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WHAT IS INTEGRATION?

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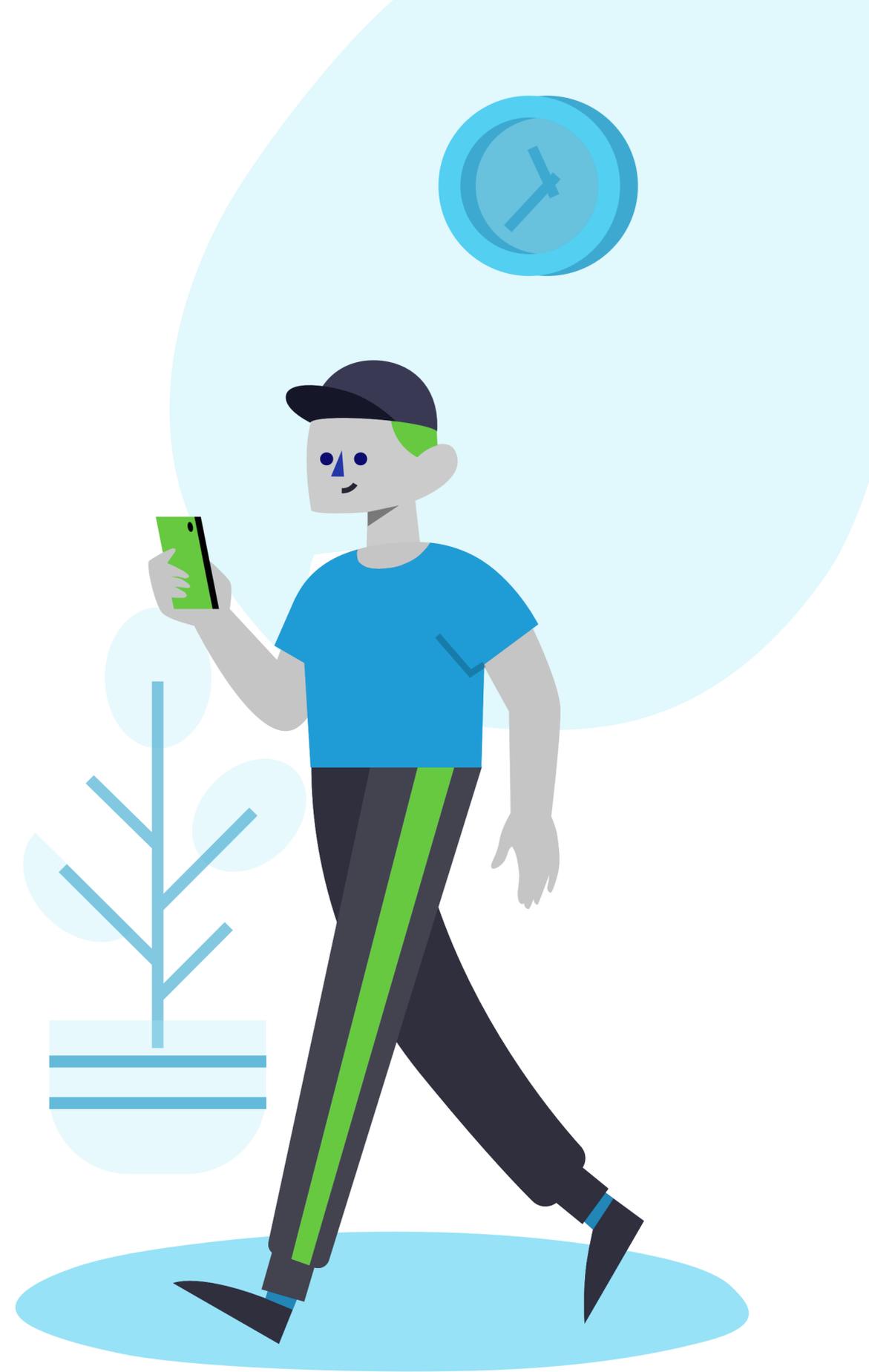
Introduction

WHAT IS INTEGRATION?

Business integration is a strategy to synchronize information technology (IT) and business cultures and objectives and align technology with business strategy and goals. Business integration is a reflection of how IT is being absorbed as a function of business and not just a department.

As technology increasingly becomes an embedded business function, many experts predict that information technology will fall under the domain of business leaders instead of technology experts.

Integration has now become a key determinant of who leads and who lags in today's global economy. Businesses with cutting-edge integration strategies have raised the bar with faster project delivery, lower operational costs, and new revenue streams. They are quickly leaving traditional players behind.



THE STRUGGLE

Despite its growing importance, organizations still struggle to achieve a truly connected and integrated state. The average business transaction now crosses 35 different back-end systems. This is generating more data than ever before. Traditional approaches to enterprise application integration no longer suffice.

The right integration strategy allows organizations to cut complexity and drive tangible business value. By quickly connecting new information and operationalizing it across the entire enterprise, they can increase automation, ensure tighter security & create competitive advantages in their industry.

However, technology teams often struggle to rally their organizations behind a new integration approach. A key reason for this is that they are not communicating the value in a clear and compelling way.

Why? Because some find the story is a hard one to tell. But it doesn't have to be! By articulating values in terms of platform benefits & business outcomes, helps

business-oriented executives understand why different approaches to integration matter.

Many organizations still hold onto their traditional approach to integration — a point-to-point method — which makes it even harder. Developers spend hours writing and rewriting the same custom code for each new project — frustrating developers and limiting team's ability to work on new projects. This approach proves to be the biggest roadblock to implementing complete integration.

Here's how businesses need to think about it. Say you're a car maker. Do you want to custom-build a Ferrari every single time? Custom-make the car from the body to the leather, stitching, and paint?

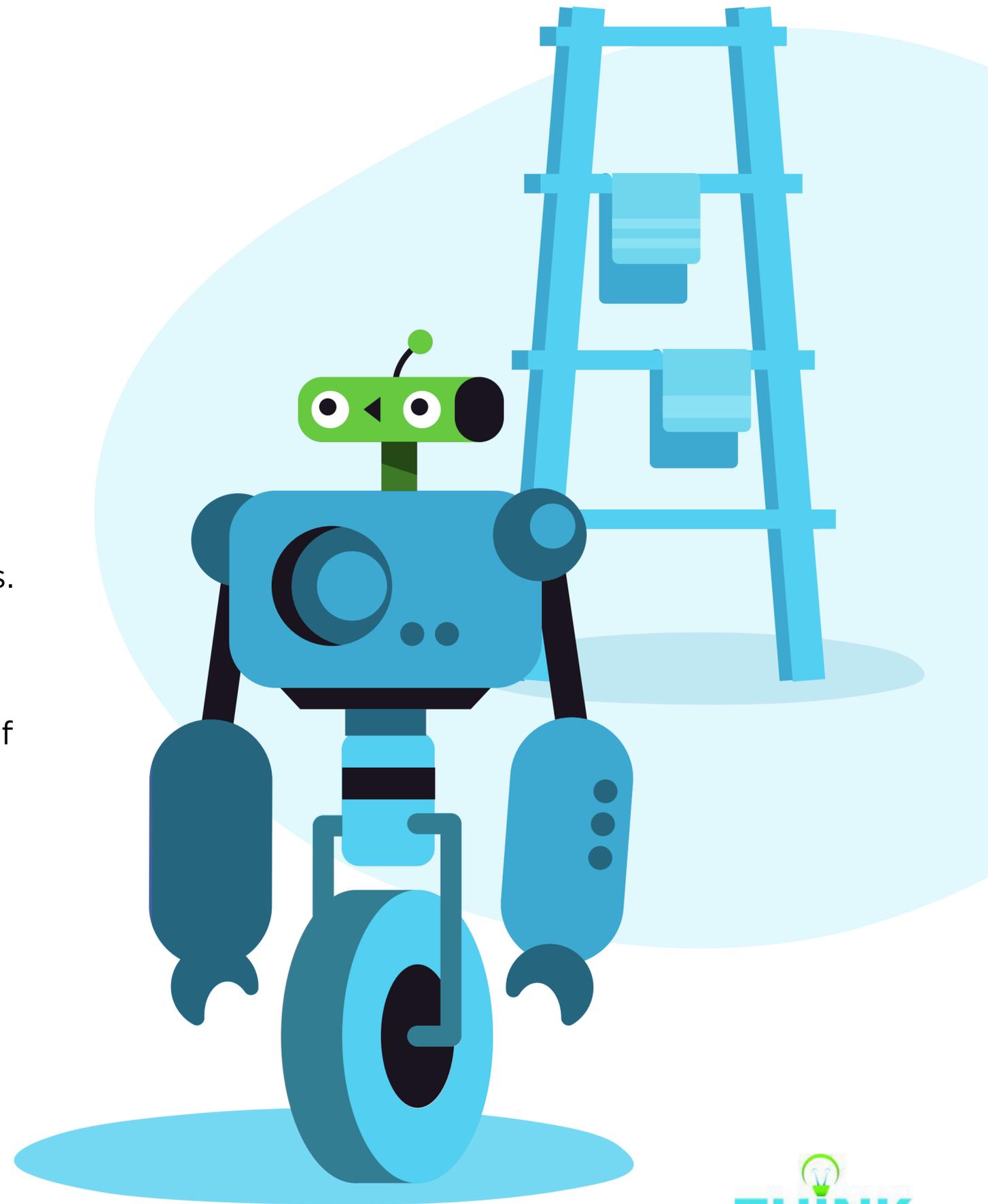
Or do you want to build a manufacturing delivery process that uses reusable components to get 70% of the way there. And if you want to change the color or the leather, custom-build those aspects. This will be faster and cheaper and more efficient.



WHAT IS DRIVING THIS CHANGE?

Today's customers expect integrated, connected experiences across all channels and that is exactly the reason for this change. Businesses are under phenomenal pressure to change; to move faster, to do more, to innovate.

In order to deliver a seamless customer experience, business need data that is currently trapped across hundreds of systems. What's more, for most companies only 29% of those systems are connected. In order to meet the demands of their customers, enterprises are looking to unlock the power of data across systems to deliver connected experiences through integration.



INTEGRATION AND DIGITAL TRANSFORMATION TRENDS

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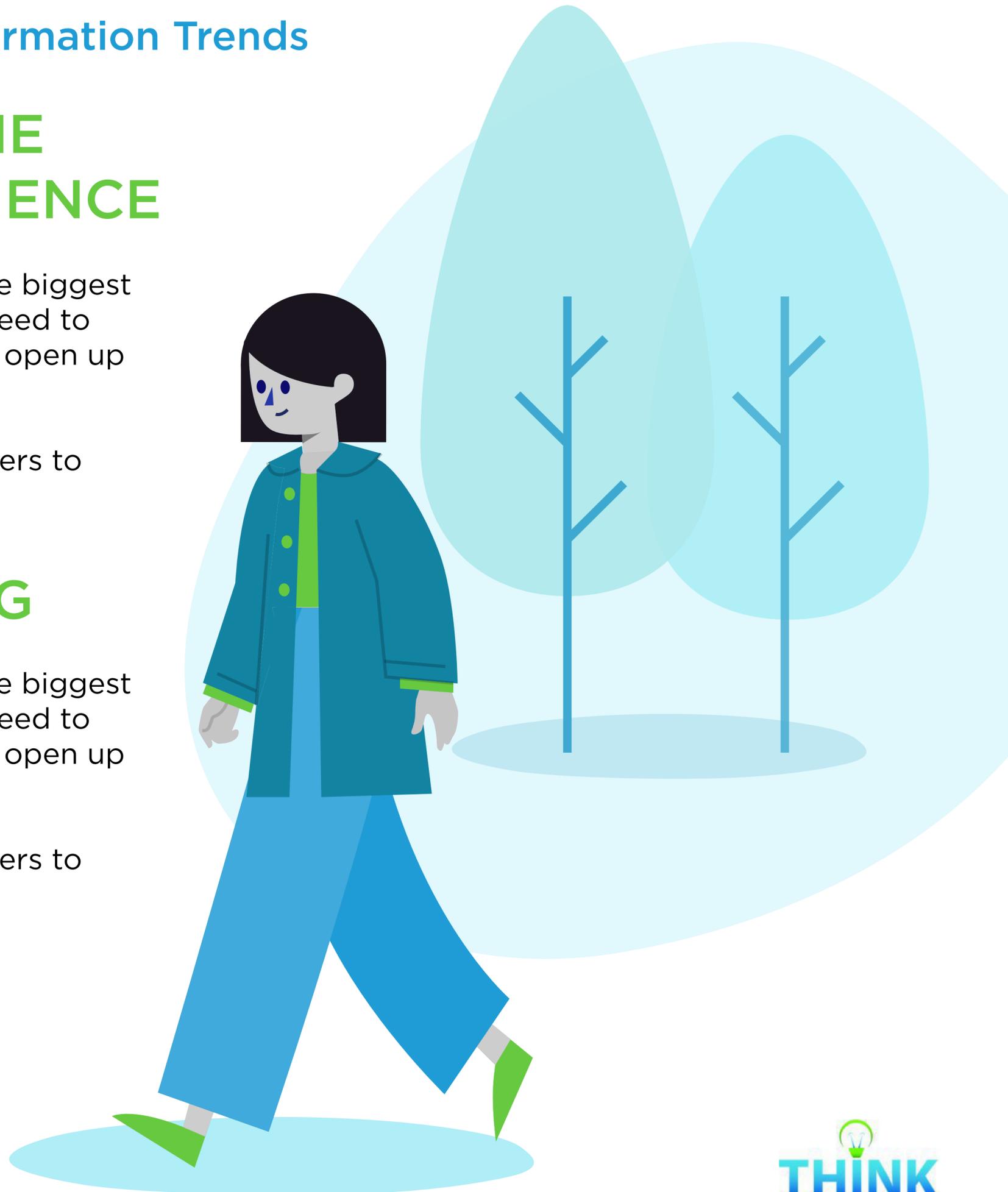
Integration & Digital Transformation Trends

A. CONNECTING THE CONSUMER EXPERIENCE

As mentioned earlier this is one of the biggest driver of Integration. Organizations need to solve for increasing pressure on IT to open up bandwidth for delivering connected, personalized experiences for their consumers—from customers to partners to employees to developers.

B. DATA IS THE KING

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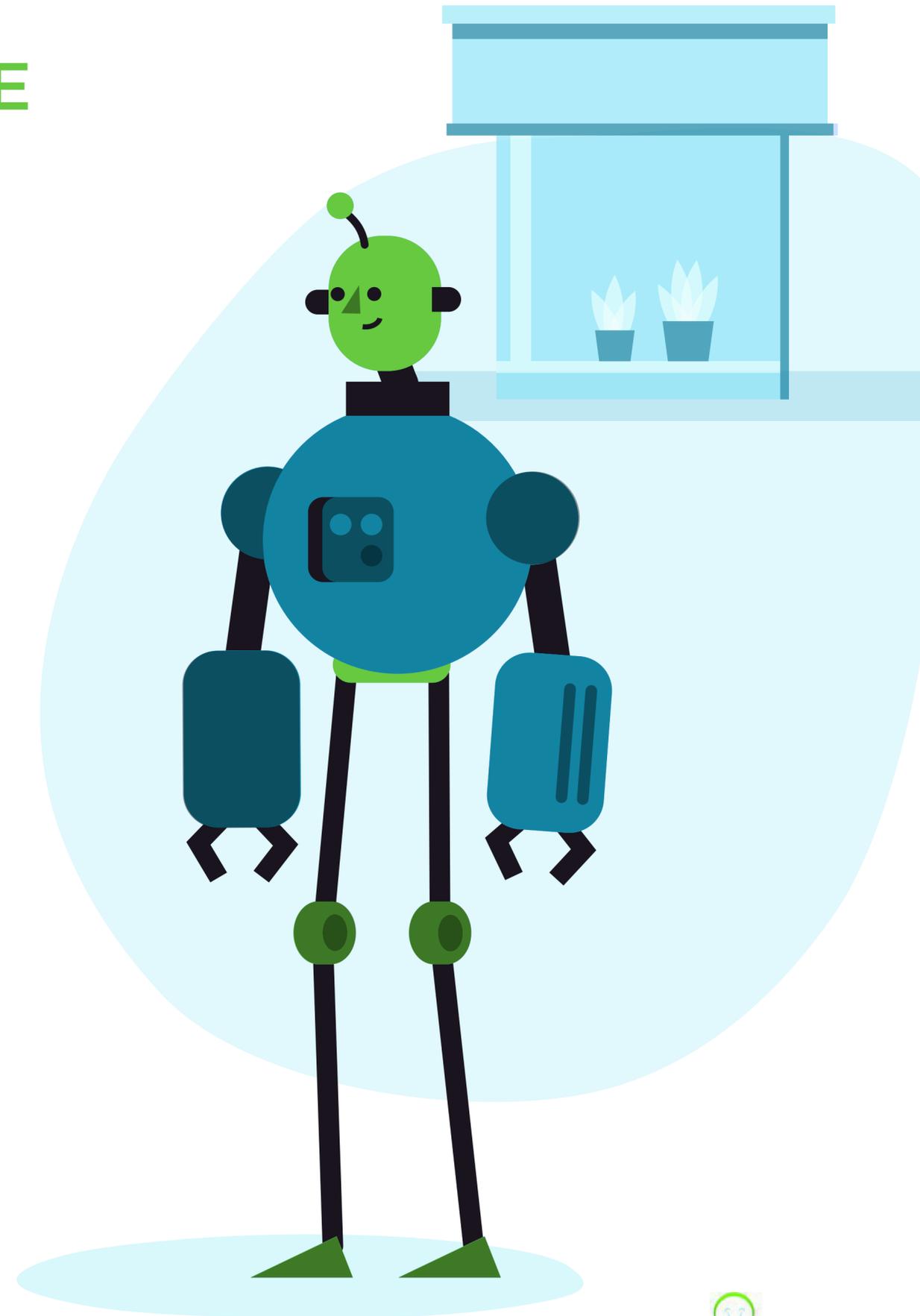


C. ARTIFICIAL INTELLIGENCE & MACHINE LEARNING

Organizations are increasingly investing in AI capabilities to expedite and personalize customer service, reduce human bias, and increase productivity. They are learning that the value of AI and machine learning tools are dependent upon the data they are fed. The more systems and applications they will be able to integrate, the more streamlined data they will have. And as a result they will be able to utilise AI and machine learning effectively to their advantage.

D. MULTI-CLOUD COMPUTING

Most enterprises today run on multi-cloud environments, but managing multiple clouds is complicated, specifically when it comes to moving application workloads between cloud environments. API-led application integration and containerization are two potential solutions to this problem.



E. PARTNERING WITH IT TO TURBOCHARGE THE BUSINESS

To maximize the full potential of technology, organizations are positioning IT as a core enabler to the business as opposed to IT being just a department amongst many in the traditional ways of working.

F. CO-CREATING VALUE WITH EXTERNAL STAKE HOLDERS

The best businesses are creating a network effect by building collaborative ecosystems of partners, customers, and external stakeholders.

G. FUELING BUSINESS PERFORMANCE WITH API'S

Businesses leveraging APIs are experiencing increased productivity, revenue growth, and room for innovation. But they must be productized and easily reusable to deliver full value.



TYPES OF INTEGRATION

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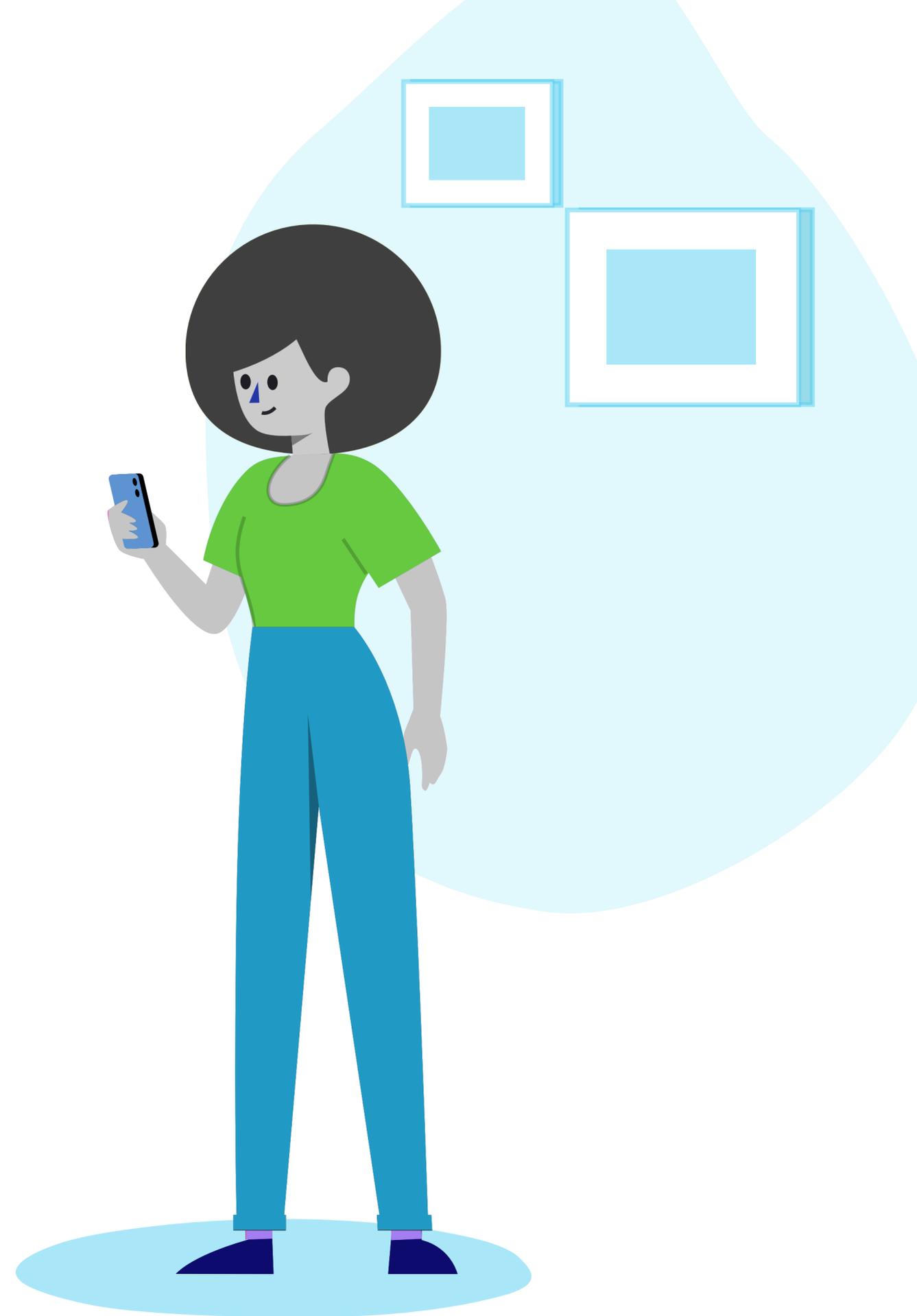


Types of Integration

Data is an extremely valuable business asset, but it can sometimes be difficult to access, orchestrate and interpret. When data is moving across systems, it isn't always in a standard format; data integration aims to make data agnostic and usable quickly across the business, so it can be accessed and handled by its constituents. And in order to make that data usable even more quickly, data can be integrated in following ways to standardize the integration process.

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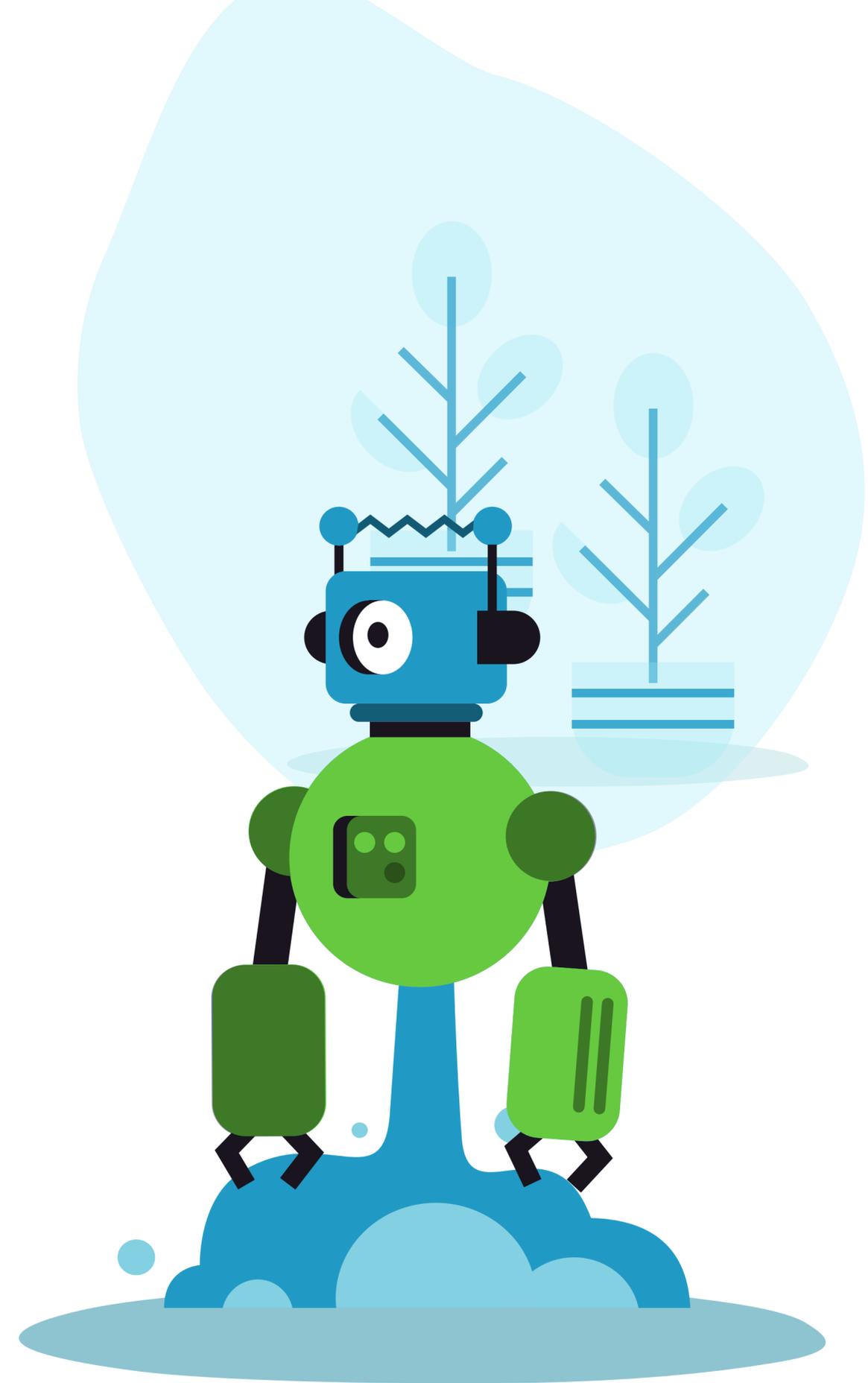
Types of Integration

B. BROADCAST

Broadcast is the act of moving data from a single source system to many destination systems in an ongoing and real-time (or near real-time), basis. Whenever there is a need to keep our data up-to-date between multiple systems across time, you will need either a broadcast, bi-directional sync, or correlation pattern. The broadcast pattern is extremely valuable when system B needs to know some information in near real time that originates or resides in system A.

C. BI-DIRECTIONAL SYNC

The bi-directional sync data integration is the act of combining two datasets in two different systems so that they behave as one, while respecting their need to exist as different datasets. This type of integration need comes from having different tools or different systems for accomplishing different functions on the same dataset. Bi-directional sync can be both an enabler and a savior depending on the circumstances that justify its need. The need, or demand, for a bi-directional sync integration application is synonymous with wanting object representations of reality to be comprehensive and consistent.



Types of Integration

D. CORRELATION

The correlation data integration is a design that identifies the intersection of two data sets and does a bi-directional synchronization of that scoped dataset only if that item occurs in both systems naturally. It is useful in the case where you have two groups or systems that want to share data only if they both have a record representing the same item/person in reality.

E. AGGREGATION

Aggregation is the act of taking or receiving data from multiple systems and inserting into one. For example, customer data integration could reside in three different systems, and a data analyst might want to generate a report which uses data from all of them. It derives its value from allowing you to extract and process data from multiple systems in one united application. This means that the data is up to date at the time that you need it, does not get replicated, and can be processed or merged to produce the dataset you want.



WHAT DOES THE FUTURE HOLD?

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What does the future hold?

Data is the currency of digital transformation, and data-driven application integration is the future of enterprise architecture. To become a successful digital business, you need to select a data and application integration strategy that enables you to unify all your company's data assets and analyze them in the context of your businesses bigger picture.

With this rapid proliferation of applications used in the enterprise comes a big challenge for IT to centrally master data. Using integration to counter this problem, here's what the future holds for us -

CLOUD & MULTI-CLOUD INTEGRATION

The emergence of multi-cloud can be seen, where companies want to integrate several clouds between them. The idea would be that the integration solution would be a kind of hatched solution, managing itself the execution location of the code, according to performance, reliability and cost criteria. Companies would develop their integration on a platform specific to the integration solution, focusing on the business need for integration, without asking yourself the technical questions.



What does the future hold?

MICROSERVICES TO SERVERLESS

It seems link the development of microservices is going to move towards the ability to focus only on business code. Moreover, it can be seen in the technologies that appear around microservices, that the goal is to simplify the work which means we're heading straight for the serverless at full speed.

INTEGRATION AS A PRODUCT

This is already a major trend accompanied by the rise of API Management. It's about making integration easily available and off the shelf to application developers. It's also about making this accessible to project managers, promoting its integration capabilities, and even reselling them.



ABOUT THINK SOURCE

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About Us

ABOUT THINK SOURCE

Integration is hard. Most organizations are weighed down by legacy integration patterns and platforms that make it difficult to innovate and impossible to scale. But it doesn't need be this difficult. Think Source is on a mission to turn integration into one of your organization's greatest strengths. Our team of certified developers help dozens of enterprises and to quickly achieve business value with the industry-leading integration platforms.

Visit www.thinksource.us for more.

