



Thoughts on

Integrating Robotic & Human Exploration

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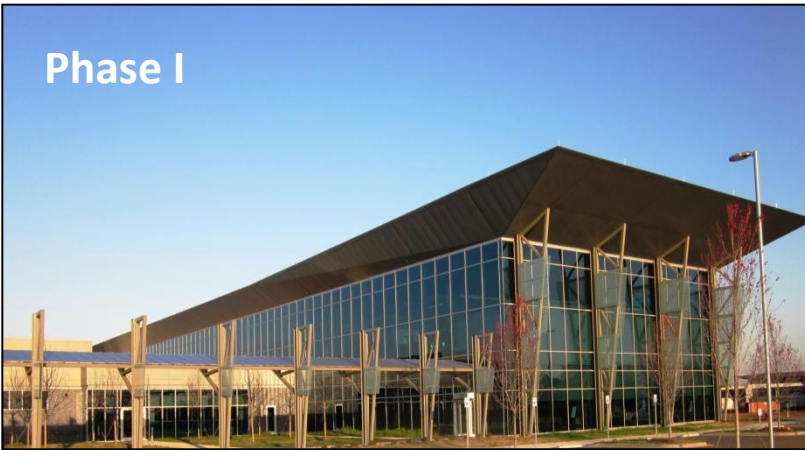


Create Jobs

Grow Business

Produce Highly Trained & Educated Workforce

Phase I



Phase II

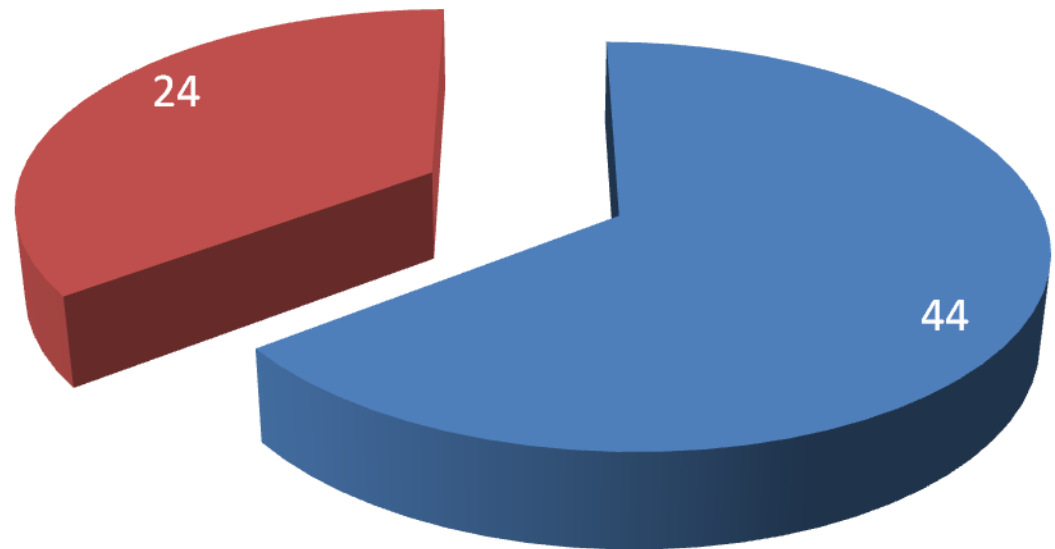


ALABAMA COMMERCIAL ROBOTIC DEVELOPMENT CAPABILITY

Local Business Survey Conducted January 2011

Company Name

Decision Sciences Company
Techni-Core Engineering, Inc.
GaN Corporation
System Studies and Simulation (S3)
XyEnterprise Inc. / SDL Structured Content Technologies
BAE Systems
nLogic
Alabama A&M University
AZ Technology, Inc.
Yetinspace Inc.
CDL Systems Inc.
Manufacturing & Industrial Technologies, Inc.
Patterson Machine, Inc.
RNB Technologies, Inc.
MCR
Qualis Corporation
United Circuits, Inc.
CohesionForce, Inc.
Brockwell Technologies, Inc.
Defense Systems Management Corporation
DeVivo AST, Inc
System Dynamics Int'l Inc.
Orbis, Inc.



35% Possess Robotic Development Capability

Industrial Automation Training & Education – Phase I

Research & Development, Test & Evaluation – Phase II

Future Integration & Entrepreneurial Activity – Phase III



PHASE I

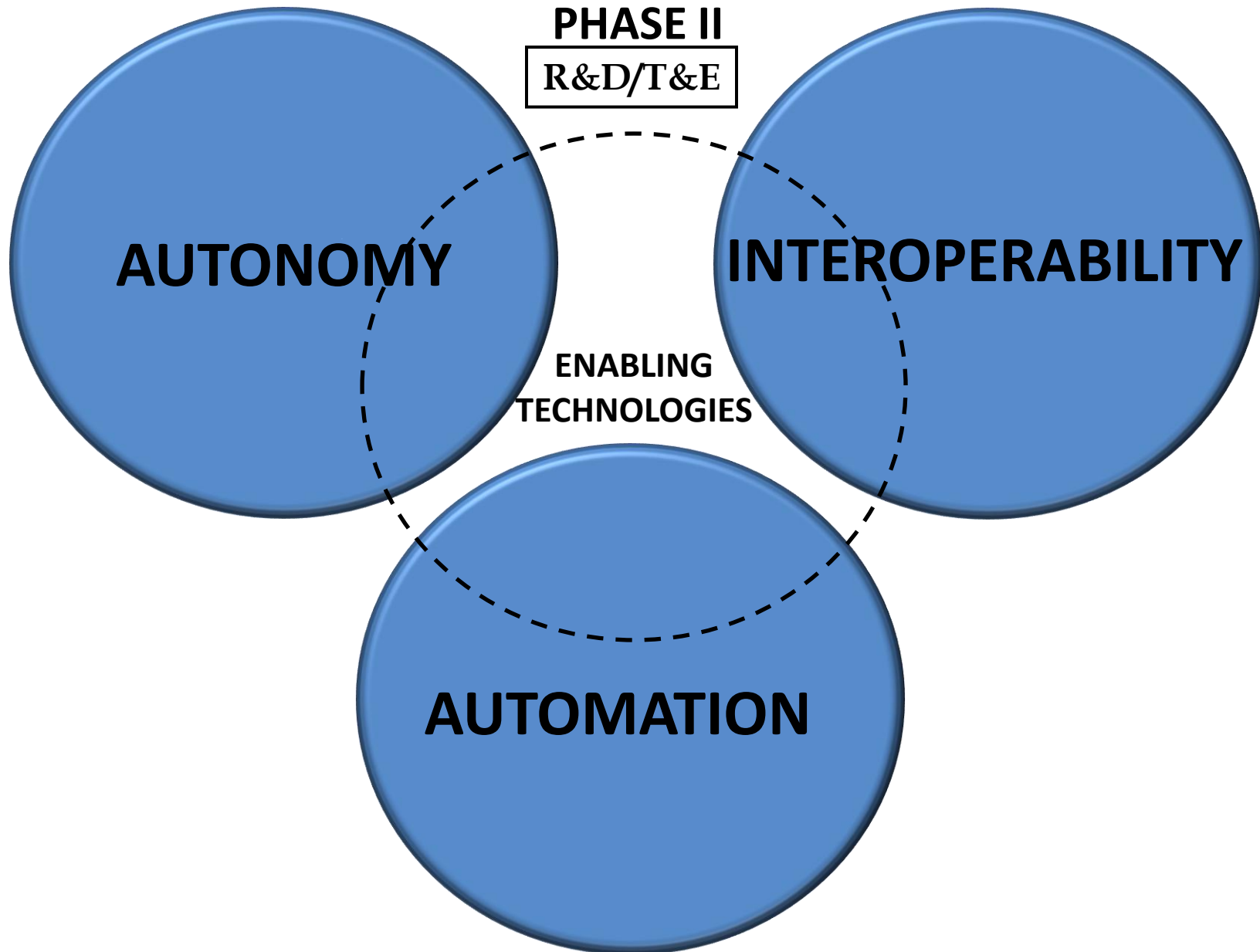
Education and training for current and next generation industrial maintenance technicians and jobs associated with robotics technologies



- \$40,000,000 in new automation and robot equipment
- No-Cost training for Alabama companies



Rather than sending techs to Europe or Asia, companies can send them to north Alabama which offers a huge reduction in travel and lodging costs



PHASE II APPLICATIONS

Probability of Phase II Cell Application (P^A): ● Higher than 50%; ● 50%; ● Less than 50%

P ^A	Company	R&D / T&E	Current Location
●	#1	Interoperability	Alabama & Tennessee
●	#2	Automation	Alabama
●	#3	Automation	Alabama
●	#4	Autonomy	Alabama
●	#5	Interoperability	Alabama
●	#6	Automation	Alabama & Mississippi
●	#7	Enabling Technology	Alabama
●	#8	Enabling Technology	Alabama

INTEROPERABILITY

Cross-Domain
Collaboration

Common Control

Scalable, Modular,
Plug & Play

Human-Machine
Interface

X-DOMAIN

SPACE

AIR

GROUND

MARITIME



An Army Expeditionary Task Force Soldier from Fort Bliss, Texas uses the Common Controller during a daylight readability study.



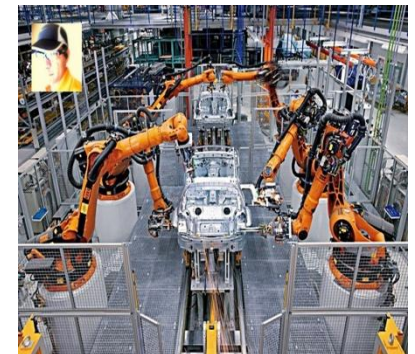
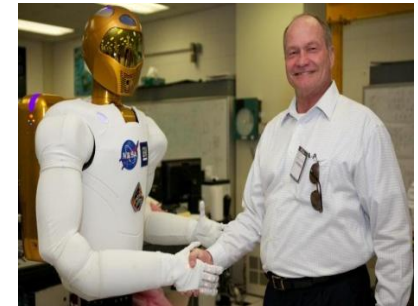
New AR.Drone videos on YouTube.com/ARDRONE. Click!

NATIONAL SPACE POLICY
of the
UNITED STATES *of* AMERICA

JUNE 28, 2010

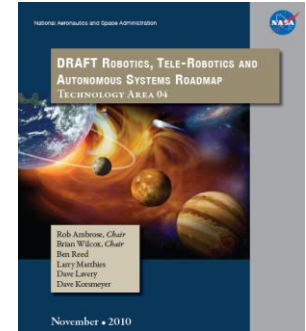


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ICWG
USB



CONCLUSIONS

- Integrating Robotic & Human Exploration
 - ✓ **Automation** Solutions Require HMI Improvements
 - ✓ Increased **Autonomy** for Deeper Space Exploration
 - ✓ An **Interoperability** Imperative to Emerge From Space Policy
 - ✓ Better Robotics Through “Chunks” of **Enabling Technologies**



- Budget Crisis Presents NASA With Opportunity
 - ✓ To Capitalize on the Work of Others
 - ✓ To Leverage Financial Resources
 - ✓ To Lead in Standards/Interface Development
 - ✓ To “Spin Off” Latest Robotic Technologies

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