



# AMMO Working Group

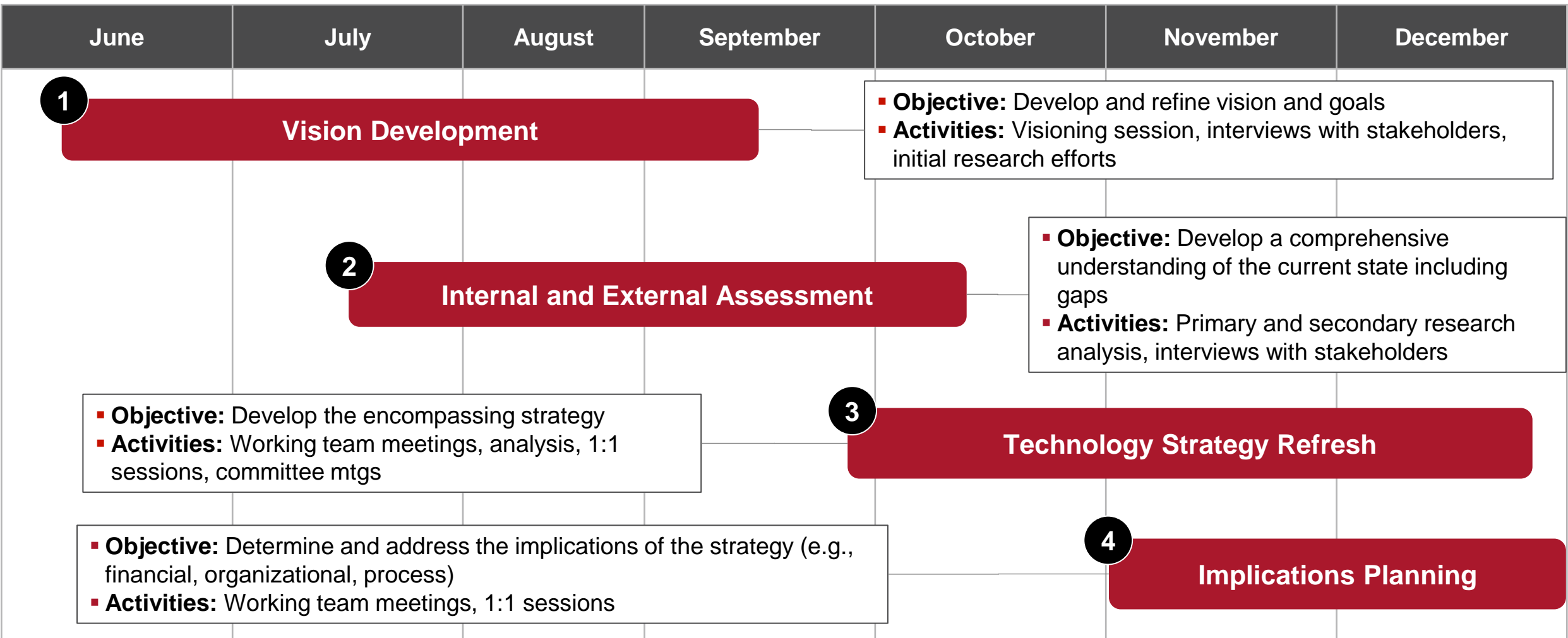
July 7, 2021

# Key Questions for Strategic Planning Process

- What should guide our focus/re-focus on strategic technology areas and on project concept development?
- What information on global developments of digital technologies would be key to maintaining a cutting-edge strategic plan?
- How does MxD avoid duplicating development at other organizations?  
Collaborate with them?

# Technology Strategy Refresh

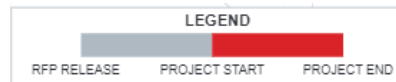
## High Level Timeline and Objectives



# Strategic Investment Plan



## RD&D ROADMAPS



THRUST AREA		ID	Program Name	2021				2022				2023			
Primary	Secondary			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
DESIGN		PP-001	AI Design Advisor												
		PP-003	Digital Twin of Product Sustainment Phase												
		TBD	2022 Design Project												
FUTURE FACTORY		19-04-03	Digital Twins for Process Manufacturing: Open Architecture												
		19-04-04	Digital Twin Testbed for Process Manufacturing: Mobile Worker												
	Government Directed	20-13-01	Docent Technology Transfer (Follow-on to 17-04-01)												
	Workforce Development	19-13-05	Human Workflow Digital Twin												
	CARES Act Government Directed	20-17-01	Rapid and Secure Deployment of Medical Devices and Instrumentation												
		19-02-01	Closed-Loop, Measurement Control for Enhanced Robotic Performance												
		20-04-01	Maximizing Your ROI from Digital Technology as a Small Manufacturer												
	Supply Chain	20-02-07	AI-Enabled Computer Vision for Real-Time Adaptive Quality Inspection												
		PP-012	Integrated Scheduling and Control for Real-Time Factory Operations Optimization (Follow-on to 18-04-02)												
	Supply Chain	PP-009	Digital Manufacturing Playbooks												
		PP-043	Predictive Maintenance in Manufacturing												
	Supply Chain	PP-073	Track and Trace Spanning the Factory and Supply Chain												
	Workforce Development	PP-016	Operator Health Tracking												
	Supply Chain	PP-009	Digital Manufacturing Playbooks												
	TBD	2023 Future Factory Project													
Supply Chain	PP-009	Digital Manufacturing Playbooks													
SUPPLY CHAIN	FDA OCET Government Directed	20-19-01	Analysis of the Advantages of and Barriers to Adoption of Smart Manufacturing for Medical Products												
	CARES Act Government Directed	20-18-01	Capacity and Mobilization Assessment of the Pharmaceutical Industry												
	CARES Act Government Directed	20-18-01	Supply Chain Risk Alert for Wearables												
		20-05	Achieving Resilience through Proactive Supply Chain Risk Management												
	Future Factory	PP-020	Virtual Interaction with Supply Chain Using Digital Twins												
		PP-038	Blockchain for Supply Chain Exploration												
	TBD	2023 Supply Chain Project													

Download from  
<https://www.mxdusa.org/sip2021/>

# Completing Projects

- 19-04-04 Digital Twin Test Bed for Process Manufacturing
- 20-04-01 Maximizing ROI from Digital Technology as a Small Manufacturer
- 20-19-01 Analysis of the Advantages and Barriers to Adoption of Smart Manufacturing for Medical Products

# Request for Proposals

- AI Design Advisor
- Integrated Scheduling and Control for Real-Time Factory Optimization
- Predictive Maintenance in Manufacturing
- Virtual Interaction with Supply Chain Using Digital Twins

# Questions

The background is a dark, almost black, space filled with a subtle, glowing grid pattern that appears to be a 3D wireframe mesh. The grid is composed of small, light-colored dots connected by thin lines, creating a sense of depth and movement. Scattered throughout the scene are numerous small, bright white and light gray particles, some of which are slightly out of focus, giving the impression of a vast, digital or scientific environment. The overall aesthetic is clean, modern, and high-tech.