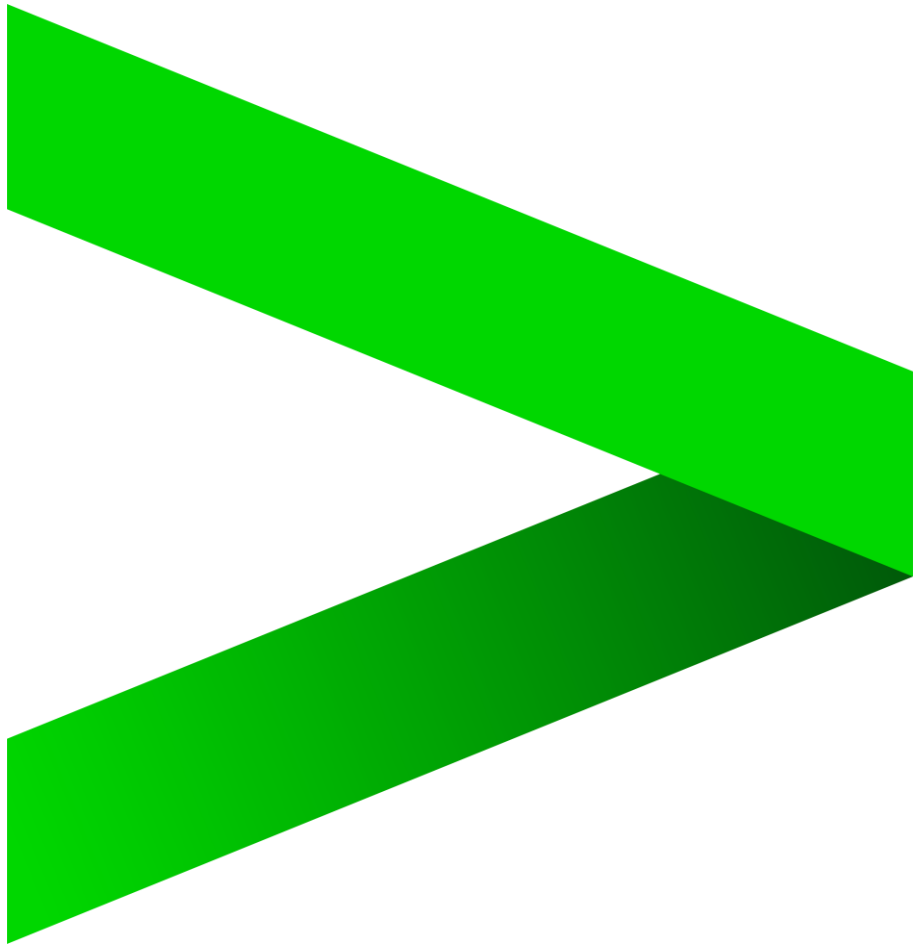
QUALITY ENGINEERING IN THE NEW

BE A FUTURE READY INTELLIGENT ENTERPRISE

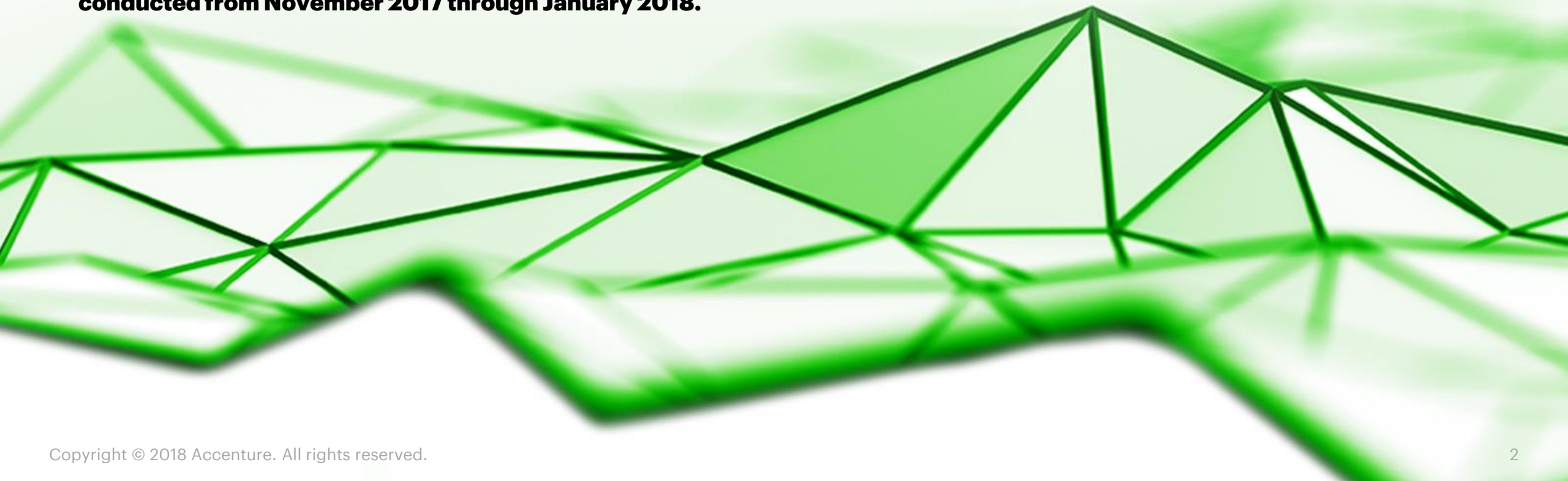
TAPOST 2018
MATTHIAS RASKING



accenture technology

84% of business and IT executives agree that through technology, companies are weaving themselves seamlessly into the fabric of how people live today.

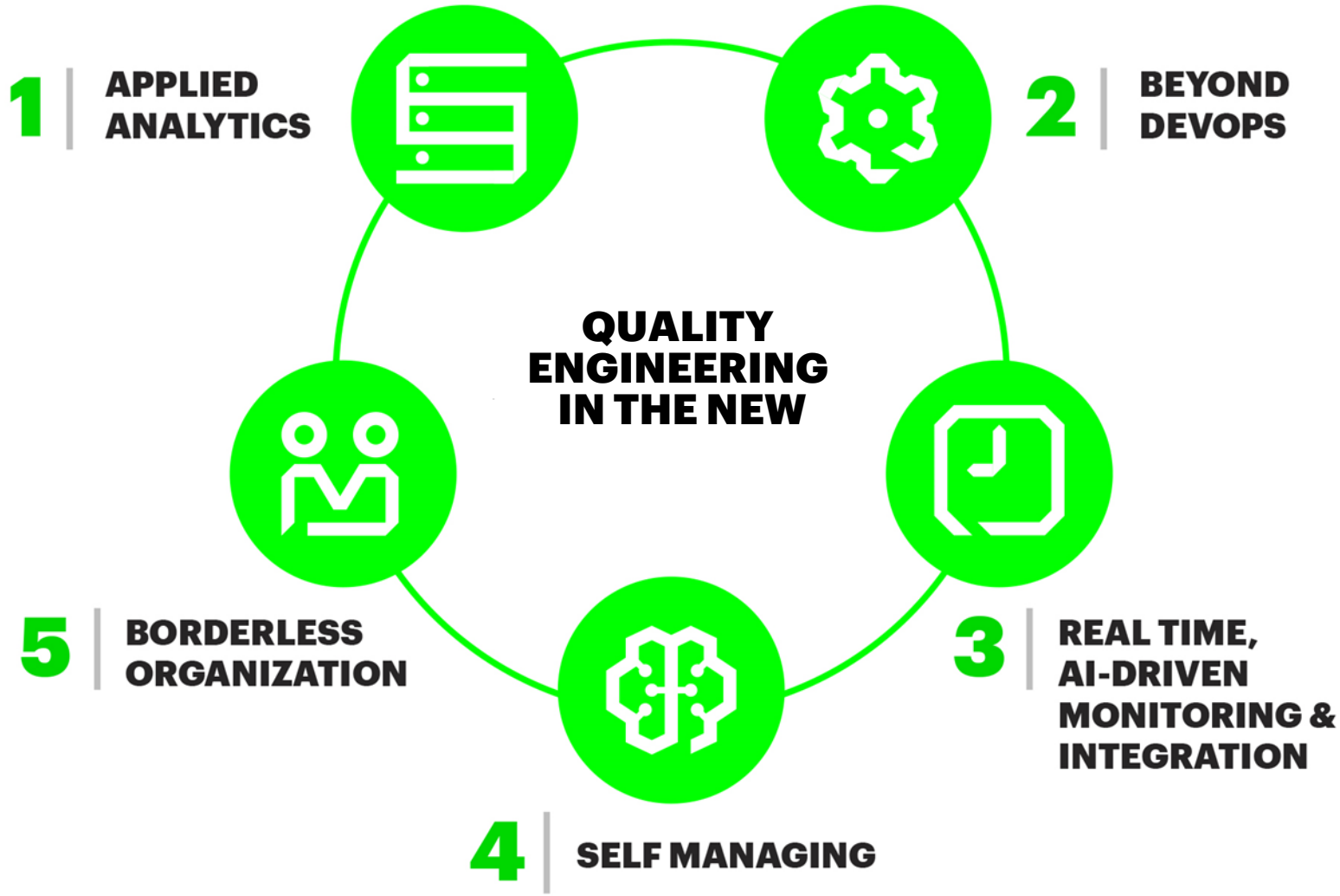
Accenture Technology Vision 2018 survey of more than 6,300 executives from 25 countries conducted from November 2017 through January 2018.



TRADITIONAL TESTING IS CHALLENGED DUE TO TECHNOLOGY INNOVATIONS

BUSINESS CHALLENGES		TECHNICAL CHALLENGES
Miscommunication between client, account teams, and developers	→	Unclear and frequently changing requirements
Always-on businesses, deployed across multitude of devices, platforms and technologies	→	Developing and deploying applications at speed for omnichannel environments, even at the edge
Shorter time to market, frequent updates, and engaging user experience	→	Keeping developer experience relevant across the test environments
New business metrics—from Performance-based to Purpose-based	→	Identifying performance issues and generating focused test data for purpose
Focus on customer's business, industry and market	→	Aligning technical priorities with business purpose

TRADITIONAL TESTING NEEDS TO EVOLVE TO QUALITY ENGINEERING IN THE NEW



IMPERATIVES FOR DRIVING QUALITY ENGINEERING IN THE NEW

1. APPLIED ANALYTICS

Shift from “test data” to “test insights” through applied analytics to manage the exponential growth in data volumes and variety.

2. BEYOND DEVOPS

Move beyond function/ script-driven approaches towards autonomous frameworks that bring developers, customers and end-users together.

3. REAL-TIME AI-DRIVEN MONITORING & INTEGRATION

Evolve from issues-based resolution to real-time monitoring and integration to enable the integration of any technology stack.

4. SELF-MANAGING

Create an AI layer to augment testers and then enable self-managing function, embedding trust throughout the system to prevent unintended bias.

5. BORDERLESS ORGANIZATION

Build interconnected virtual teams comprising of industry, business and technology experts aligned around a common business purpose.

1. LEVERAGE APPLIED ANALYTICS FOR DATA-DRIVEN QUALITY ENGINEERING

FROM DATA QUANTITY TO DATA QUALITY

Shift to the most insightful data that can offer key insights into performance.

DATA-DRIVEN FRAMEWORKS AND QUALITY PLATFORMS

Store every test point and insight, enabling the real-time prediction of application defects.

AI-DRIVEN "TEST DATA AS A SERVICE"

Leverage analytics as a function to test systems, create a playground for developing new products and services for the enterprise.

2. LOOK BEYOND DEVOPS TOWARDS AUTONOMOUS FRAMEWORKS

Breaking the product into small incremental builds & testing individually

Shift left testing with automation tools and continuous integration

Embedding security in software design to recover application from failure

AI enabled automation with key focus on business requirements

Identifying failure points proactively and pervasively

2020 Maturity Horizon

Beyond 2020

Enforcing design quality, identifying design workflows and decisions support systems will enable quality engineering to focus on business conditions beyond the 2020 horizon

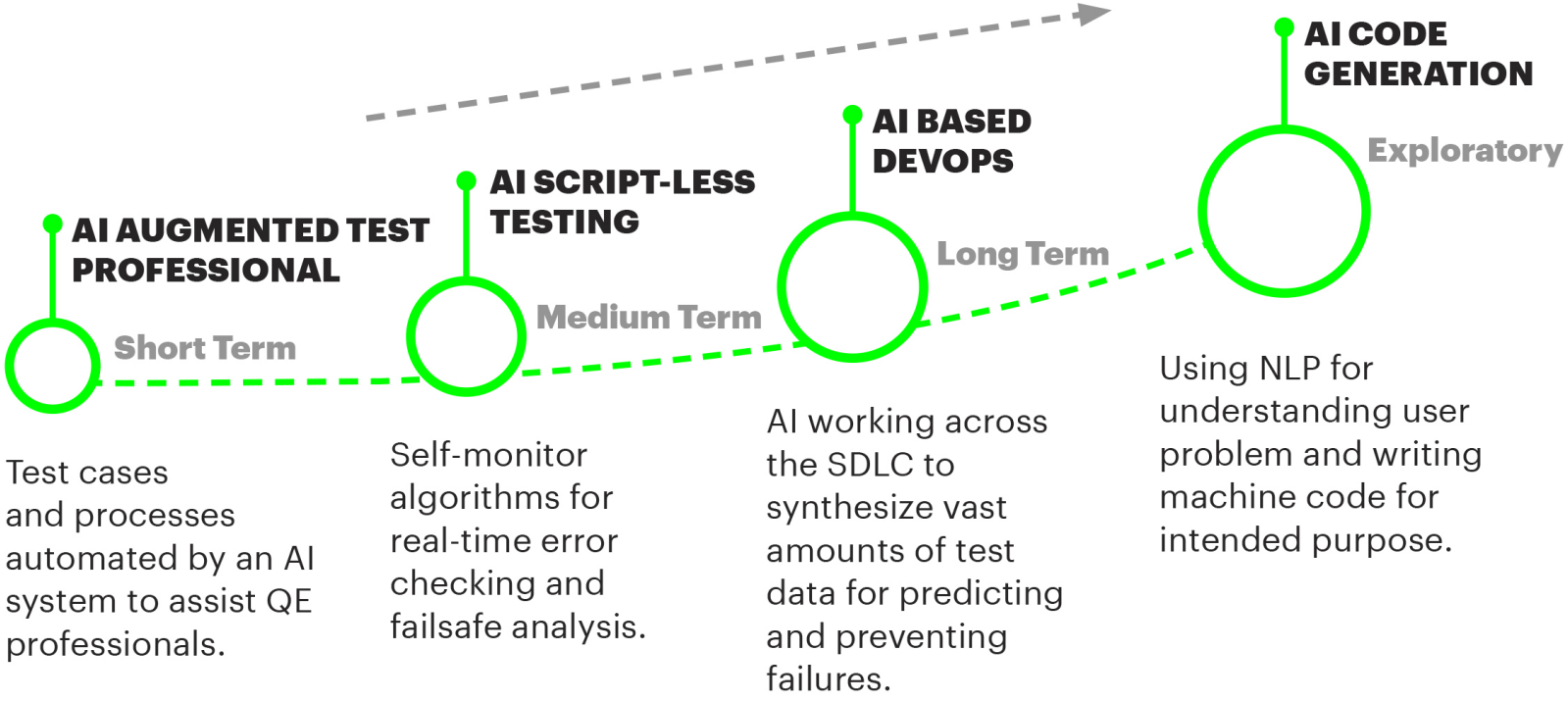
3. ENABLE REAL-TIME AI-DRIVEN MONITORING & INTEGRATION

Amplify **TESTING AS A SERVICE WITH VIRTUAL AND AUGMENTED REALITY** collaboration to transform testing professionals into design engineers.

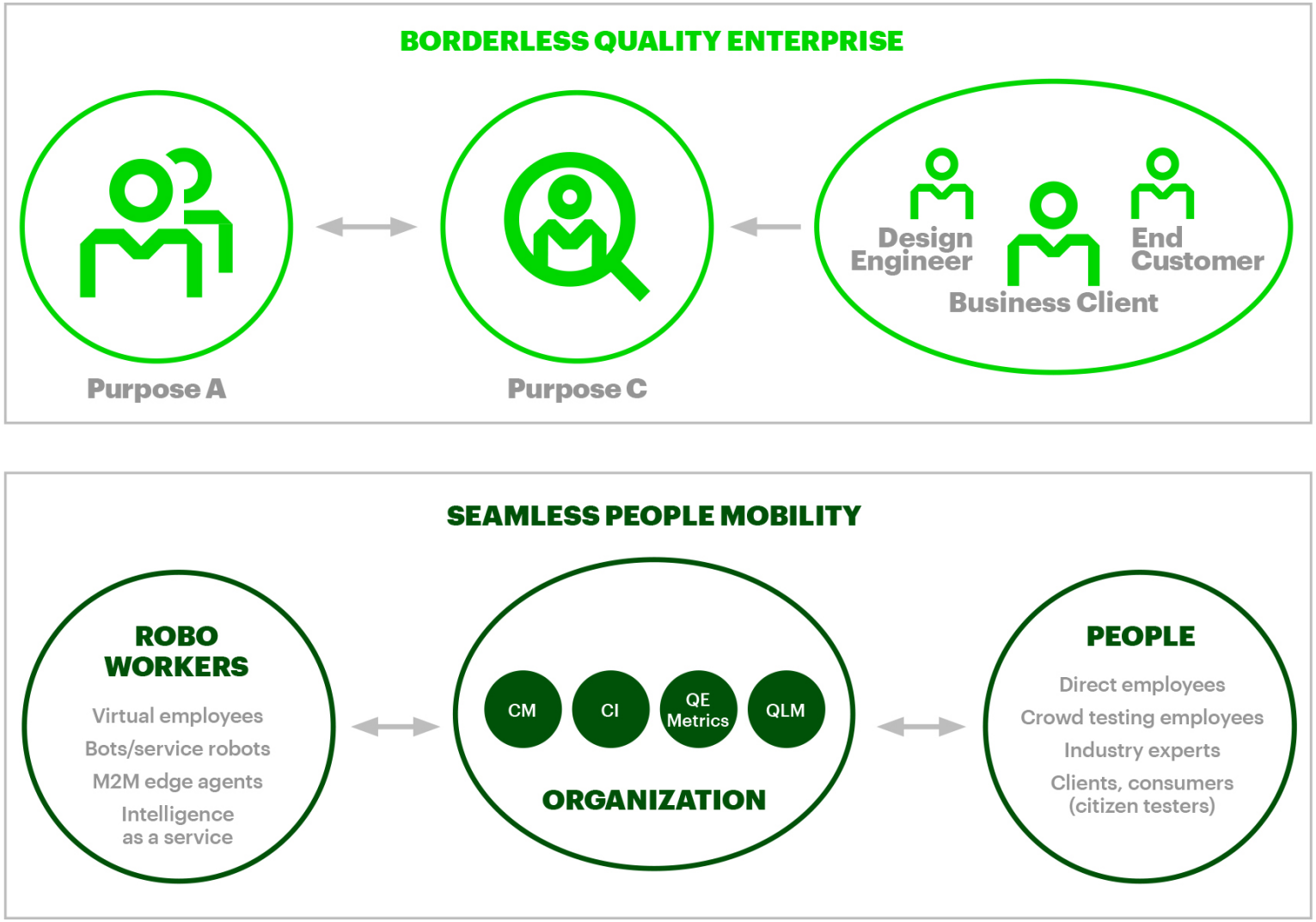
Leverage **SENSOR TECHNOLOGIES** to enable virtualizations, digital twins, and deeper test simulations.

Enable **INTELLIGENT IDENTITY MANAGEMENT** to embed smart contracts and support real-time root-cause analysis and seamless handovers for distributed applications.

4. CONTINUE TO EVOLVE QUALITY ENGINEERING AS A SELF-MANAGING FUNCTION



5. BUILD A BORDERLESS ENTERPRISE ALIGNED AROUND A COMMON PURPOSE



NEW & EVOLVING ROLES
QE WORKFORCE OF THE FUTURE

DEDICATED

QUALITY ENGINEER

Develops in-sprint, automated tests; participates in dev code reviews: leads continuous testing

BUS. INTEGRATION ENGINEER

Develops story/feature-level acceptance tests; executes automated acceptance tests and conducts exploratory testing

SHARED

AUTOMATION ARCHITECT

Defines automation and tools test strategy; works with devops to implement CI/CD

DEDICATED & SHARED

AUTOMATION DEVELOPER

Builds automation test framework; writes automated regression tests; supports QE pipeline infrastructure

SERVICE COORDINATOR

Plans and supports release-level integration and E2E testing (cross sprint)

DATA DESIGNER/ ENGINEER

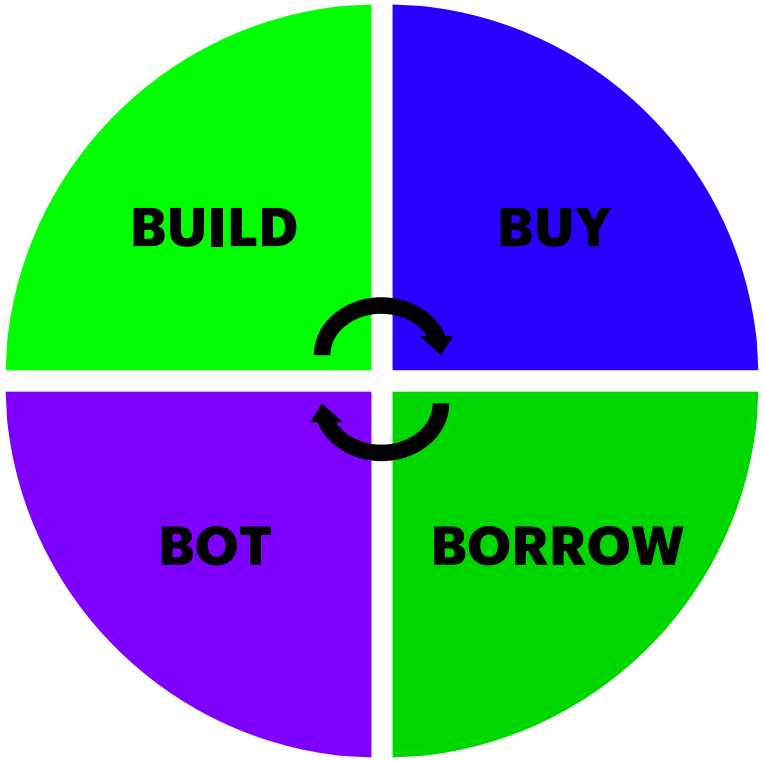
Defines test data strategy to support in-sprint tests; identifies test data patterns for functional testing

DELIVERY LEADS

Build QE infrastructure; recruit QE talent; facilitate cross-sprint testing; expand QE shared services

STAFFING & SOURCING MODEL
QE WORKFORCE OF THE FUTURE

Develop Quality Engineering skills within existing workforce



Compete to hire for critical QE skill gaps and/or source talent from strategic vendors

Automate repetitive, tactical testing activities with RPA and intelligent tools

Create a shared, gig-based workforce comprised of internal & external QE talent

THANK YOU

Find out more about Quality Engineering in the New

https://www.accenture.com/us-en/insights/technology/quality-engineering-new