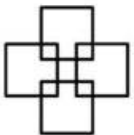


Shadow's route to Robots in Extreme Environments

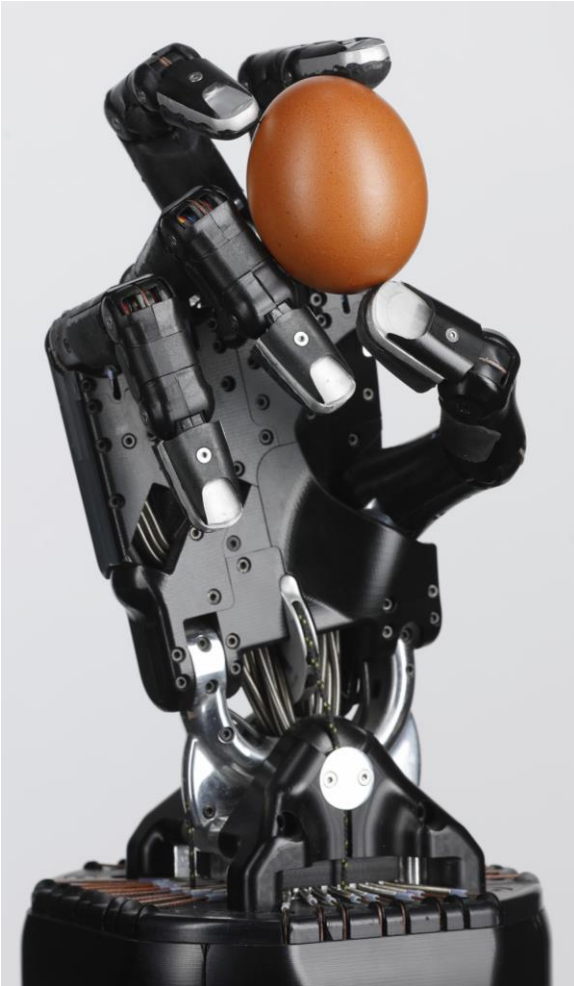
SPEAKER: DR. RADHIKA GUDIPATI

ROLE: BUSINESS DEVELOPMENT MANAGER





WHO ARE WE?

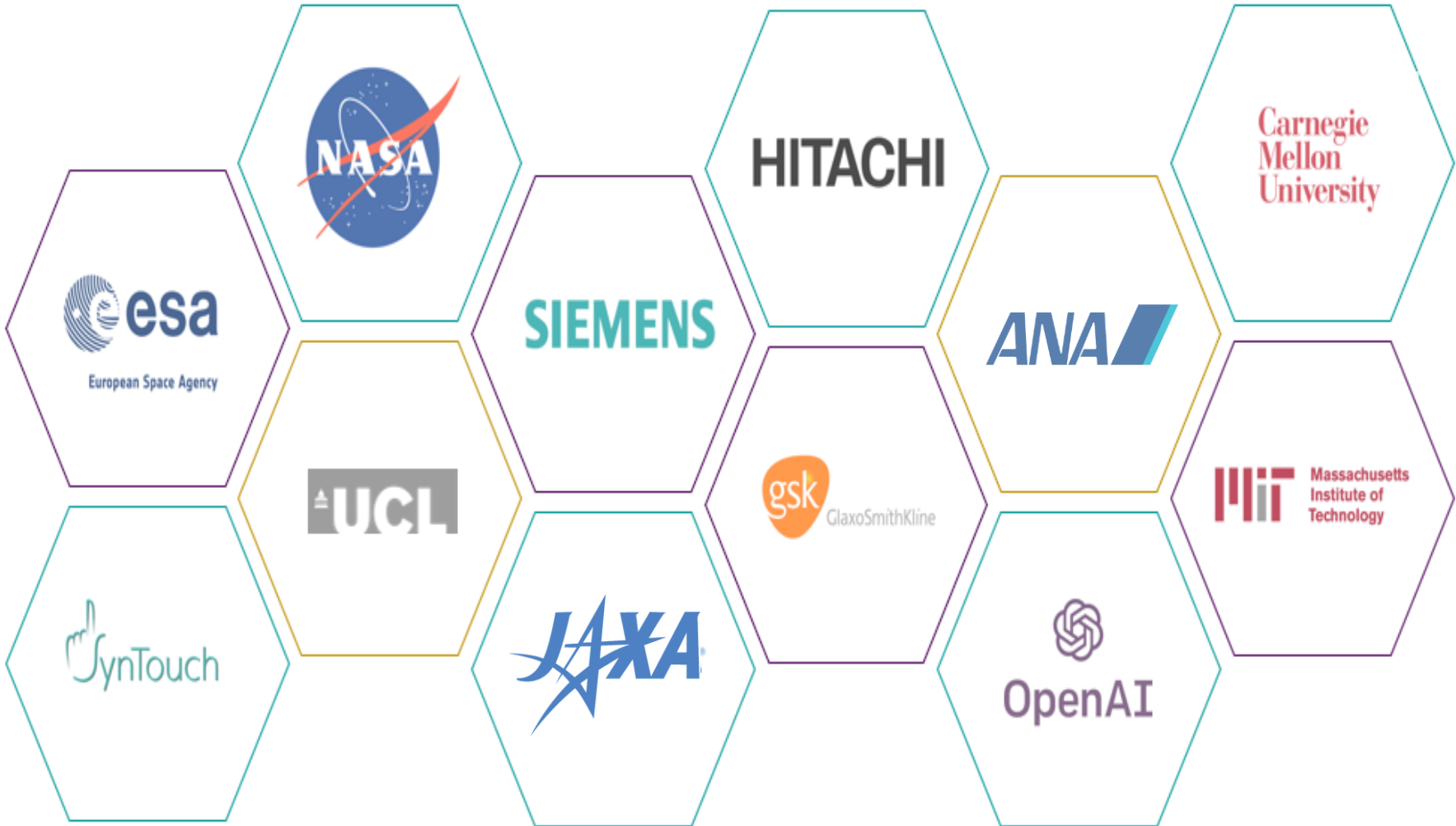


- Design & build hands for robots
- Company established in 1997 in London and we now have a subsidiary in Madrid
- 30 staff covering all robotics hardware and software development
- Significant internal and collaborative R&D
- Global network of collaborators and partners
- Turnover £1.6M 2016, £1.8M 2018,...
- Winner of DTI Smart Award, Millennium Product and NESTA Invention & Innovation Award





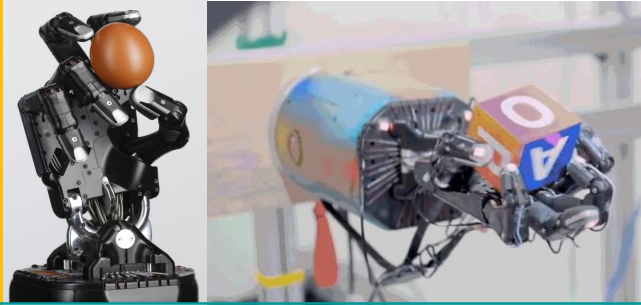
CLIENTS





PRODUCT USES

DEXTEROUS HAND



World's most human-like robot hand

Can be controlled remotely using a cyber glove (teleoperation)

Space, Pharma, Agri-tech, AI testing, VR

MODULAR GRASPER



Advanced alternative to industry grippers

Can be connected to an arm and other components for a smart grasping system

Manufacturing, Industry 4.0

SAME TECHNOLOGY BUT DIFFERENT PRODUCTS FOR DIFFERENT END-USERS

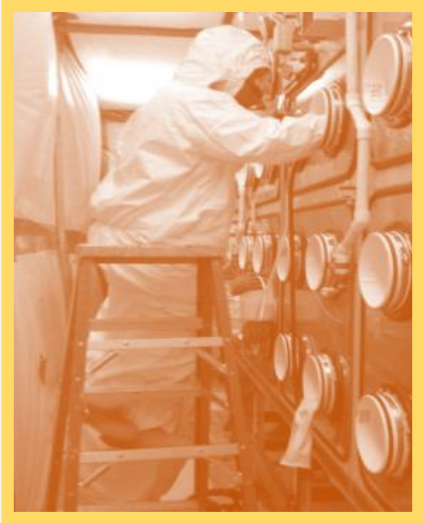


TELEOPERATION
SOLUTION





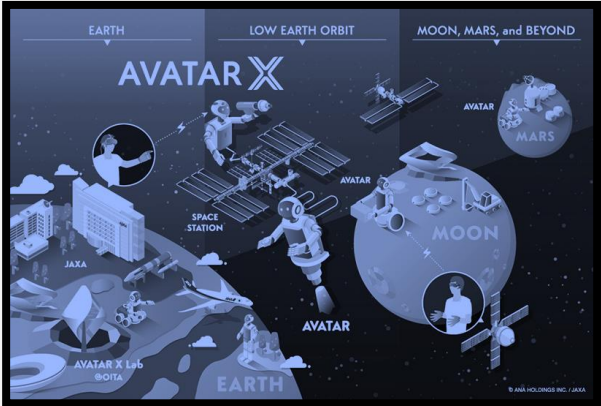
TELEOPERATION SYSTEM - APPLICATIONS



NUCLEAR DECOMMISSIONING



PHARMA STERILE MANUFACTURING



SPACE TELEPRESENCE



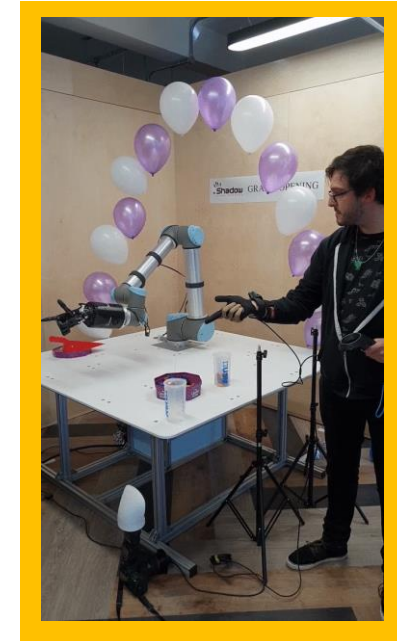
TELEOPERATION SYSTEM - SOLUTION

How it works, explained in 3 steps:

1. The Shadow Hand is set-up in the extreme environment e.g., a glove box using existing glove ports
2. You control the Shadow Hand at a safe distance, even in another room or vicinity
3. The robot mimics your hand and arm movements, handling hazardous materials so you don't have to



- Added layer of safety for the workers in extreme environments
- More productive work hours
- No more protective suits
- Low equipment cost & less waste





ENHANCED SAFETY - MINIMAL DISRUPTION



Minimal cost to integrate within a company causing little to no disruption



There's little need to invest money into reskilling or retraining staff as the Shadow Hand is easy to use



It seamlessly fits within current systems and safety practices without changing industry procedures

We'd be creating safer work for people, improving productivity, minimising costs and supporting technological advances in industry and public services



MEDIA

“one of the greatest promises of advanced robotics: keeping humans out of dangerous situations”

WIRED

“Tele-operated robots that can squeeze into difficult or hazardous spaces to carry out maintenance and inspection work”

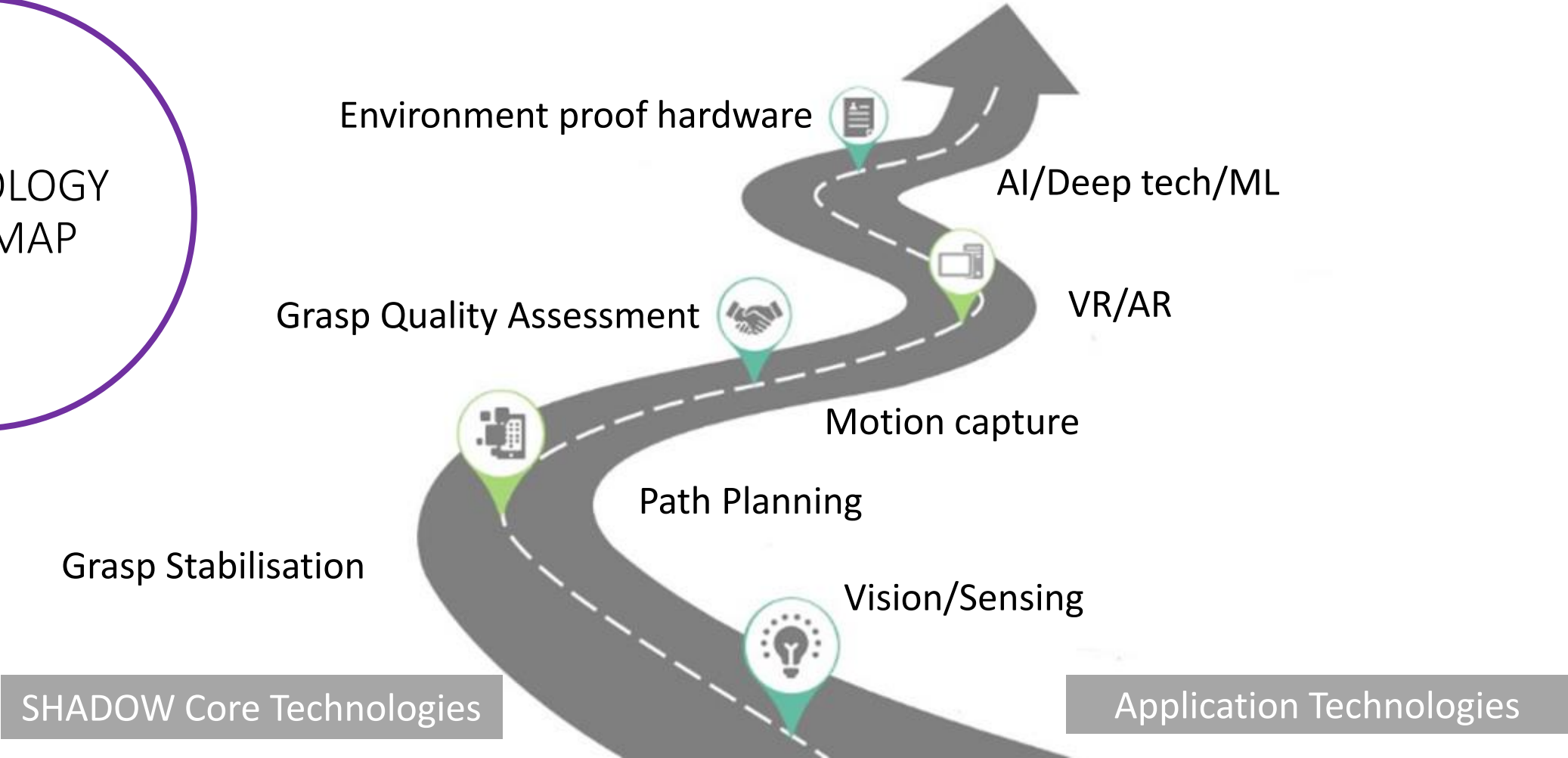
the**ENGINEER**

“Can even be relied upon to handle the connection between an astronaut and a spacecraft”

Information/Age

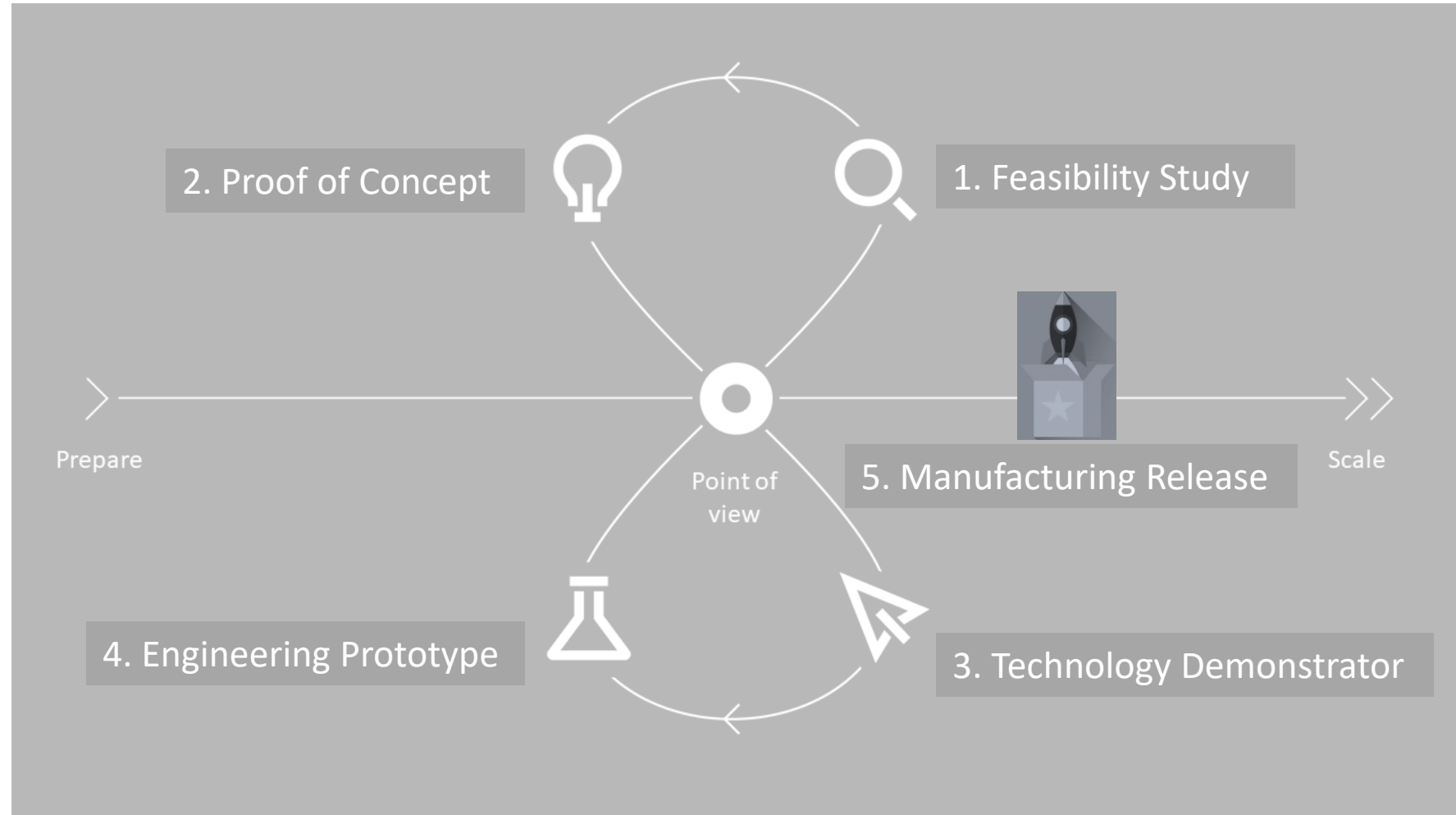


TECHNOLOGY ROADMAP





ROADMAP ENGAGEMENT





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