UNLEASHING THE POTENTIAL OF GEN AI AS YOUR INNOVATION ASSISTANT
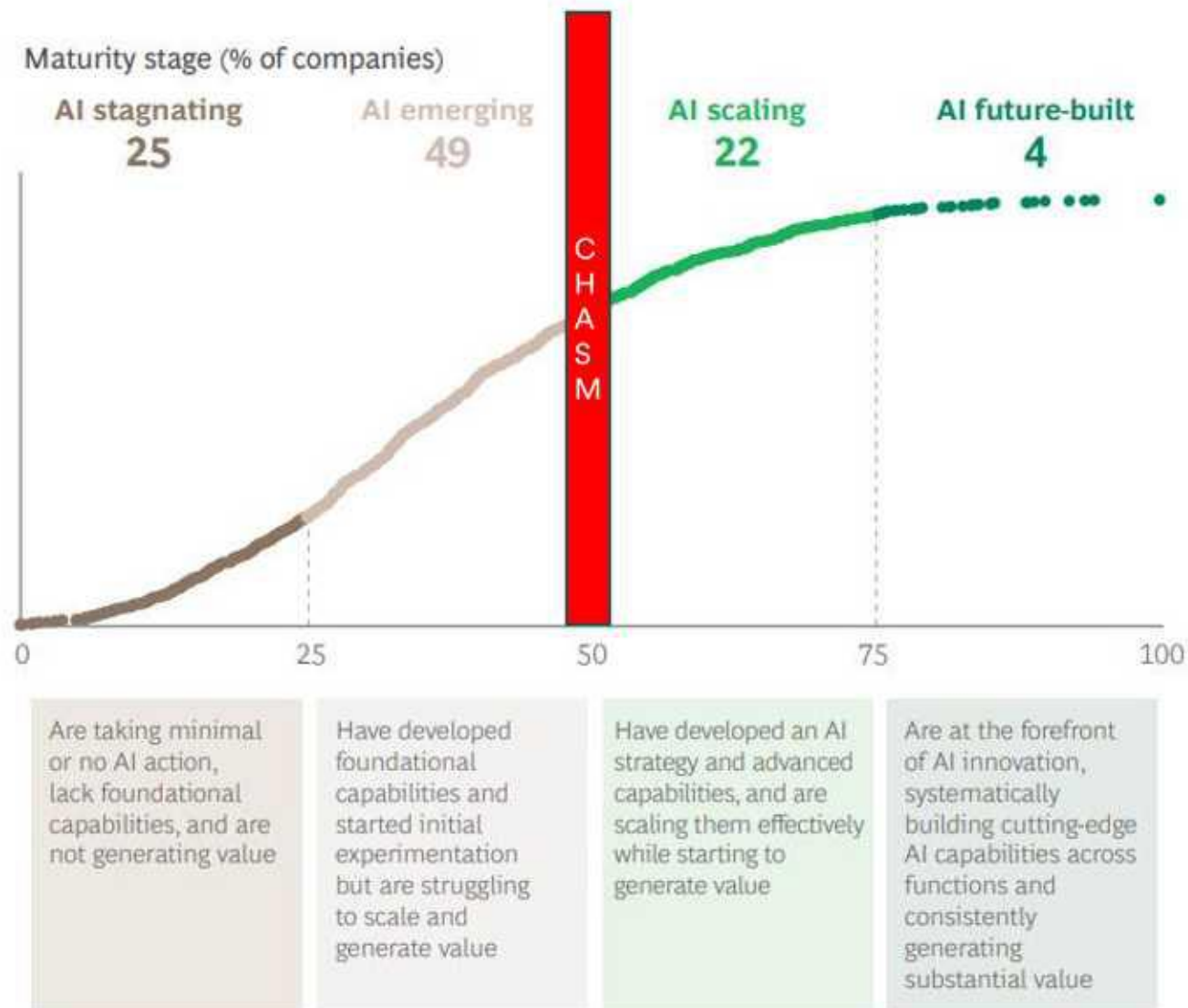
Nithin Ramachandran,

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3M

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Crossing the Chasm
Guiding POC purgatory to scale

Maturity stage (% of companies)

AI stagnating	AI emerging	AI scaling	AI future-built
25	**49**	**22**	**4**

CHASM

Are taking minimal or no AI action, lack foundational capabilities, and are not generating value	Have developed foundational capabilities and started initial experimentation but are struggling to scale and generate value	Have developed an AI strategy and advanced capabilities, and are scaling them effectively while starting to generate value	Are at the forefront of AI innovation, systematically building cutting-edge AI capabilities across functions and consistently generating substantial value

Source: BCG: Where's the value in AI, Oct 2024

- **Strategize per economics of scaling Gen AI assistants**

- **Allocate capital with an understanding of AI ROI models**

- **Empower for impact**

- **Architect for Scale**

- **Engineer for sustainability**

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Gen AI Assistant deployment
Strategy Archetypes

SNOWBALLS

Reusable capabilities deployed against smaller use cases, gaining cumulative value as the number of use cases increase

- Low ROI per use case, but lower cost of implementation
- Repeatable, often commodity capabilities
- Efficiency Multiplier for the workforce at scale
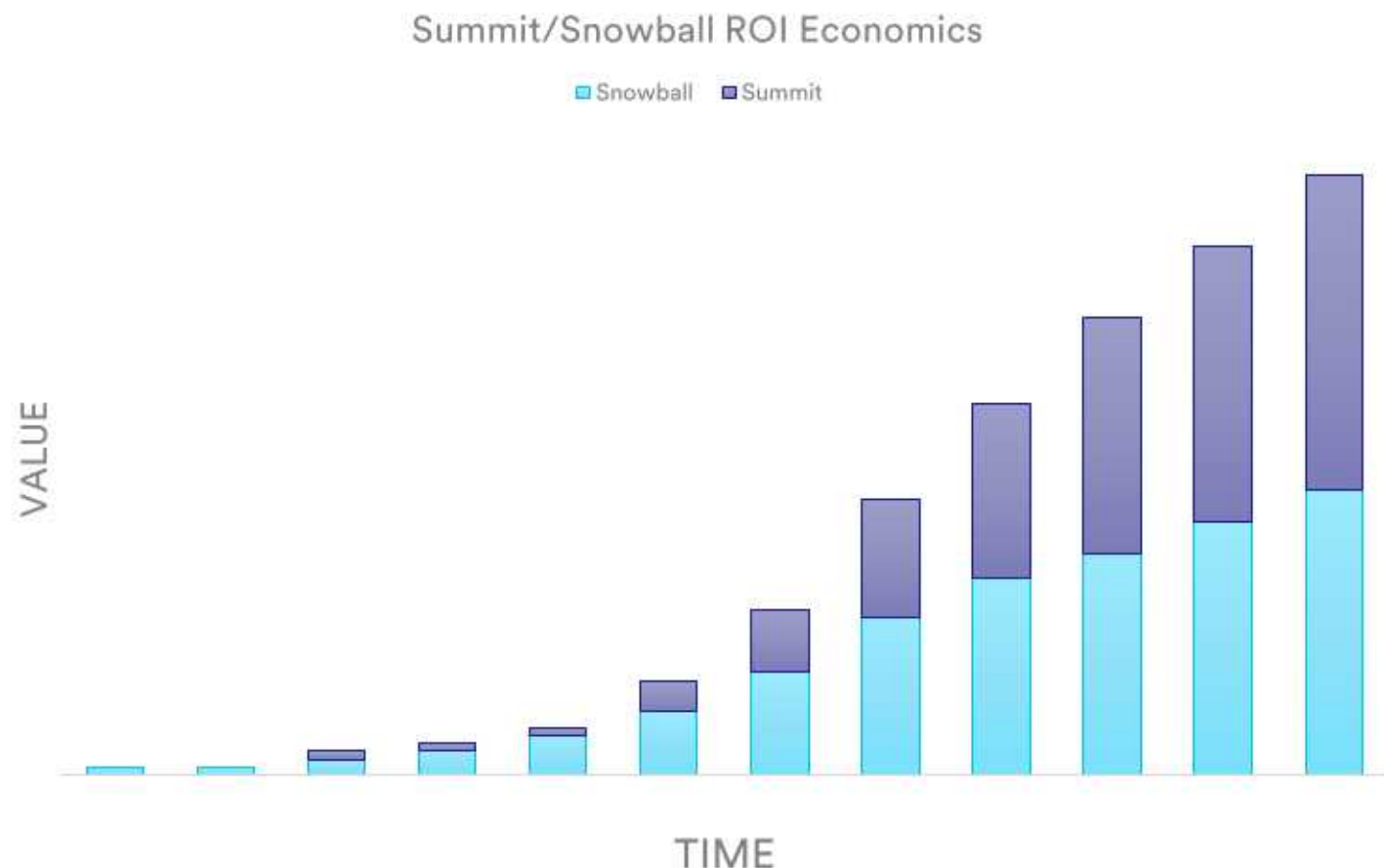

SUMMITS

Bespoke capabilities built for very specific use cases that are usually industry specific and deliver competitive advantage

- Larger Use Case, Harder to build
- High ROI
- Not Repeatable, often bespoke
- Differentiation in marketplace

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Gen AI Assistants – Summits and Snowballs
ROI expectations framework and implications

Summit/Snowball ROI Economics

☐ Snowball ☐ Summit

VALUE

TIME

- Initial scaling is best done with a snowball strategy

- Snowballs buy you time, delivering incremental ROI with lower marginal cost of deployment

- Summits take time to develop and demand patient investing

- Over time, summits will triumph, as snowball scaling opportunities dry out

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Value graph is directive and is based on expectation of results. Actual results/timelines may vary

Gen AI Assistant: Agent Archetypes at Scale
Scaling requires classifying agentic archetypes during design

Router Agents

Process User need and identify the right agent to employ on a task

Knowledge Agents

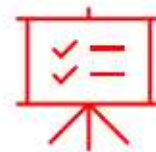Focused on retrieving information from documents, databases and other sources

Prediction Agents

Focused on leveraging AI/ML models to deliver predictions to guide proactive decision making

Workflow Agents

Focused on automating workflows in business processes

Autonomous Agents

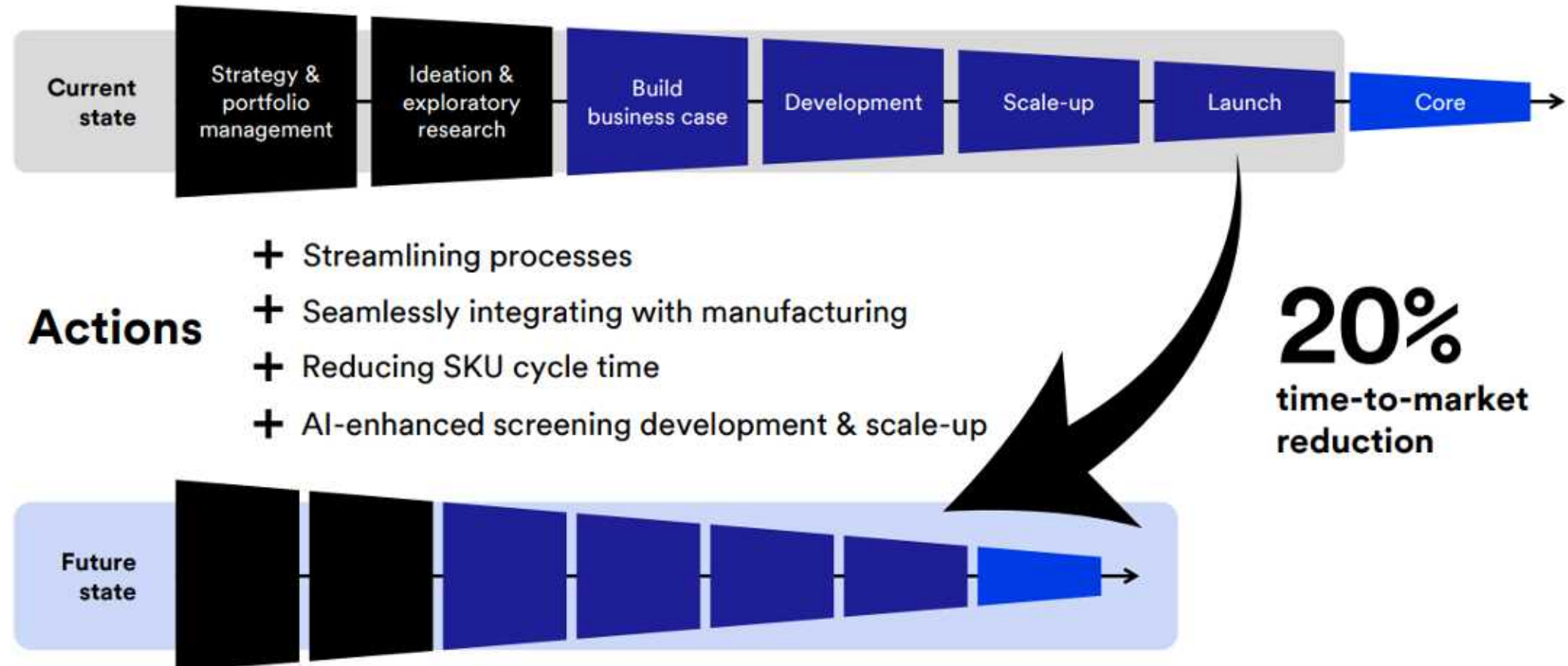Independent agents that can make decisions based on a given set of information

- Initial use cases will be one off agents of a specific archetype

- As Gen AI scales, use cases get more complex and require agents collaborating

- Agent's ability to collaborate is critical to creating unified solutions and "co-pilots"

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Summit Archetype - 3M's foray into R&D Assistants
Accelerating new product development

Drive process improvement in R&D factory

Current state

| Strategy & portfolio management | Ideation & exploratory research | Build business case | Development | Scale-up | Launch | Core |

Actions

+ Streamlining processes

+ Seamlessly integrating with manufacturing

+ Reducing SKU cycle time

+ AI-enhanced screening development & scale-up

20%
time-to-market reduction

Future state

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3M

Summit Archetype - 3M's foray into R&D Assistants
Improving researcher productivity

and hyper-impactful

Goal: Build an easy-to-use Digital R&D ecosystem that enables "hyper-productive" R&D personnel

Elegant User Interface

Purpose-built, inter-connected, productivity tools & infrastructure for all R&D Roles

| Technology Developer | Product Dev | Product Eng | Application Eng | R&D Leader | Process Eng | Product Steward | Quality Eng | Technicians |

Material Data Card

MODEL HUB

Democratization of Advanced Modeling & Easy access to High Perf Compute

gALAxy

Analytical Automation Platform CRAL

Skylab

Informatics Toolset

-Materials Manager
-Mixing Studio
-Experiment Manager

Process Informatics

Digital Material Hub Customer Portal

Lab Automation Connected Test Equipment Sample traceability

Inter-connected back end

Disparate Enterprise-wide R&D IT Systems

NPI database   Product Life Cycle Mgmt   Lab Information Systems   Electronic Lab Notebook
Technical Report databases   Invention database   Sharepoint sites   More...

ONEPLACE

Enterprise-wide, Modern Data Architecture & Governance Smart data access & retrieval

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Snowball Archetype – 3M Enterprise Employee Assistant
Helping employees navigate 3M data, documents and workflows

Internal GPT
Started as a secure way to access industry GPT solutions and safeguard company data

Document Intelligence
Analyze, summarize, rewrite documents, emails, presentations etc

Strategy Companion
Helping users understand frameworks to solve business problems

Data Analysis
Upload data files or connect to databases to analyze data using certified AI/MI models with automated results summarization and next steps

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Achieving Success at Scale
Drivers for a sustainable agentic future in a global enterprise

Top Down Alignment and Support

Program Management

Business Value

Responsible AI & Risk Management

Training and Adoption

User Communities, Developer communities, Feedback Loops

Standards of Development

Robust Testing

Distributed Development, Centralized Deployment

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