Barriers and Challenges	Priority
• Lack of effective methods to identify commonality from multiple sensors and	
modalities	High
• Lack of good techniques for temporal and spatial data alignment and synchronization	High
• Different resolution and accuracy of data from multiple data collection processes and	
sensors	High
Technology exists but good methods to extract unbiased feature from raw data	Medium
• Limited techniques to handle modality interaction for handling missing information	Medium
• What modalities should be learned is unclear	High
• Limited sharing of MMDF best practices, feature, fusion algorithms, success stories, and training due to disparate standards and information formats; customization of manufacturing systems, automation systems and robotic systems contribute to low re-	
usability of MMDF analytics and ability to share results.	Medium
Multimodality cost-benefits are unclear	Low