

AI Agent vs. Agentic AI: An Introduction

Defining core concepts and distinction

VS



AI Agent



- Perceives environment, acts to achieve goals.
 - Reactive or simple proactive behavior.
 - High agency, advanced planning capabilities.
 - Operates within defined parameters.
 - Multi-step execution towards complex objectives.
- Evolution: From reactive to proactive, goal-driven systems

Agentic AI

Roots & Rise: AI Agent to Agentic AI

Historical context and modern emergence



1990s

AI Agent Concept Formalized

Early academic work defined agents' perceptions and actions.



Early 2000s

Initial Implementations

Simple agents in games, search engines, and robotics.



Post-2020

Agentic AI with LLMs

Powerful Large Language Models enable new levels of agency.



Present

Rapid Prominence

LLM capabilities drive advanced planning, reasoning, and tool use.

Advancements in Agentic AI are driven by LLM capabilities.

Evolution: from reactive to proactive, goal-driven systems.

Milestones: Early Agents to Autonomous Execution

Key achievements and advanced task automation



AI Agent Achievements

- Self-navigating robots for exploration.
- Expert systems for complex decision-making.
- Personal assistants (e.g., early Siri, Alexa).
- Simple automation tasks in industrial settings.



Recent Agentic AI

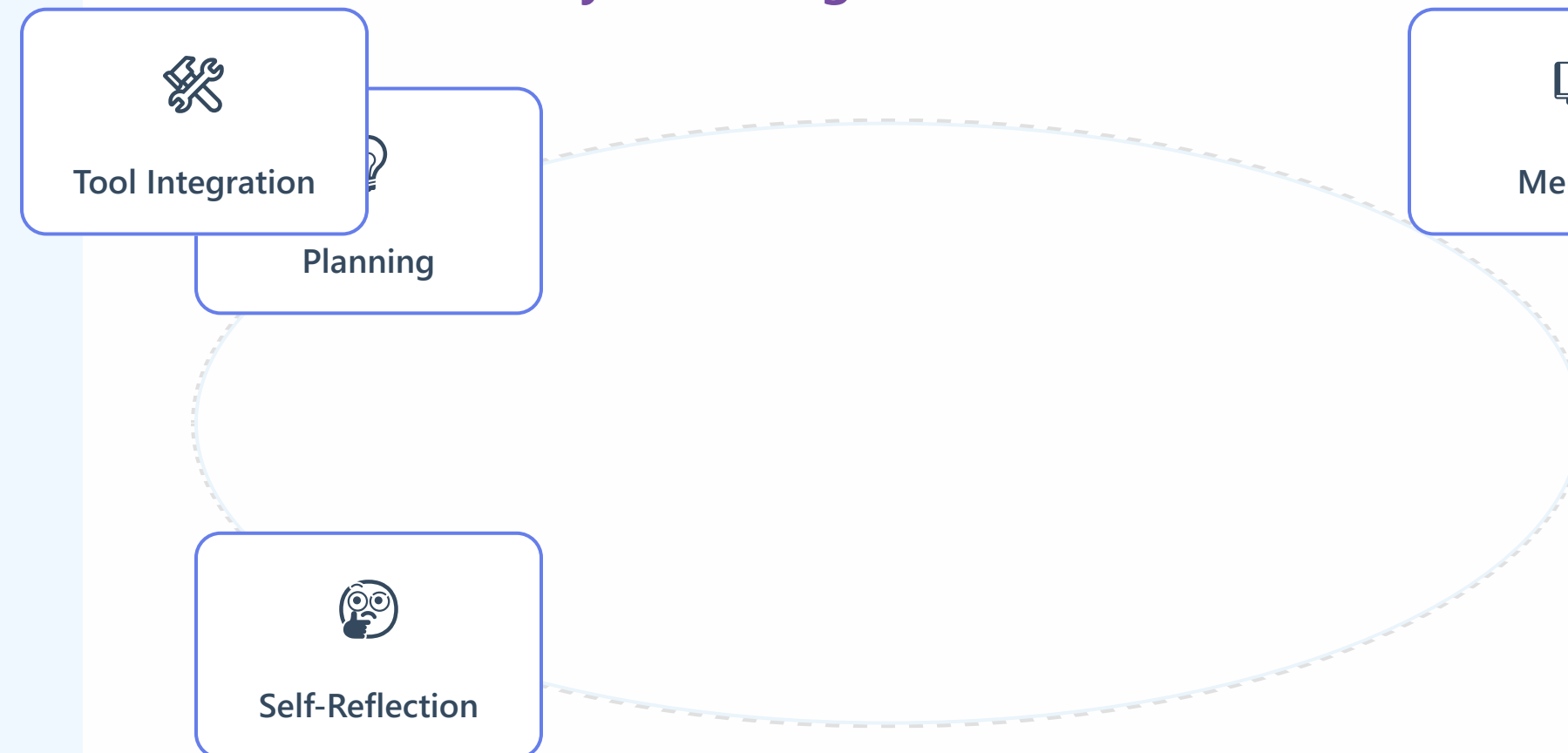
- Auto-GPT, BabyAGI, SuperAGI frameworks (2023).
- Autonomous research, coding, debugging.
- Complex interaction with various APIs.
- Minimal human intervention for high-level objectives.

- These systems demonstrate autonomous, multi-step task execution using LLM prompts.
- Agentic AI aims for minimal human intervention, focusing on high-level objectives.

Current Focus: Enhancing Agentic Autonomy

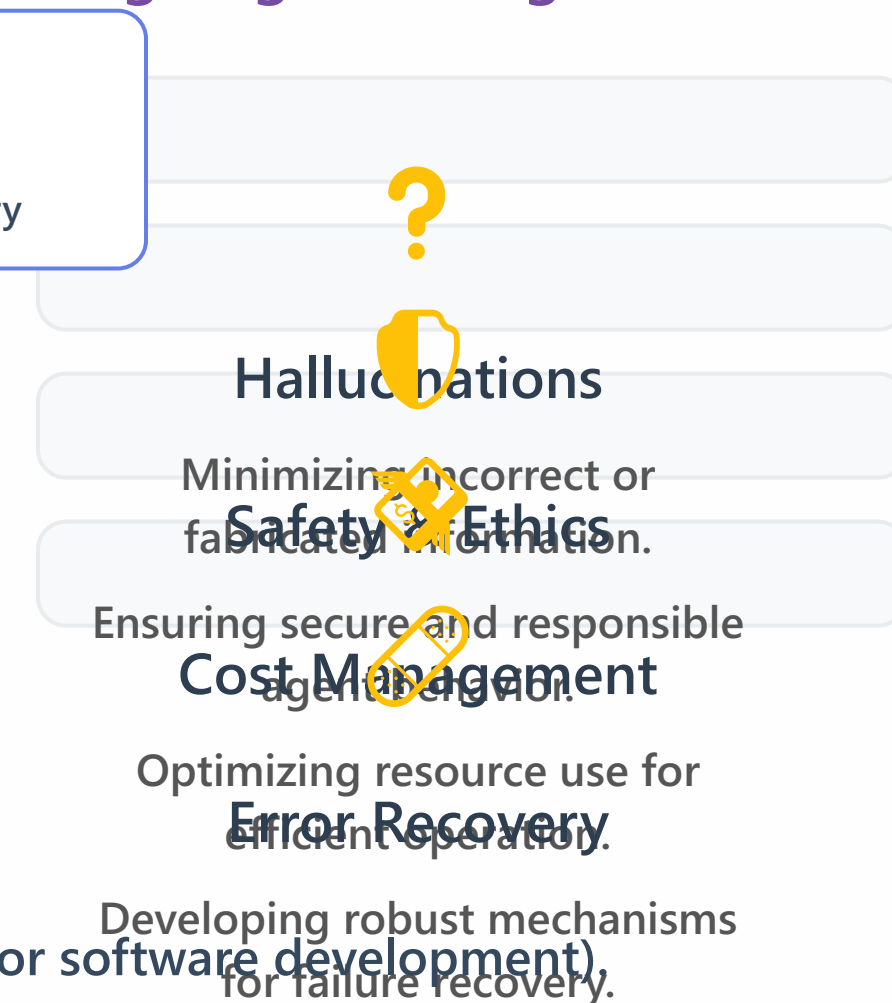
Present developments and ongoing challenges

Enhancement Cycle for Agentic AI



- Specialized agent frameworks emerge (e.g., MetaGPT for software development).
- AI Agent (General): robotics, smart homes, enterprise automation, simulations.

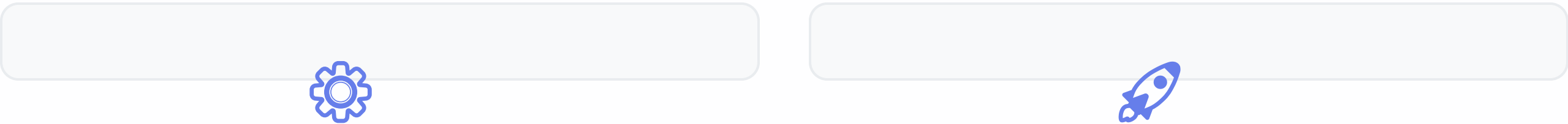
Ongoing Challenges



Transformative Impact & Ethical Considerations

Future implications and path towards AGI

Impact Comparison



Ethical Considerations AI Agent Impact

- Revolutionized automation and control.
- Enhanced digital user experiences.
- Applied in smart homes, robotics.

Agentic AI Impact

- Boosts productivity with complex automation.
- Automates multi-step, goal-driven tasks.
- Pushing boundaries of AI capabilities.



Human-AI Collaboration

Ethics & Accountability

Towards AGI

Societal & Work Impact



Ensuring fairness

in decisions.

Transforming industries and employment.

Agentic AI is a crucial step towards Artificial General Intelligence (AGI) through sophisticated autonomy and proactive goal pursuit.