

# Generative AI applications in manufacturing industry

(Transforming Operations and Innovations)

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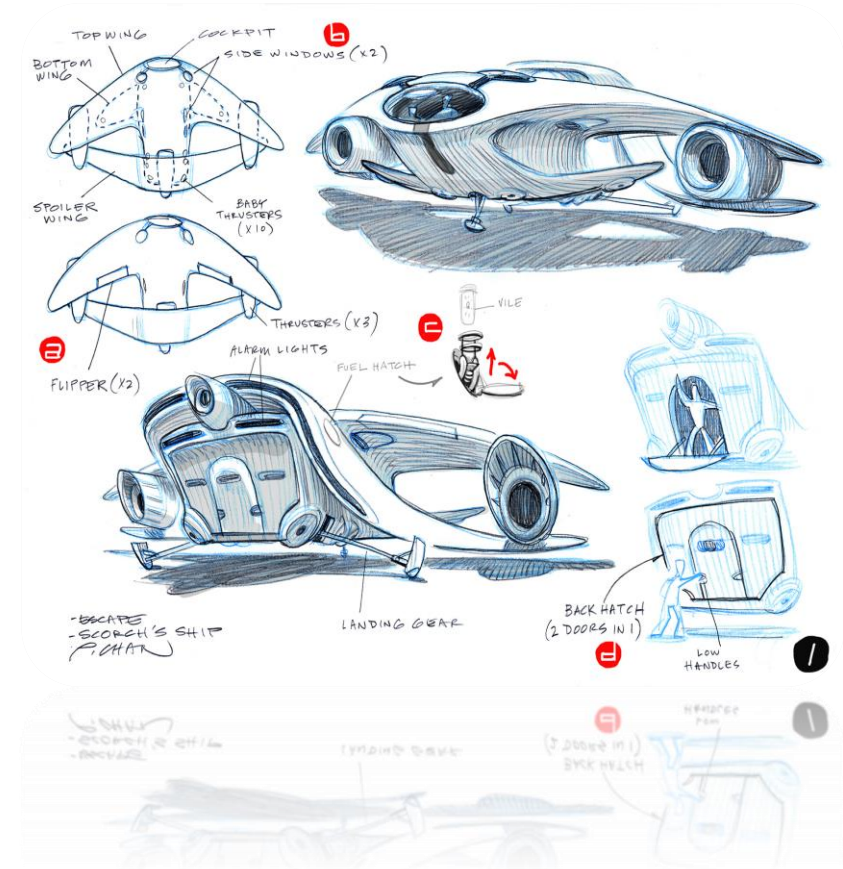
# Customized Product Design

## Development Challenges:

- Mass customization complexity
- Data collection and privacy
- Design and engineering constraints

## Deployment Challenges:

- Cost and scalability
- Collaborative design integration
- Supply chain adaptation



# AI-Powered Collaborative Robots

## Challenges/Needs:

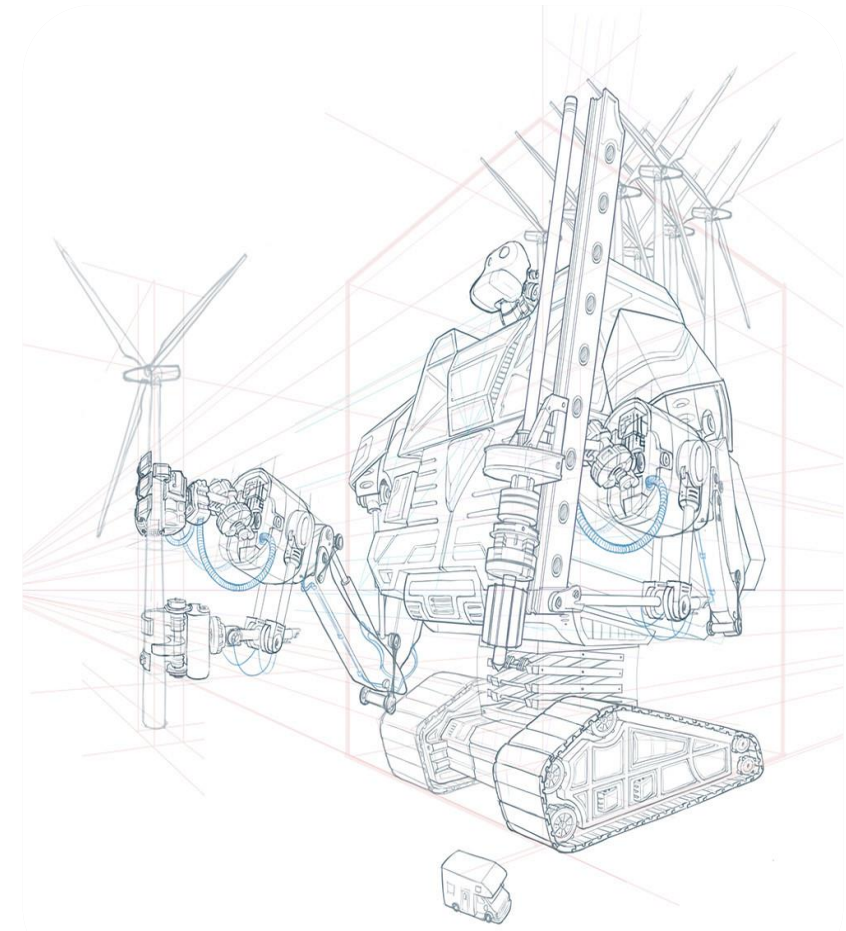
- Labor shortages
- Programming complexity
- Flexibility in production operations
- Safety

## Solution:

- Advanced sensor technology
- Intuitive programming interfaces
- Comprehensive integration platforms
- Robust data security measures

## Benefits:

- Enhanced productivity
- Improved safety
- Reduced production costs
- Cost efficiency
- Market competitiveness





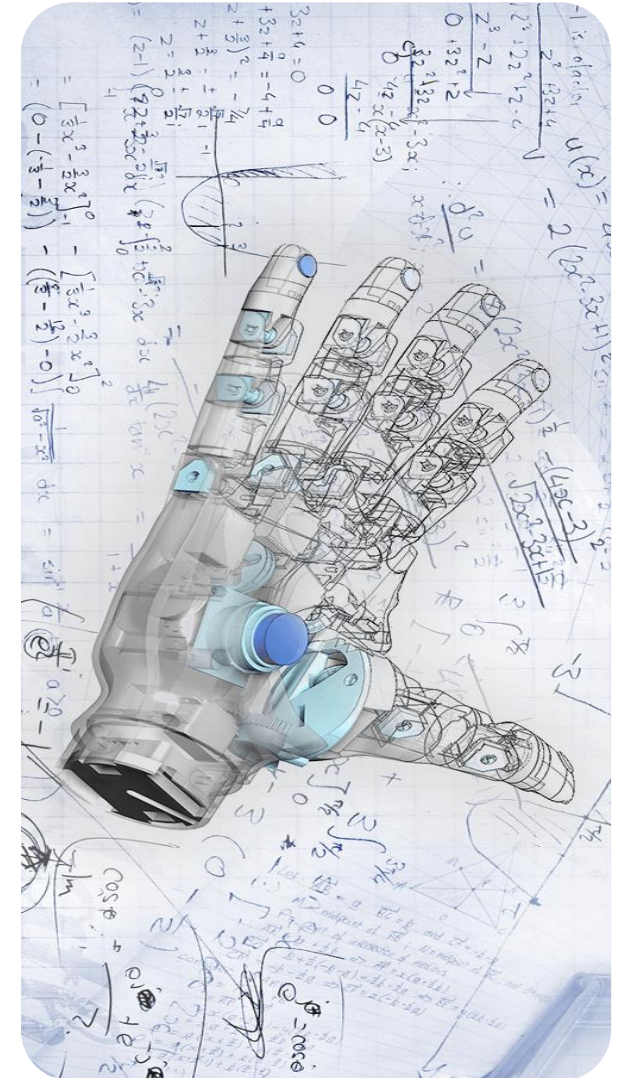
# AI-Powered Collaborative Robots

## Development Challenges:

- Algorithm complexity
- Hardware integration
- Interoperability
- Real-time decision making
- Sensor integration
- AI training infrastructure

## Deployment Challenges:

- Workforce training
- Collaborative workspace setup
- Legal and regulatory compliance
- Maintenance, support and upgrades



# The Field for Actions



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RESEARCH AND INNOVATION AREA FOR AI APPLICATIONS IN  
MANUFACTURING