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The Executive Guide to Hyperautomation





Frances KaramouzisDistinguished VP Analyst







Gartner Definition of Hyperautomation

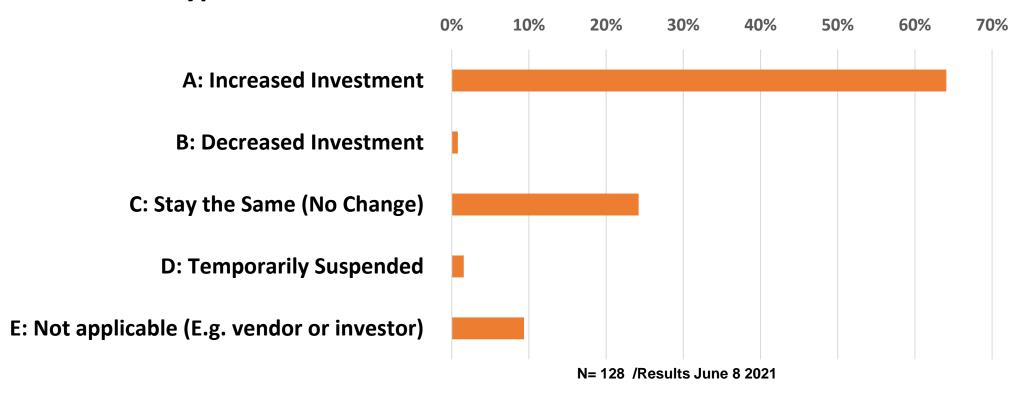
"Business-driven hyperautomation is a disciplined approach that organizations use to rapidly identify, vet and automate as many business and IT processes as possible. Hyperautomation involves the orchestrated use of multiple technologies, tools or platforms. Examples of these include AI, machine learning, event-driven software architecture, robotic process automation (RPA), BPM/iBPMS, integration platform as a service (iPaaS), low code/no code tools, packaged software and other types of decision, process and task automation tools."



Polling Question 1

How would you characterize your organization's Hyperautomation investments over the next 12 months?

Hyperautomation Investments Over Next 12 Months

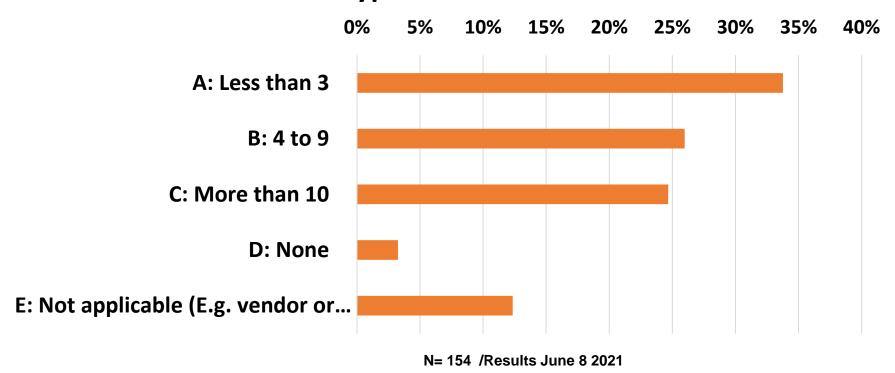




Polling Question 2

How many Hyperautomation initiatives are currently taking place within your organization? Examples include: RPA, Low Code / No Code, Conversational Platforms, Chatbots, Artificial Intelligence

Concurrent Hyperautomations Initiatives





Continued Unabated Investments in Hyperautomation Despite the Crisis

Strategic Investments

85%

will increase or not change Hyperautomation investment strategies over next 12 months

Investments Bring Governance to the Forefront in Your Hyperautomation Journey

Governance

40%

will have 4 (four) or more Concurrent Hyperautomation initiatives to manage and operate

Governance

16%

will have 15 (fifteen) or more

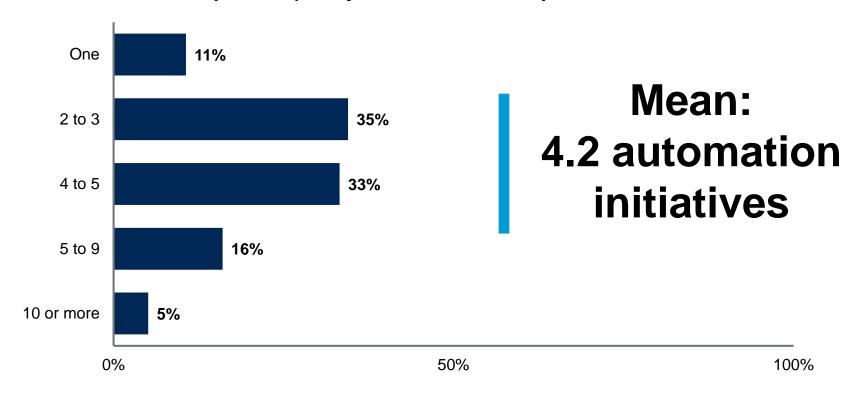
Concurrent Hyperautomation initiatives to manage and operate





April 2021: Concurrent Hyperautomation Initiatives

How many distinct automation initiatives (e.g., projects to automate a business process) did you work on in the past 12 months?



n = 558

Source: Gartner 2021 Hyperautomation Discipline, Technologies & Users



The pandemic has been both a REVEALER & ACCLERATOR





Pandemic Impact on Digital Business Initiatives



Source: Gartner View from the Board of Directors 2021

Q02. What kind of impact do disruptions caused by COVID-19 have on your organization's digital business initiatives? n = 260, All Respondents, Excluding Don't know, Multiple responses allowed



Business Drivers

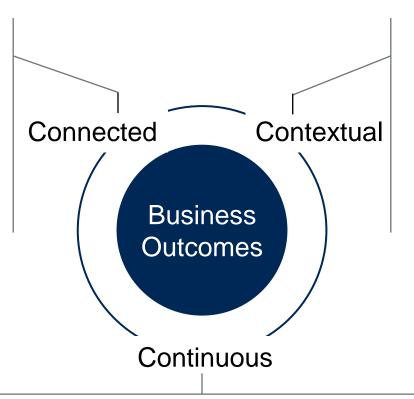
65% of decisions made are more complex than two years ago

Source: The Future of Data and Analytics: Reengineering the Decision, 2025 Frank Buytendijk, Pieter den Hamer, Gareth Herschel, Jorgen Heizenberg, Mike Rollings, Erick Brethenoux



Business Outcomes of Reengineered Decision Making

More Inclusive **More Transparent**



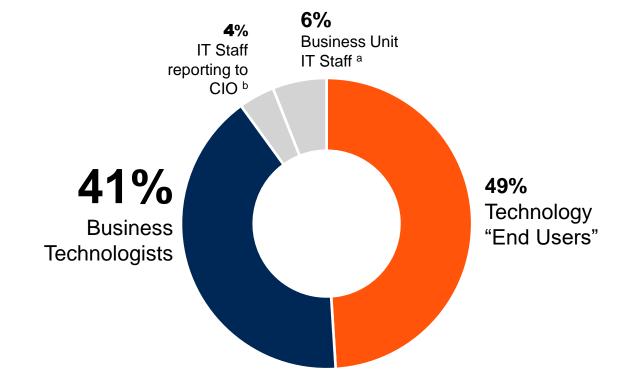
More Trustworthy More Accurate More Personalized

Faster More Scalable **More Flexible**



Democratization

Gartner's Definition of Business Technologists: Employees who report outside of IT departments and create technology or analytics capabilities for work.



n = 11,848 employees across the entire workforce

Source: 2021 Gartner Reimagining Technology Work Survey combined with 2020 Gartner Digital Friction Survey;

^a Business Unit IT Staff Reporting Into Divisional or BU CIOs. By CIO we mean the senior most IT executive, but actual titles may vary.

.b By CIO we mean the senior most IT executive, but actual titles may vary.

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Gartner Definition of Business Technologists

<u>Definition:</u> Business technologists are employees who report outside of IT departments (centralized or business unit IT) and create technology or analytics capabilities for internal or external business use.

<u>Context:</u> Business technologists can be individuals whose primary job entails technology work (such as Python developers hired in Marketing, data scientists hired in Finance & Accounting teams, Software engineers hired in R&D) or they can be citizen technologists whose primary job is done through technology work (such as pricing managers building algorithms, customer service reps building chatbots, doctors writing pandemic apps).



Business Technologists

Business Units

IT

End **Users** SME (do not work on tech or

analytics)

Non-Dedicated to tech & analytics

Dedicated to tech & analytics



DeCentralized IT

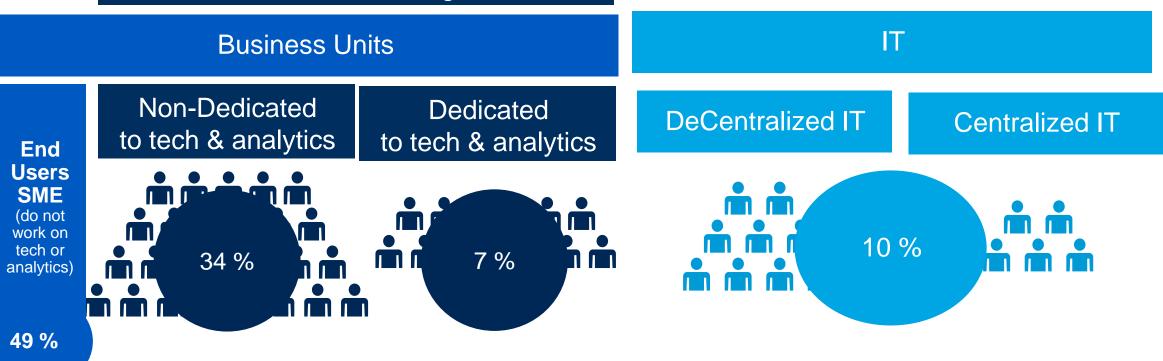


Centralized IT



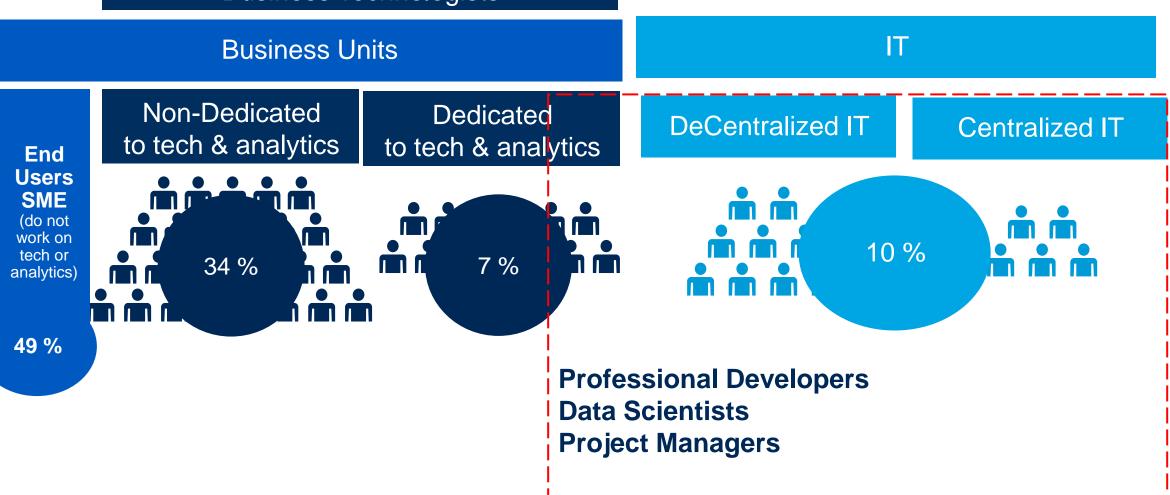


Business Technologists





Business Technologists





Business Technologists



IT

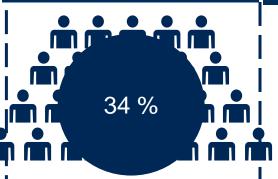
End **Users** SME (do not work on

analytics)

tech or

49 %

Non-Dedicated to tech & analytics



Citizen Developers

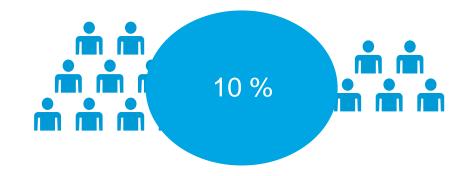
- Citizen Data Scientist
- **Citizen Designer**
- Citizen Automator
- **Citizen Integrator**
- Citizen Project Manager

Dedicated to tech & analytics



DeCentralized IT



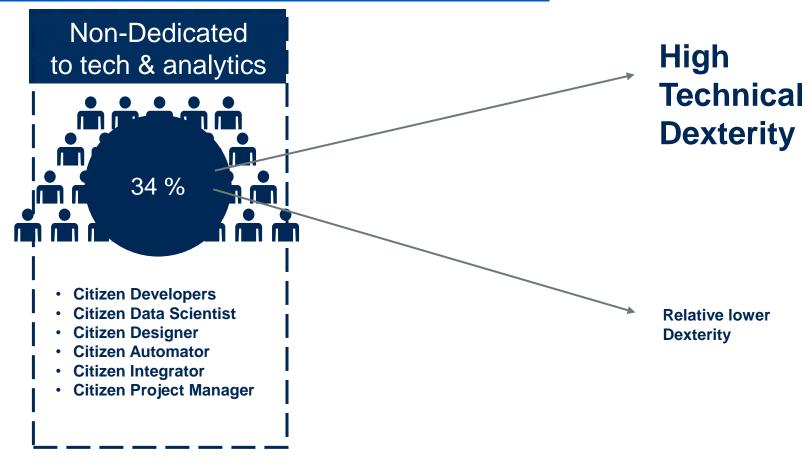


- **Applications**
- **SW Engineers**
- **Infrastructure & Operations**



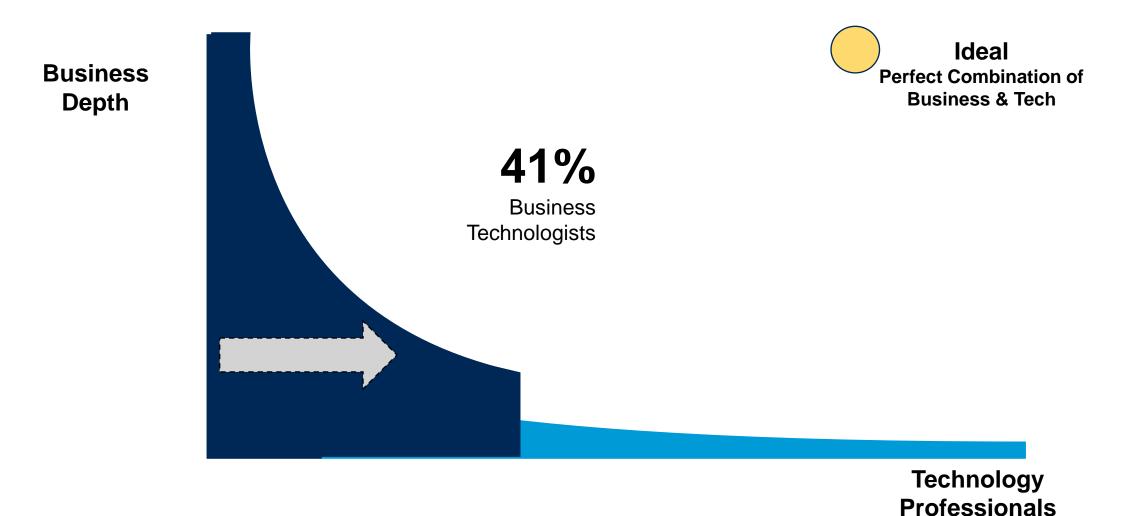
Business Technologists

Business Units





Dream State: Combination of Business & IT





Gartner TalentNeuron Data (April 2021)

Technology Skills in High Demand Outside of IT Departments

AAA

2 out of 3 job openings requiring data science skills are not in IT AAA

2 out of 3 job openings requiring Al skills are not in IT

AAA

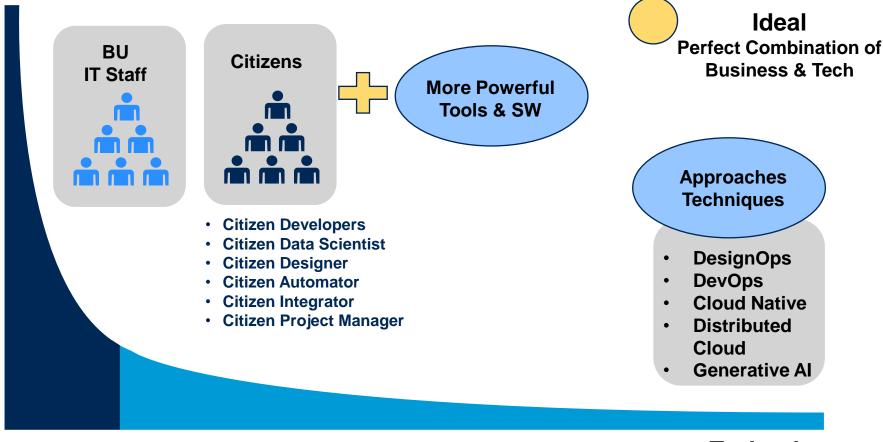
1 out of 4 job openings requiring **Python skills** are not in IT

Source: April 2021 Gartner TalentNeuron™;



Dream State: Combination of Business & IT

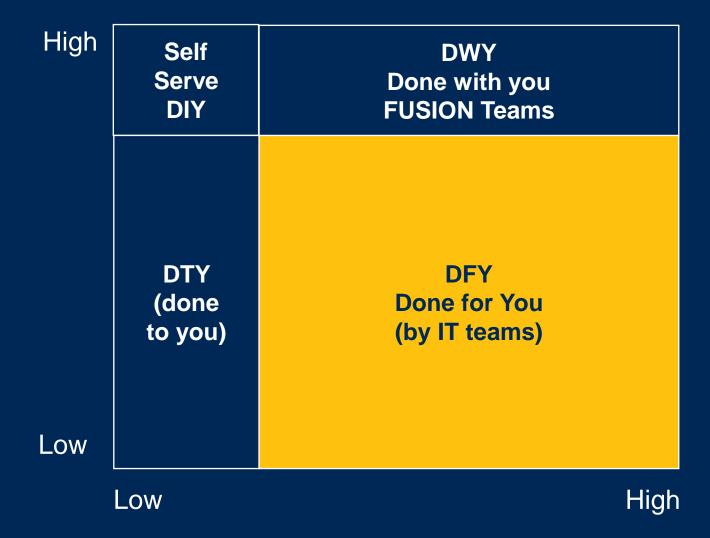
Business Depth



Technology Professionals



Shifts



Gartner.

Business Technologists



Gartner.

By 2023, the number of active citizen developers at large enterprises will be at least four times the number of professional developers



Gartner Definition of Citizen Developer

<u>Definition:</u> Citizen developer is an employee who creates application capabilities for consumption by themselves or others, using tools not actively forbidden by IT or business units. A citizen developer is not a title or targeted role (can be referred to as a persona) and they report to a business unit or function (other than IT).

<u>Context:</u> All citizen developers are business technologists. However, all business technologists are not necessarily citizen developers. There is no required designation of proficiency or time allocation for citizen developers but they must be legal employees of an organization.



By 2025, 70% of new custom applications written by enterprises will use low-code or no-code technologies

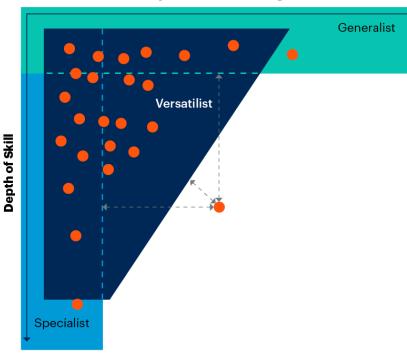


Versatilist

Embrace a Versatilist Mindset

Required Skills ←→ Skills Gap

Scope of Roles and Assignments



Source: Gartner 740801 C

Versatilist

- Deep skills, wide scope of roles, broad experience
- Recognized in other domains
- Needed more often; allows you to say "Yes" more
- More flexible architecture and development opportunities

Generalist

- Broad scope, shallow skills
- Available for quick response
- · Limited in complexity of architecture and implementation effectiveness
- Lacks confidence in complex challenges

Specialist

- Deep skills, narrow scope
- Peer-recognized, unknown outside domain
- Limited in availability and likely to be a constraint
- Enable technically complex architectures and application implementations

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Business Technologists Use of Tools

Data Science and Al Tools

- Automated ML
- Data science and ML platforms
- Analytics and BI tools
- Master data management tools
- Metadata management tools
- Data quality tools
- Database management tools



App **Development** Tools

- No-code/low-code dev tools
- Content service platforms
- Prototyping and design tools
- Digital experience, web content tools
- Automated development/ deployment (CI/CD)



Automation Tools

- Process mining tools
- Business process management tools
- RPA tools
- Conversational platforms for chatbots

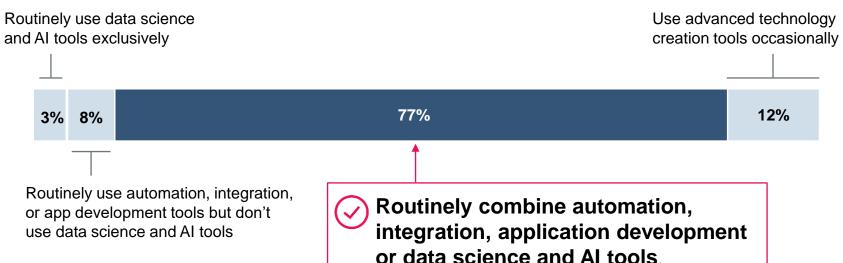


Integration **Tools**

- Integration platforms
- Data integration tools
- API management tools
- IoT platforms



Business Technologists Use of Tools



n = 2.820 business technologists / Source: 2021 **Gartner Reimagining Technology Work Survey**

Data Science and Al Tools

- Automated ML
- Data science and ML platforms
- · Analytics and BI tools
- Master data management tools
- Metadata management tools
- Data quality tools
- · Database management tools

App Development Tools

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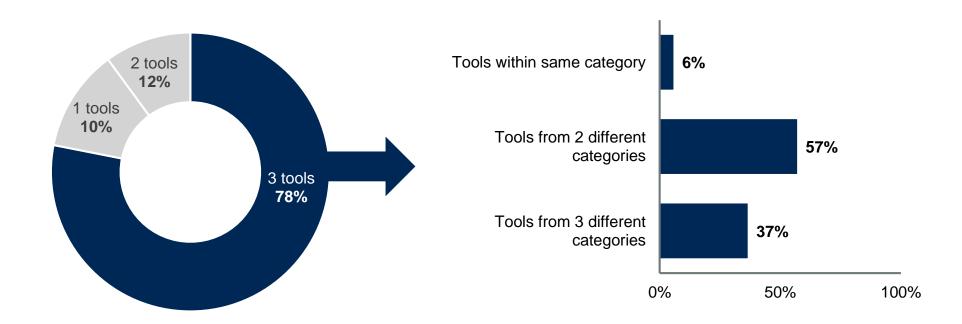


- · Integration platforms
- · Data integration tools
- API management tools
- IoT platforms



Multiple Tools is Commonplace

Number of tools used for business driven automation initiatives in past 12 months Multiple Responses (Up to 3)



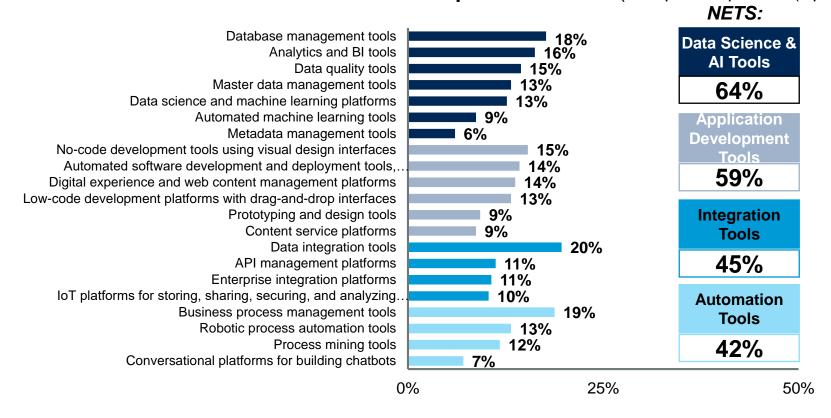
n = 557; Hyper-automation respondents using tools to produce analytics or technology capabilities (Q36A)

Q70. Please select up to 3 tools that you used most (based on frequency and volume) for business-driven automation initiatives over the past 12 months. Source: Gartner 2021 Hyper-automation Discipline, Technologies & Users



Most Common Tools

Please select up to 3 tools that you used most (based on frequency and volume) for businessdriven automation initiatives over the past 12 months (Multiple Responses (Up to 3))

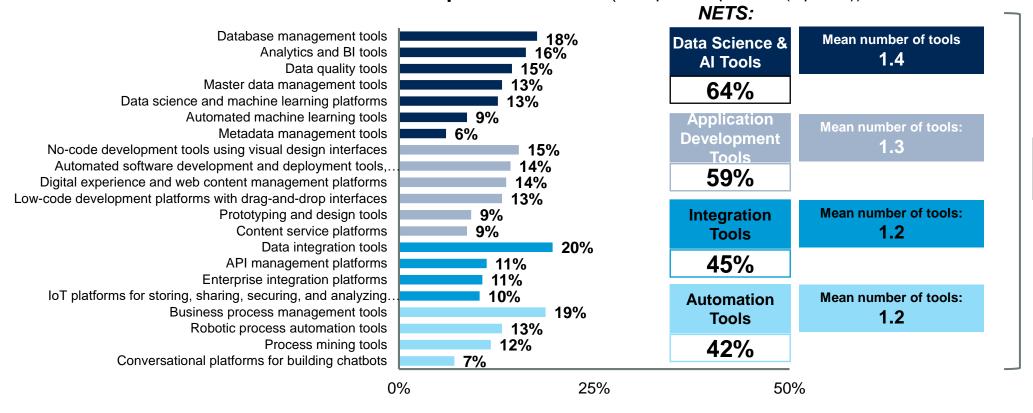


n = 557Source: Gartner 2021 Hyperautomation Discipline, Technologies & Users



Most Common Tools

Please select up to 3 tools that you used most (based on frequency and volume) for businessdriven automation initiatives over the past 12 months (Multiple Responses (Up to 3))



Mean number of tools: 2.7 (maximum of 3 allowed)

n = 557Source: Gartner 2021 Hyperautomation Discipline, Technologies & Users

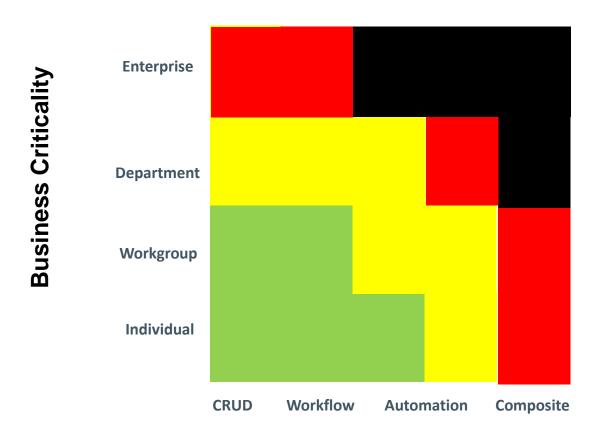


External Market: Capabilities Across Platform Types

Platform Types		Multi- experience Development	Low-Code Application Platform	Citizen Automation &	Business Process Automation	Decision Automation (DMS)	Robotic Process Automation	Integration Platform-as- a-Service
Capability		(MXDP)	(LCAP)	Development (CADP)	(BPA)	(56)	(RPA)	(iPaaS)
User Interface	User Multiexperience	Required	Optional	Optional	Optional	Optional	Optional	Optional
	User Experience Web and Mobile Forms	Required	Required	Required	Expected	Optional	Expected	Optional
Business Logic	Process Orchestration	Optional	Expected	Expected	Required	Expected	Optional	Expected
	Decisions/Rules	Optional	Optional	Optional	Expected	Required	Optional	Optional
Back-end	Database User data	Optional	Required	Expected	Optional	Optional	Optional	Optional
	Integration via Bots	Optional	Optional	Optional	Optional	Optional	Required	Optional
	Integration to APIs Process + Connectors	Optional	Expected	Optional	Expected	Expected	Expected	Required



Adaptive Governance



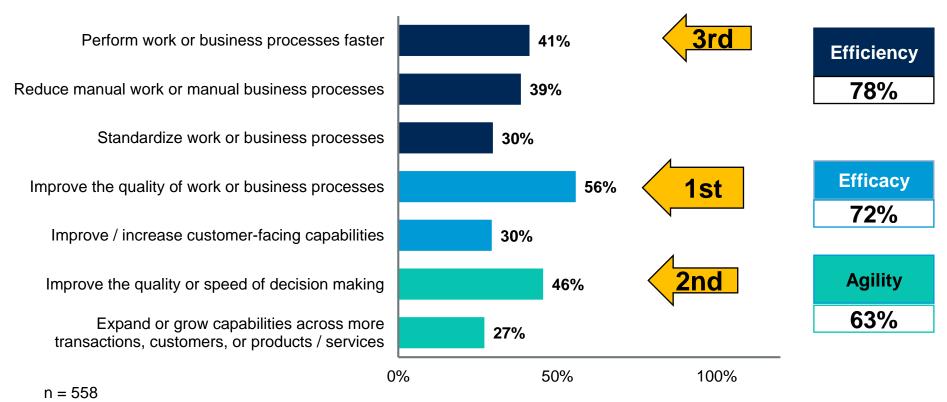
Off Limits	Move to IT-owned portfolio				
Danger	Require IT oversight and governance before release				
Supported	Co-create with pro developers & adaptive governance				
Safe Zone	Self-governing sweet spot				

App Complexity



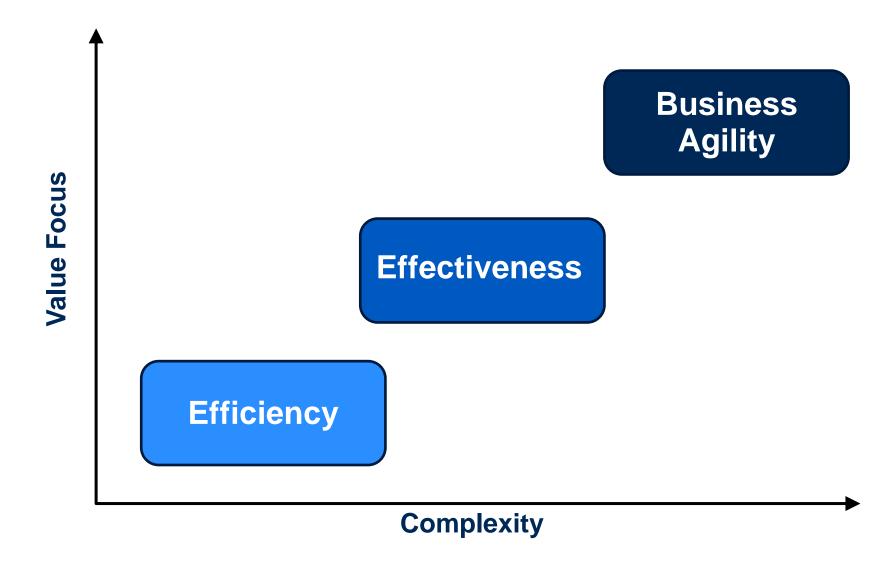
Primary Business Objectives Why Work Was Performed?

For your involvement in producing analytics or technology capabilities in the past 12 months, what are the main objectives for why you performed this work? Multiple Responses (Up to 3)

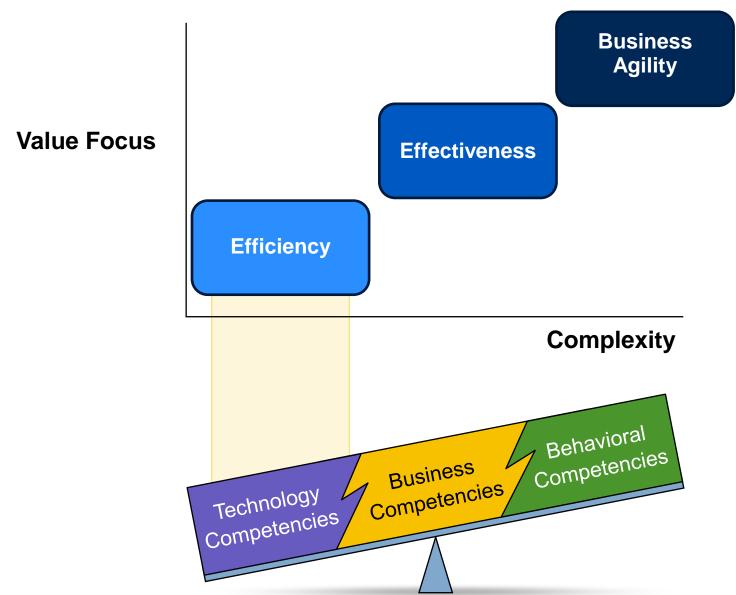




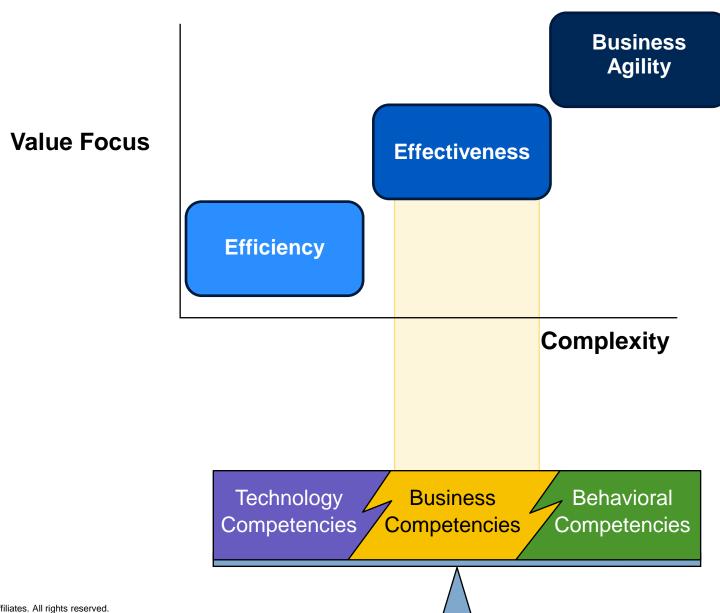
Business Value Focus



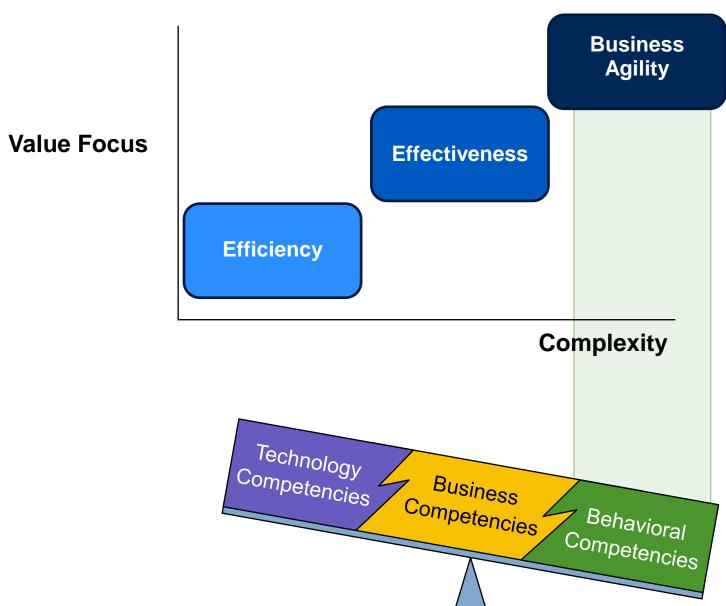






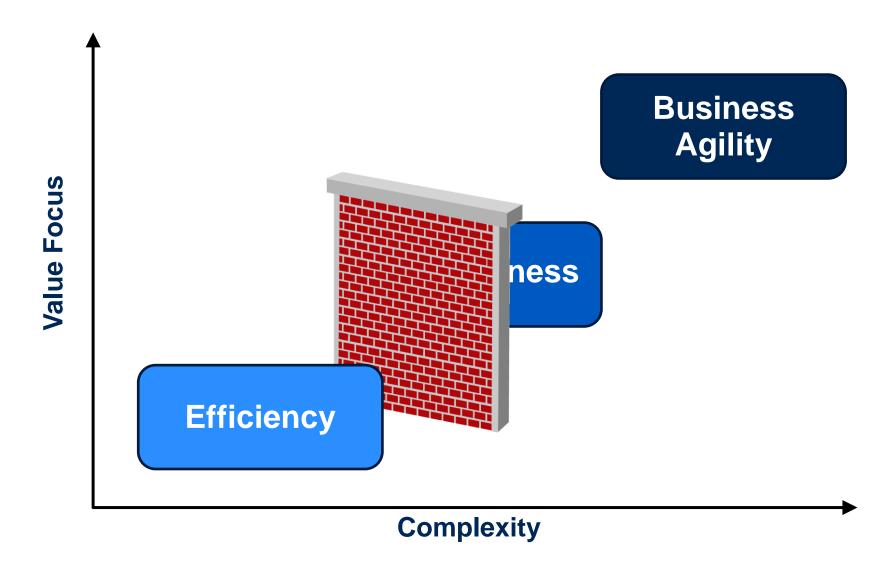








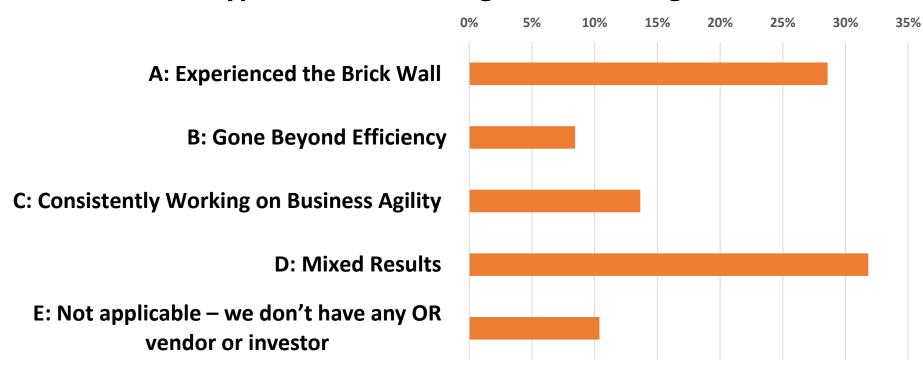
Brick Wall



Polling Question 3

How would you characterize your organization's Hyperautomation initiatives?

Hyperautomation Organization Progress



N= 143 /Results June 8 2021





Biggest Challenges

Inability to connect data & analytics to value



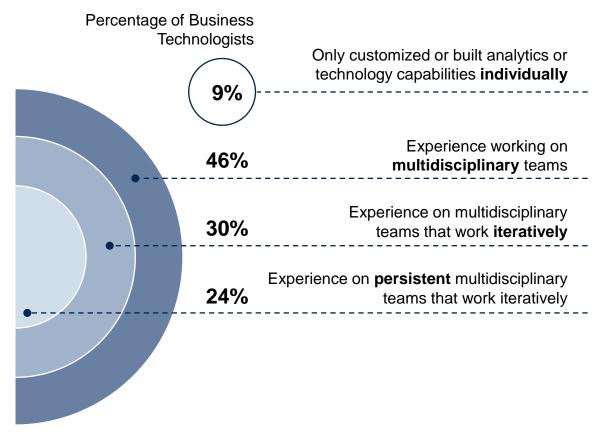
Gartner Definition of Fusion Team

<u>Definition:</u> A fusion team is a multidisciplinary team that blends technology or analytics and business domain expertise and shares accountability for business and technology outcomes. Instead of organizing work by functions or technologies, fusion teams are typically organized by the cross-cutting business capabilities, business outcomes or customer outcomes they support.

<u>Context:</u> Fusion teams do not have a prescribed reporting structure. Team leaders or members may report to either dedicated IT departments or business areas outside of IT. Fusion teams often start as Agile project or scrum teams and gradually adopt product-management discipline to oversee a capability end-to-end, from strategy to delivery and continuous enhancements.



Team Characteristics



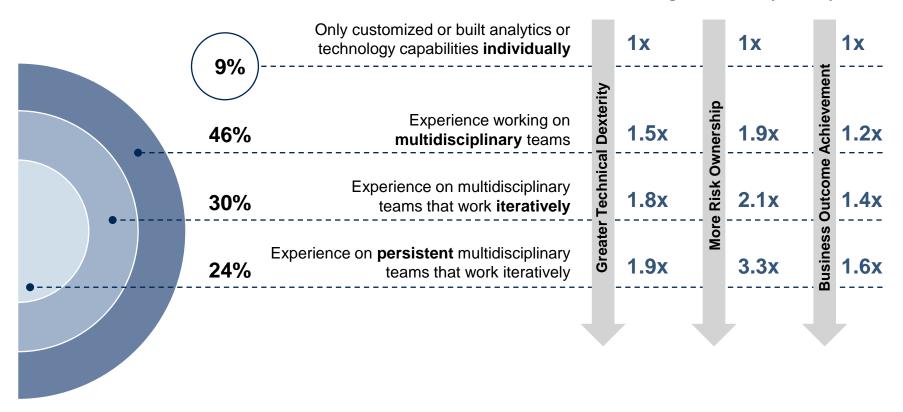
n = 2,820 business technologists

Source: 2021 Gartner Reimagining Technology Work Survey



Impact of Teaming

Likelihood of Business Technologists Performing Successfully on Key Vectors

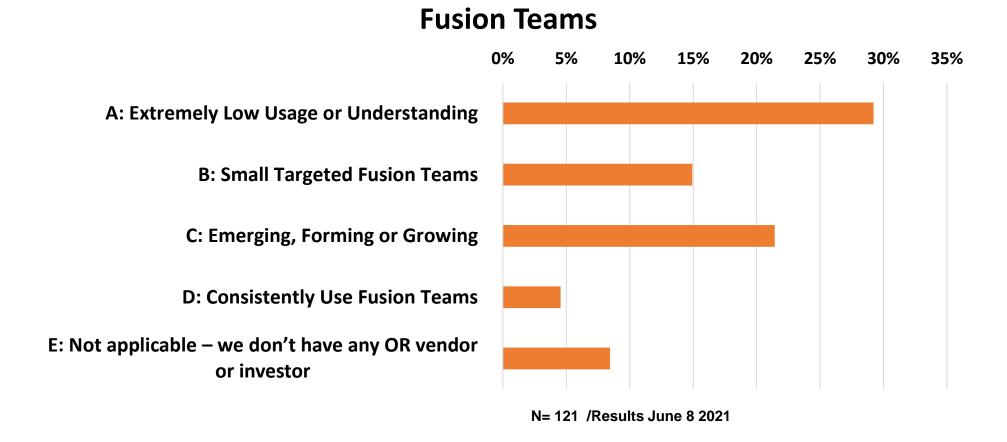


n = 2,820 business technologists

Source: 2021 Gartner Reimagining Technology Work Survey

Polling Question 4

How would you characterize your organization's use of Fusion Teams?





7 Habits of Highly Effective Initiatives



Key to Success Multidisciplinary Teams/Common Language (Currency)

Portfolio Definition/Alignment/Metrics

Process/Data/Technology/Talent Profiling

Center of Excellence and Staff the "Right" Teams

Relationship Management (Internal Stakeholders/Vendors)

IP & Data Protection (Process Ontologies, Workflow Algorithms, Data Insights, etc.)

Manage/Measure and Quality-of-Service Structures



Gartner Hyperautomation Core Team

IT Leaders Analysts



Frances Karamouzis
Chief of Research and Distinguished VP Analyst
20 years at Gartner / 33 years industry experience



Stephanie Stoudt-Hansen
Sr. Director Analyst
4 years at Gartner / 26 years industry experience



Melanie Alexander
Sr. Principal Analyst
4 years at Gartner / 25 years industry experience



Keith Guttridge
Sr Director Analyst
7 years at Gartner/ 26 years industry experience

Financial Services Analysts



Nicole Sturgill
VP Analyst
12 year at Gartner / 14 years industry experience



Laurie Shotton
VP Analyst
6 year at Gartner / 19 years industry experience



Gartner Applications (Targeted Focused On Hyperautomation)

North American Analysts



Jason Wong
Distinguished VP Analyst
7 years at Gartner / 25 years industry experience



Paul Vincent
Sr Director Analyst
5 years at Gartner / 37 years industry experience



Saikat Ray
Sr Director Analyst
2 years at Gartner / 22 years industry experience

European Analysts



Keith Guttridge
Sr Director Analyst
7 years at Gartner/ 26 years industry experience



Mark O'Neill
VP Analyst
5 years at Gartner / 25 years industry experience

Gartner AI team (Data & Analytics Group)

North American Analysts



Erick Brethenoux VP Analyst 2 years at Gartner / 30 years industry experience



Frances Karamouzis Chief of Research and Distinguished VP Analyst 20 years at Gartner / 33 years industry experience



Svetlana Sicular VP Analyst 8 years at Gartner / 27 years industry experience

European Analysts



Pieter den Hamer Sr. Director Analyst 2 year at Gartner / 27 years industry experience



Alex Linden VP Analyst 7 years at Gartner/36 years industry experience

Asia Pac



Shubhangi Vashisth Sr Principal Analyst 5 years at Gartner / 13 years industry experience



Farhan Choudhary Assoc Principal Analyst 1 years at Gartner / 15 years industry experience



Gartner AI team (Applications Group)

North American Analysts



Van Baker **VP Analyst** 29 years at Gartner / 39 years industry experience



Whit Andrews **Distinguished VP Analyst** 20 years at Gartner / 24 years industry experience



Bern Elliot Distinguished VP Analyst 20 years at Gartner / 43 years industry experience



Saniye Burcu Alaybeyi Sr. Director Analyst 5 years at Gartner / 23 years industry experience

European Analysts



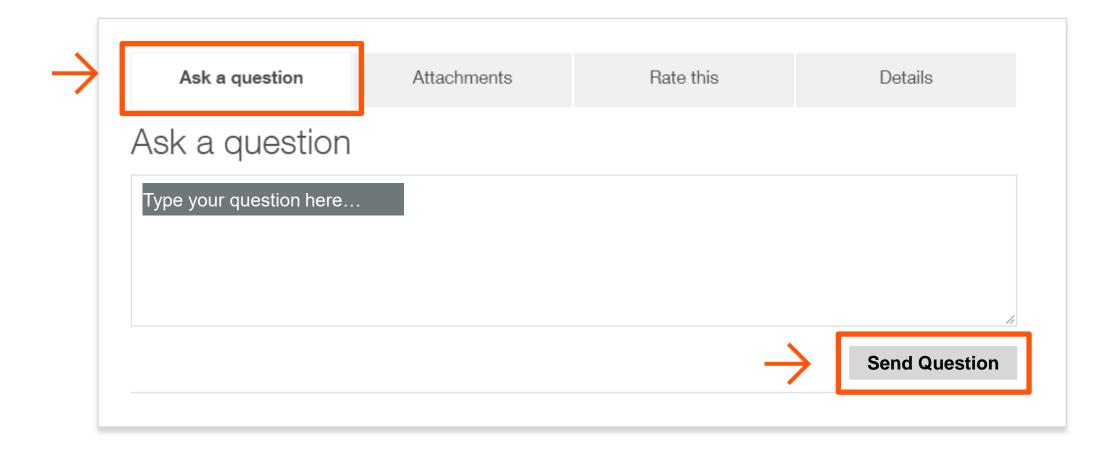
Anthony Mullen Sr Director Analyst 4 years at Gartner/ 31 years industry experience



Magnus Revang VP Analyst 7 years at Gartner / 21 years industry experience



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