused L&D structure significantly outperform their peers, according to Deloitte's research.[10] This is likely because they are recognised as strategic partners. They bring an integrated, future-focused workforce perspective, flexibly and rapidly developing workforce skills and capabilities to match emerging opportunities.

Learning operations

The operations dimension is an organisation's map of learning – needs, strategies and delivery. It gives designers, trainers and managers a clear view of what types of problems L&D solves, how they solve them, what facilities and tools they use and which approaches they take.

Future-proof L&D teams combine a focus on the front-end user experience with re-configuring their middle- and back-office operations. Their success lies in supporting highly accessible, relevant and collaborative learning. They bring inventive learning approaches and deliver measurable impact, such as an improved learning experience, lean processes and reduced costs.

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Curriculum and content vendors

The rise of digital-enabled learning – internally built or borrowed/bought from vendors – has brought content that is innovative, refreshing, immersive and inspiring. To drive the future curriculum and content vendor strategy, L&D teams could benefit from engaging in 'performance consulting' activities and revising curriculums.

Performance consulting is the process that helps identify the root cause of a business challenge or performance gap. It brings L&D teams close to the business reality. Subsequent work with instructional designers and learning advisors shapes the (training or non-training) solution: for example, a blend of in-house–developed content, externally sourced content and coaching.

The best approach is to review existing courses against core impact metrics, test them against learning ambitions and principles, and evaluate them for efficiency and effectiveness before establishing next steps to retire, replace, retain or refresh each course. Ideally, L&D teams will make such curriculum/content vendor reviews a continuous process, rather than one-off initiatives.

Learning technology

Consider the technology 'landscape': the set of tools, solutions and platforms the organisation uses for continuous workforce learning and development (those designed specifically for learning and those adopted for that purpose). That landscape should continuously evolve, based on the organisation's learning and business needs, but optimising the technology stack requires direction on what is trying to be achieved and why. This helps expose

FIGURE 2

Building the ecosystem

Technologies managed by the organisation Technologies managed by the employee

FUNCTIONALITIES (EXAMPLES)

Learner profiles	Skills tracking	Serious games	(360) feedback	Workflow learning
Search & recommendation	(Skill) assessments	AR/VR (360 video, simulations)	Coaching	Gamification
Career planning & paths	Content libraries	Collaborative learning	Communities	Project marketplace
(External) content curation	User-generated content	Compliance tracking	Expertise directories	Workfront collaboration
Personalisation	Mircolearning	Adaptive learning	Chat	Certifications
	MOOCs/SPOCs	Learning analytics		Chatbots

Ecosystem core
A solid core containing all that are mission crital for your organisation/ Ensuring strong integrations with the organisation's (HR) IT landscape.

External layer
Tools and applications used by employees that are either designed or adopted for learning purposes. Be aware of what is happening in this layer and evaluate if it is worth bringing some of the functionalities into your flexible layer.

Flexible layer
Non-mission critical functionalities that support (part of) the learning process. Select point solutions, develop simple integrations and start experimenting.

CORE
FLEXIBLE LAYER
EXTERNAL LAYER

Source: Deloitte analysis. Adapted from Dave van der Heijden and Marnix Ruitenbeek[11].

which technologies should be prime and which are no longer needed, allowing L&D teams to build an implementation or decommissioning roadmap.

In a recent publication, Dave van der Heijden and Marnix Ruitenbeek[11] argued that technology landscape decisions will fit a 'core', 'flexible' or 'external' layer, each addressing a different level of authority and responsibility (see figure 2):

- The **core** layer represents all functionalities that are 'mission critical' for the organisation: those necessary to ensure integrations and connections across the technology landscape (e.g., integrate learning technologies with the HR or finance technology suite, or with a compliance reporting system).

- The **flexible** layer supports specific learning processes or learner groups. It offers the opportunity to innovate with pilots that will be evaluated for success and potentially scaled up. This typically uses off-the-shelf integrations to avoid large investments in IT projects.

- The **external** layer covers the technology the workforce brings to the workplace (e.g., a mixed-reality headset brought by an employee who wants to use it to aid learning at work in some way). Decision makers can then evaluate if, and when, to bring such a technology into the landscape.

L&D teams working with this layered approach to learning technology are better positioned to make informed decisions and, in the long term, build a superlearning technology-landscape strategy that is more efficient and effective.

THE BENEFITS OF A STRONG LEARNING CULTURE[12]

- Efficiency gains

- Increased productivity

- Increased profit

- Decreased employee turnover, as employee satisfaction grows and loyalty and commitment strengthens

- The creation of a continuous improvement mindset

- Shared ownership of projects and shared accountability for results

- Development of leaders at all levels, which helps with succession planning

- A culture of enquiry, adaptive capacity and knowledge sharing (vs. knowledge hoarding)

- An enhanced ability for individuals and teams to embrace and adapt to change

2. TRANSFORMING CULTURE

Today, many organisations focus on developing a 'growth mindset' in individuals and teams, as opposed to a 'fixed mindset',[13] which turns a rather abstract topic – learning culture – into something much more 'human'. People with a growth mindset not only want to learn and apply what they have learned to help their organisation, they also feel compelled to share their knowledge with others.[14]

To productively foster a growth mindset in staff and drive the success of superlearning, the following key factors should be considered for incorporation.

Psychological safety: Enabling learning and growth

Harvard Business School professor Amy Edmondson coined the term *psychological safety* in the 1990s to describe "a shared belief held by members of a team that the team is safe for interpersonal risk taking".[15] The concept is the basis of trust in the workplace; it drives an organisation's ability to create belonging,[16] and inspires employees to perform at their best. Employees who can be open and honest about their learning needs are more likely to display growth-mindset behaviours, such as taking advantage of provided learning opportunities.

Psychological safety is considered a catalyst for learning and growth. Often-cited benefits include greater loyalty to the organisation, more healthy interpersonal relationships at work, more active collaboration in teams, and higher levels of work engagement driving individual, team and organisational performance.

An important enabler of psychological safety is perceived leader vulnerability, which sparks similar behaviour in others. Leaders who authentically demonstrate a need for help or support are fostering a sense of role-model vulnerability, which supports growth-mindset behaviour and a learning culture in their teams.[17]

Power skills: Fostering unlearning, learning, relearning

Ideally, an employer will provide staff with the ability to continuously unlearn, learn and relearn. Power skills, defined by Massachusetts Institute of Technology professor Anant Agarwal as "hard-won and rigorously maintained abilities, such as critical thinking, persuasive writing, communications and teamwork",[18] help achieve this, supporting personal development and career growth.

Unlearning the old to learn the new, at or beyond the speed of change, requires that individuals are given time and opportunities to adapt. It's not just about acquiring knowledge for knowledge's sake; fundamentally, it's about changing habits[19] as an essential aspect of a growth mindset. L&D teams and change managers must understand the mechanisms of habit formation to help their workforces succeed with unlearning, learning and relearning what is relevant to their job, organisation, industry, career and life.

Change management: Calibrating the cultural evolution

We've said before that the learning mindset and practice need to be part of daily work, not something separate. To carefully encourage adoption of a new culture in the workplace, it helps to collect feedback and input from individuals and teams: monitoring and measuring impact – and refining culture change and communication strategy accordingly – to enable leaders to better manage change interventions and drive culture adoption in their teams.

Essentially, the desire for a fast culture transformation must not compromise an organisation's ability to perform business as usual. The implementation process should balance speed and business continuity.

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3. STEPPING UP CAPABILITIES TO NURTURE THE FLOW

The third transformation area targets the user's expectations to have learning opportunities available anytime, anywhere, on any device. This ties into the notion of the *Personal Learning Cloud*, defined by University of Toronto's Rotman School of Management professor Mihnea Moldoveanu and Harvard Business School professor Das Narayandas as "customisable learning environments, through platforms and applications that personalise content according to learners' roles and their organisations' needs".[20]

With superlearning, the Personal Learning Cloud concept is expanded to integrate learning into (digitised) work processes and environments. Today's vendor market includes platforms that offer online interactive content and skill-building journeys that are personalised, socialised, tracked, authenticated and sometimes also contextualised. For learners, these personalised microlearning solutions are based on insights from a wide set of skills, learning and performance data.

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FIVE WAYS TO MAXIMISE YOUR CAPABILITIES

To achieve superlearning, our research finds L&D teams should consider orchestrated step-ups in five key areas:

1. Data: Refresh your learning analytics approach

Sustained reskilling, upskilling and outskilling is not possible without using data, which can point to curated growth opportunities and learning that is more efficient and effective. Considering that reskilling, upskilling and outskilling make up a key strategic priority for many organisations,[21] blending skills data with external benchmark data and relevant contextual data will bring huge benefits. The resulting insights can help inform the total workforce management strategy and help L&D teams become strategic partners in talent discussions.

The first opportunity lies in learning and talent analytics capabilities, which can enable L&D teams to prove their competence and gain business credibility. When learning and talent data are brought together, not only are decisions about talent strategy improved, but performance management is strengthened and tied to the corporate strategy.

Secondly, L&D can mine a wealth of data about individuals to bring personalised, contextualised learning and content. Relevant data pertains to their activities – in projects, tasks or events – plus their personal aspirations and job performance, which is then complemented by benchmark results. Most organisations today use data to support focused reasoning by L&D professionals, who draw on their own experience and context to construct an argument and suggest a decision. In the future, technology can deliver more automated data analysis, generating richer insights and improving decision quality.

With the uptake of people analytics[22] in the HR domain, realising the true value of data to L&D requires an organisation-wide data strategy that enables cross-function data sharing. Over the coming years, we'll see an evolution: from exerting effort to make data accurate and consistent (metadata definition, content tagging) to really leveraging user-interaction data and contextual data.[23] The latter can fuel cognitive recommender engines and support the data-driven value of superlearning.

2. Process: Recode learning operations

When focusing on digitising learning processes, L&D teams primarily support optimising and automating those processes. Successful L&D teams will need to make two big shifts away from this habit. First, they need to let go of their process-driven mindset and adopt one that always begins with the learner's experience. Second, their focus needs to move from internal (e.g., on process excellence) to external.

To support the first shift, teams can begin by defining learner personas – such as a blue-collar learner, an office worker, a business leader, a contractor, a learning professional – to identify the moments that matter to them.[24] Mapping desired experiences to implement for those personas (e.g., in onboarding programmes, leadership development journeys and the flow of work) will reveal opportunities to realise higher value from more user-centred, efficient and effective learning.

For the second shift, to deliver value-adding activities that support learning in the flow of work, the focus should be turned outside the company walls. An example is implementing best-practice processes or benchmarking through partnerships set up to expand the learning network. This will continually challenge the status quo and make enhancing performance a priority.

3. Content management: Redefine learning and knowledge resources for the task-level moment of need

It is recognised that microlearning and macrolearning will remain in co-existence,[25] but the biggest shift organisations are struggling with today is that from offering learning content at the job level to offering learning content at the task level. This shift is necessary to the future of microlearning, by which content – either learning content or knowledge resources – should be short and focused enough to meet an immediate learning need.

Future recommender engines will call upon learning or knowledge resources to bring just enough of the right content into the flow of work – and at just the right moment of need. One of the biggest historical pain points has been the inability of people to find the right courses and learning content for their job or task, but superlearning could solve this. Initial efforts include portfolio rationalisation and aligning metadata across all learning content.

4. Technology: Rewire learning tools

Above all, superlearning requires a simultaneous step-up in the learning technology landscape to bring all efforts together. Rewiring the landscape will need to start from a functionality perspective, to guide decision-making.

The connection between technology and the evolution of analytics in the L&D space is apparent. Remember van der Heijden and Ruitenbeek's layers of technology decisions based on authority and responsibility? Let's take, as an example, a future core-layer decision (about what technology is 'mission critical' for an organisation): Ideally, L&D leaders would base that decision on how intelligently a technology connects various data sources with available internal and external resources, and how it uses the L&D analytics and insights to push recommendations in the flow of work.

Another point to note is that ongoing innovations in the technology landscape[26] make it hard, at this point, to decide on a strategic vendor/s for learning. By trying out new technologies now (as part of the flexible layer) and learning from experiments and pilots, L&D teams can allow the landscape to evolve as technology does, while they coordinate innovative initiatives across the organisation.[27]

5. People: Reskill L&D professionals

Today, the L&D team's role is no longer just to manage learning programmes or source training courses. L&D can play a prominent part in workforce transformation by designing and delivering learning experiences and bringing learning into the flow of work. However, new L&D skills are needed, focused on sourcing quality content, establishing connections or communities, facilitating links to experts, acting as a business partner and leveraging insights from data and analytics, among other areas. In addition, the shift to more project-based work means L&D professionals will need to drive learning initiatives targeted to improve team effectiveness.

But the most urgent L&D upskilling need is linked to the technology step-ups expected in the years to come. To integrate learning in the flow of work and achieve superlearning, technology will help L&D professionals who are curating content – and, potentially, later replace them. The point will soon arrive when curation cannot be achieved manually, by individuals using focused reasoning; instead L&D professionals will need to work with new technology solutions that intelligently connect profile data, contextual data, user interaction data, etc. to find solutions that are contextual and fit the moment of need. These technologies are about to arrive, and savvy L&D teams are experimenting with them.

Conclusion

Successfully integrating learning into the flow of work, and scaling it up to deliver superlearning, will bring L&D's value to a much wider audience and many more contexts. As we have seen, such a transformation requires careful, multi-step orchestration in key areas. Future-proofing will bring credibility, prove competence and prepare for long-term growth and innovation – a welcome message to business leaders. Re-imagining the learning culture and focusing on a growth mindset will benefit individuals and teams, trickling down to the organisation as a whole. And last, but not least, stepping up capabilities in certain areas, even if they're new or unfamiliar to L&D teams, will ensure a thorough and thriving transformation.

The COVID-19 pandemic puts organisations in uncharted waters, yet L&D teams can take decisive action to help ensure their staff, teams and organisations are resilient. In the context of the urgent global call for reskilling, upskilling and outskilling, L&D has arrested the attention of the C-suite, and demands new ways to meet the challenge. Superlearning should be paramount in this effort, to drive productivity and performance improvements across the organisation. Those who opt for the status quo will find themselves at a disadvantage, vying to compete with businesses whose L&D teams followed an orchestrated journey to learning transformation.

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Acknowledgements

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Luc is a leading adviser in enterprise-wide talent and learning transformations who brings deep industry and consulting experience in talent management, corporate learning strategy, learning technology, and (digital) learning journey design and development projects. Luc is based out of Brussels and has helped organisations across Europe and the United States.

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