

**ZYLLER**  
**TECH SEEKER**  
**DEVELOPMENT**  
**+ ADOPTION**  
**SUPPORT**

**ZYLLER**



*Capability Brief*

# Zylter puts emerging technology to work in industry

We work with a range of emerging technologies to develop and expand field-ready tech solutions:



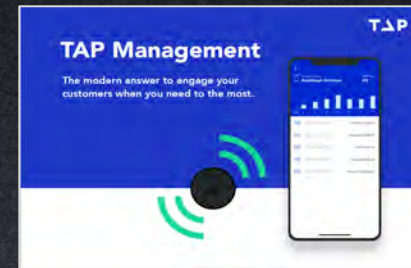
*Unmanned Aerial Vehicles / Drones*



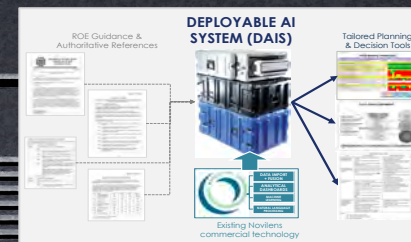
*Autonomous Ground Vehicles*



*Extended Reality*

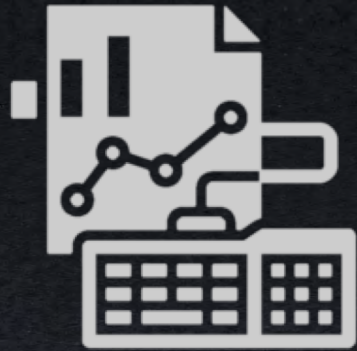


*IoT / Connected Devices*



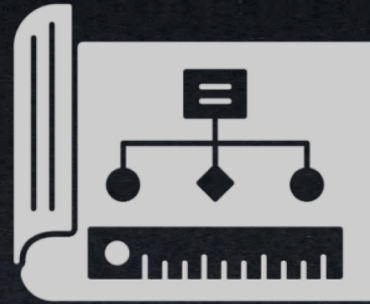
*Artificial Intelligence & Machine Learning*

# We are tech adoption experts that connect *Tech Builders* and *Tech Seekers* through...



## ANALYSIS

Systematic and investor-focused research to identify, assess and prioritize your tech needs or markets.



## STRATEGY

Design and guiding of long-term planning, growth and execution for commercial technology development and adoption.

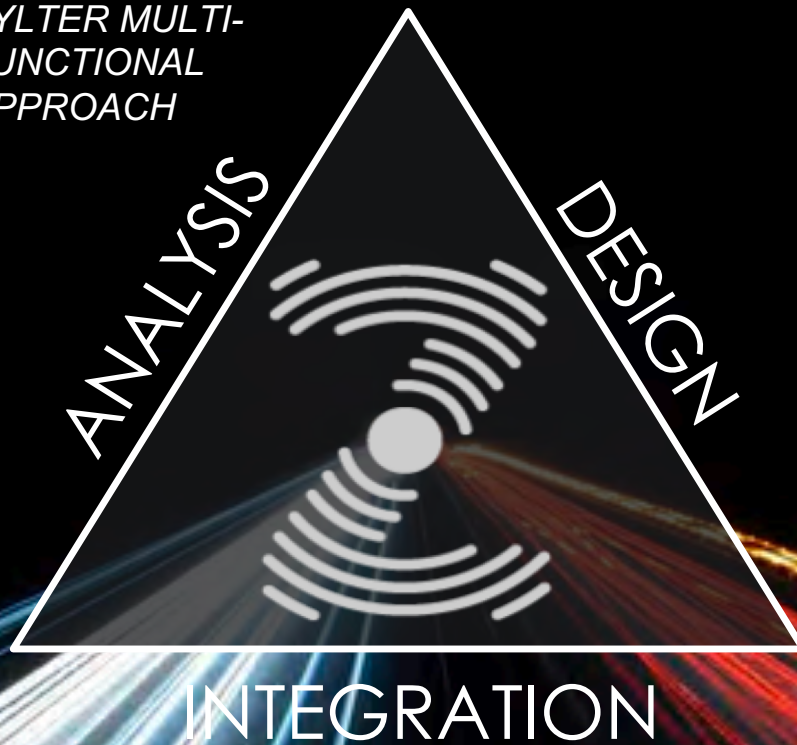


## IMPLEMENTATION

Project management and organizational C-Level support to create, launch and expand your tech solutions.

# OUR PASSION: Addressing industrial needs through adoption of emerging technologies

ZYLTER MULTI-  
FUNCTIONAL  
APPROACH



We are passionate about putting emerging technologies to work in industry. We understand both the technology and its implications for operations.

Our multi-functional approach enables companies to develop, find and adopt emerging technologies that work for their complex operations.

# OUR APPROACH: Developing emerging tech use cases

Organizations use technology as part of sociotechnical systems (STS) that drive the need for and impacts of effective tech solutions.

1	EMERGING TECHNOLOGY
2	TASKS + PROCESSES
3	ORGANIZING STRUCTURE
4	USERS / WORKFORCE
5	OPERATING ENVIRONMENT

**Zylter provides expertise, experience and approach to systematically understand and address each STS use case.**

*Zylter Sociotechnical Systems (STS) Approach for Industrial Tech Adoption*



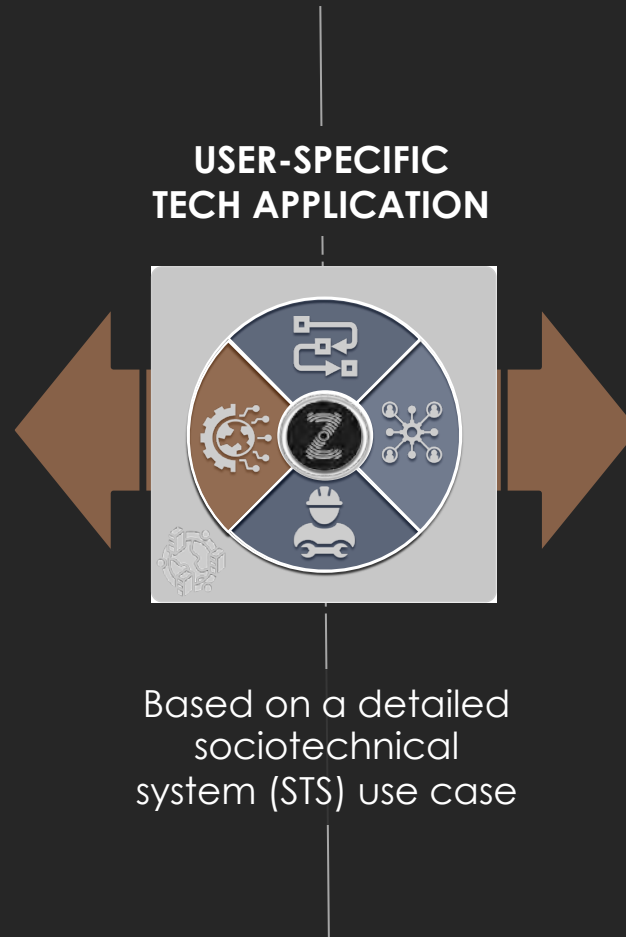
# OUR MISSION: To connect *Tech Seekers* with *Tech Builders* to address strategic use cases

## Tech Seekers

Innovative commercial and Governmental organizations seeking tech-focused solutions to improve operations and address strategic opportunities.

Zylter provides *Tech Seekers* expertise and a systematic approach to:

- ✓ Identify / assess technology options
- ✓ Identify and prioritize solution requirements
- ✓ Develop an implementation strategy
- ✓ Address long-term impacts for workforce and organization



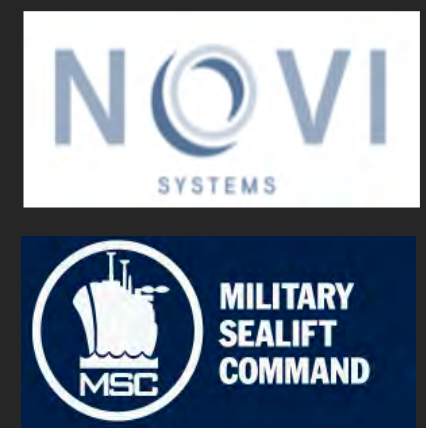
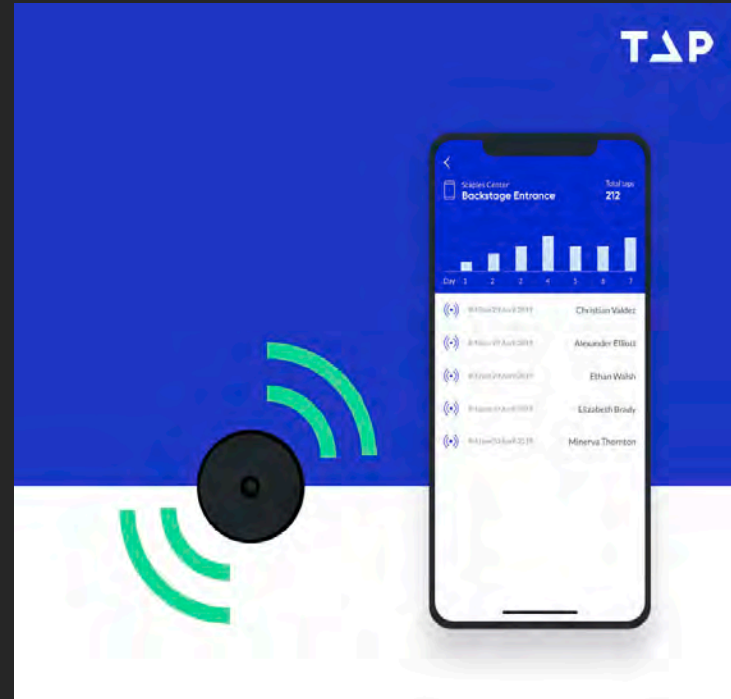
## Tech Builders

Growth companies seeking to design, develop and scale innovative tech solutions for industrial and defense applications.

Zylter helps *Tech Builders* by providing expertise and support:

- ✓ Identify and assess market opportunities for core tech solutions
- ✓ Identify and address key application requirements
- ✓ Solution development strategy and support
- ✓ Create infrastructure and processes for long-term growth

# OUR WORK: Zylter clients + partners



# OUR CAPABILITIES:

## Key expertise + capability areas



### Business & Product Strategy

Our Chief Strategy Officer (CSO) and Strategic Implementation Team (SIT) resources provide cross-functional expertise to guide sustained emerging tech strategy development, implementation and support.



### Innovation Strategy

We have significant experience helping design, implement and support innovative solutions *Tech Seekers* to improve operations and address new opportunities. Our approach is built on a clear methodology, domain experience and technical expertise.



### User Requirements

Our user researchers work along side our strategists and designers to identify insights that inform the design process from the perspective of the end user through both Quantitative and Qualitative research.



### Technical Requirements Analysis

Through years of industrial technology assessments and product development we have development resources and methodologies to identify and prioritize solution requirements. These resources and experience enable us to develop product strategies based on rigorous analysis and deep understanding of the industrial use case.



### Operating Environment Analysis

Through our field experience and expertise we understand the implications of operating conditions for technology design and employment. We send cross-functional to the field for structured assessment of your operational environment and identify key implications for solution design.



### Technology Scouting + Assessment

We provide analysis and frameworks to systematically identify, evaluate and map technology-based solutions. This analysis enables our *Tech Seeker* clients to visualize available technology solutions and understand their implications for operations.



### Solution Design

We lead design sprints and focused events to apply information from analyses and subject-matter expert input. Our design process guides systematic identification, assessment, refinement and documentation of solution design for prototyping, implementation and iteration.



### Solution Prototyping & Testing

Our teams apply outputs from requirements analysis and solution design input to develop solution prototypes for high-fidelity user testing and iteration. These prototypes include mock-ups, wire-frames and fully functional prototypes.



### Proposal + Tender Development

We have significant experience finding, assessing and designing compelling responses to Government and commercial tenders or requests for proposals (RFPs). Proposal development includes detailed task execution planning, cost analysis and final proposal development.



### Field Implementation Support

Through years of product development we've built relationships with numerous manufacturers in the US and overseas. These relationships provide flexibility and expertise in client product delivery. Our on-site experts oversee production efforts and respond to issues as they occur, ensuring the highest project yields.



# OUR RESOURCES: A free library of practical information

visit the Zylter [website](#) for  
more information + resources



Finding + Procuring  
Emerging Technology: A  
Guide for Industry Leaders

[ [download full guidebook](#) ]



Implementing Autonomous  
Vehicles in Commercial  
Operations

[ [download full brief](#) ]



Strategic Planning for  
Autonomous Vehicles:  
A Guide for Executive  
Leaders

[ [download full brief](#) ]



Strategic Trends in  
Intermodal Logistics and  
Rail Technology

[ [download full brief](#) ]



# NEXT STEPS: How we can help

- ❑ **Identify strategic innovation goals and tech-enabled outcomes**
  - Based on strategic plans and competitive environment
- ❑ **Determine actions and timeline required to address innovation goals**
  - See the [Zylter Tech Adoption Journey Map](#)
  - Contact us for a free working consultation
- ❑ **Develop a plan for adoption milestone achievement**
- ❑ **Integrate external expertise and support where essential**
  - Contact us at [solution\\_design@Zylter.com](mailto:solution_design@Zylter.com)

# Create. Technology. Zylter.

**Matthew Boyer**

COO & Co-Founder, Zylter Inc.

W | [www.Zylter.com](http://www.Zylter.com)

E | [matt@Zylter.com](mailto:matt@Zylter.com)

M | 919.410.5175



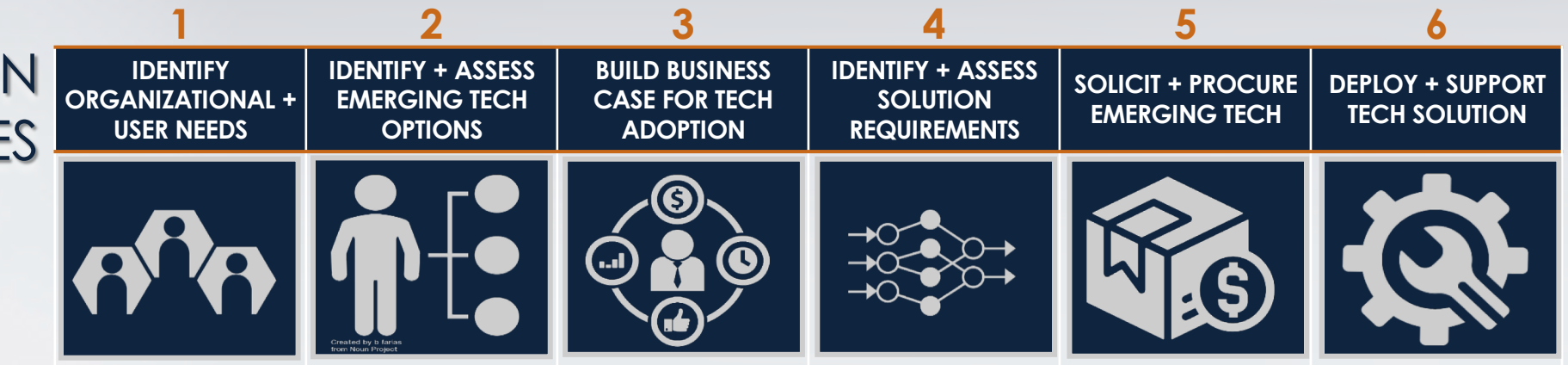
**YLTER**

# ZYLLTER TECH ADOPTION METHODOLOGY + PORTFOLIO EXAMPLES




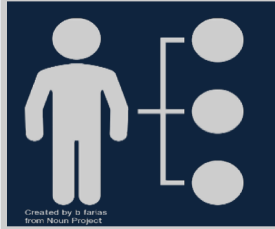




# Zylter methodology for tech scouting + adoption support

## TECH ADOPTION PHASES




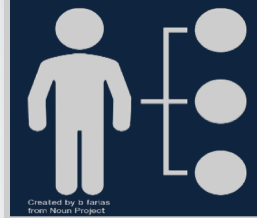

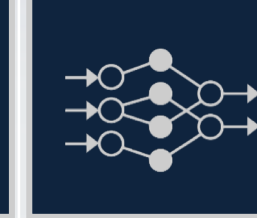


# Enterprise Tech Adoption: Key actions + milestones

Successful enterprise tech initiatives are a journey from need to solution adoption. Each phase has milestones to validate tech opportunities and solution ROI. Tech Seeker success requires aligning user needs, emerging tech and organizational priorities

	1	2	3	4	5	6
	<b>IDENTIFY ORGANIZATIONAL + USER NEEDS</b>	<b>IDENTIFY + ASSESS EMERGING TECH OPTIONS</b>	<b>BUILD BUSINESS CASE FOR TECH ADOPTION</b>	<b>IDENTIFY + ASSESS SOLUTION REQUIREMENTS</b>	<b>SOLICIT + PROCURE EMERGING TECH</b>	<b>DEPLOY + SUPPORT TECH SOLUTION</b>
						
	IDENTIFY TECH-ENABLED OUTCOMES	ASSESS TECH SOLUTION LANDSCAPE	IDENTIFY + PRIORITIZE ROI CONSIDERATIONS	IDENTIFY + PRIORITIZE SOLUTION REQUIREMENTS	DEVELOP SOLICITATION FOR PROCUREMENT	DEVELOP DEPLOYMENT PLAN
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	IDENTIFY KEY STAKEHOLDERS		DEVELOP PLAN FOR PROCUREMENT			

# Zyler scouting + support for enterprise Tech Seekers

## TECH ADOPTION PHASES

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## ZYLER CAPABILITY AREAS

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ZYLER CAPABILITY AREAS

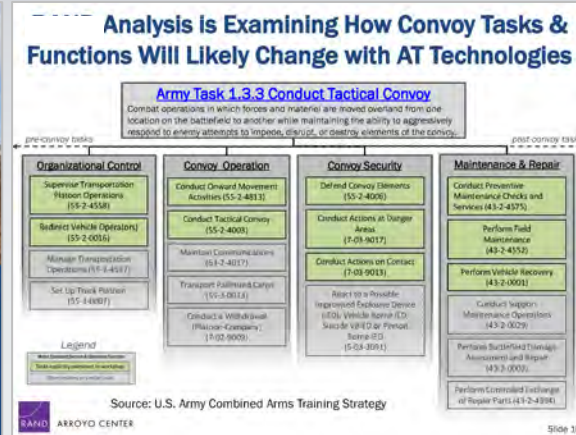
# Development of Army autonomous vehicles for logistics

**Concept** | Identify and assess available technologies to enable ground logistics with autonomous vehicles

**Purpose** | Guide Army development of and investment in autonomous vehicle logistics program

**Method** | Detailed technology maturity and sociotechnical systems assessments to assess maturity and life-cycle implications of AVs

**Outcome** | Study briefing and technical report to Program Executive Officer  
[Link to study brief](#)



**Priority Concerns for Tactical AT Development (2/2)**

**Cyber Security**

- Almost all new vehicles present significant "threat surface" for potential cyber attack
- Recent examples illustrate potential concerns (Jeep, etc.)
- Sensors and comms for autonomous systems increase potential threat surface

**Sustainment / Maintenance**

- Mission availability (dependability) of systems a primary concern
- Especially in austere conditions
- Likely demand new competencies for Army maintainers / technicians

RAND ARROYO CENTER Slide 7

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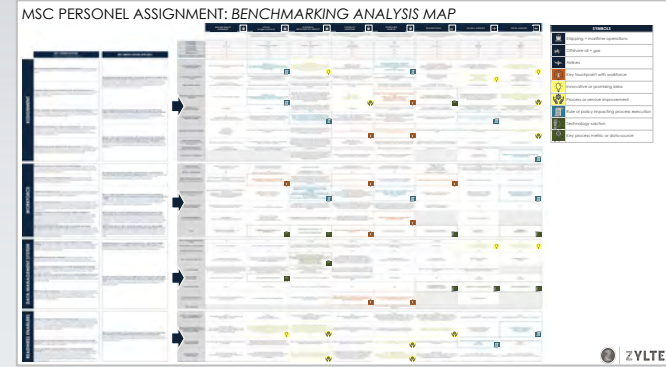
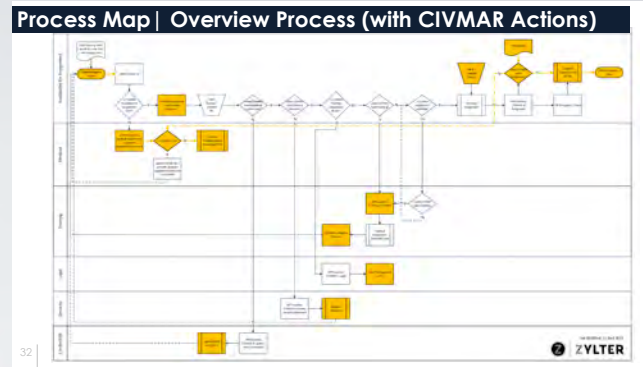
# Modernize assignments for global maritime operations

**Concept** | Redesign the civilian mariner global assignment experience through service innovation and technology

**Purpose** | Improve operational readiness and global support by reducing preparation and assignment times

**Method** | Detailed processes mapping, analysis and design sprints to guide improvement

**Outcome** | Strategic recommendations and pilot project to test new process design improvements



**Initial process mapping indicates four elements that impact execution of almost all assignment processes & actions**

These four elements all impact what is done in the assignment process and how it is done. Each aspect has a unique who (actors) and why (motivation and metrics).

This provides a framework to systematically describe current conditions, as well as identify and assess potential improvements.

ASSIGNMENT	CIVIMAR
<p>Personal, actions and resources to equal to your requirements for the MSC.</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>• Civilian Personnel Assignments (CPAs)</li> <li>• Civilian assignment policies and SOPs</li> <li>• Civilian assignment processes</li> </ul>	<p>Factors influencing CIVIMAR's ability, motivation and status of within the MSC assignment process.</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>• Civilian personnel status and availability</li> <li>• Civilian personnel recruitment and retention</li> <li>• Civilian personnel development and training</li> <li>• Civilian personnel compensation and benefits</li> <li>• Civilian personnel performance and feedback</li> </ul>
ENABLERS (Med, Trng, etc.)	SYSTEMS
<p>Resources used to complete tasks and support all aspects of the maritime, requirements and roles of the MSC, fleet, ships and CIVIMAR.</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>• Civilian personnel status</li> <li>• Civilian personnel development and training</li> <li>• Civilian personnel compensation and benefits</li> <li>• Civilian personnel performance and feedback</li> </ul>	<p>Resources used to complete tasks and support all aspects of the maritime, requirements and roles of the MSC, fleet, ships and CIVIMAR.</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>• Civilian personnel status</li> <li>• Civilian personnel development and training</li> <li>• Civilian personnel compensation and benefits</li> <li>• Civilian personnel performance and feedback</li> </ul>

Source: "The Business Standard: Measuring The Data Performance" ©Zylter, Inc. 2019

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# Scouting + assessment of neighborhood tech applications



**Concept** | Identify and prioritize tech applications for further analysis + assessment


**Purpose** | Provide a diverse set of potential tech applications for Newland consideration

**Method** | Develop detailed use case descriptions for priority tech applications based on their ability to address tech enabled outcomes

**Outcome** | A set of 22 detailed use cases for support assessment + prioritization

7 AUTONOMOUS GROUND VEHICLES		Ground Package Delivery
<b>TECHNOLOGY</b>	<ul style="list-style-type: none"> <li>Use of unmanned vehicles for pick-up, movement and drop-off of small packages</li> <li>Limited field trials ongoing</li> </ul>	<b>TRL 7</b> <b>TRL 8</b>
<b>USER(S)</b>	Individual residents or businesses seeking to have ordered goods delivered quickly and efficiently.	<b>EXAMPLE APPLICATIONS (w/ hyperlink)</b> <a href="#">Nuro Local Delivery</a>  <a href="#">Starship Technologies Local Delivery Robot</a> 
<b>TASK(S) EXECUTED</b>	Delivery of small parcels and assorted items with accuracy, efficiency and precision tracking.	
<b>EMPLOYMENT METHOD</b>	Fleet of autonomous ground vehicles using existing roadways or specified delivery roadways to move packages from pre-defined pick-up location to various destinations.	
<b>OPERATING ENVIRONMENT</b>	Primarily use designated bike paths or roadway areas, potentially ad hoc and unintended use of pedestrian walkways (e.g. sidewalks); parking or drop-off areas near key destinations and transfer points.	
<b>KEY VALUE / IMPLICATIONS FOR WENDELL FALLS</b>	<b>Improve resident / business quality of life or efficiency through rapid, timely and consistent delivery of commercial items directly to the resident or business.</b>	

16 TECH-ENABLED SUPPLY CHAIN		Modular Construction
<b>TECHNOLOGY</b>	<ul style="list-style-type: none"> <li>Supply chain tech to integrate and increase efficiency of modular construction</li> </ul>	<b>TRL 7</b> <b>TRL 8</b>
<b>USER(S)</b>	Large-scale mixed use and residential developers seeking to build more quickly with less time and cost.	<b>EXAMPLE APPLICATIONS (w/ hyperlink)</b> <a href="#">Katera Construction</a>  <a href="#">NRE Permanent Modular Construction</a> 
<b>TASK(S) EXECUTED</b>	Integrated production, assembly, shipping and erection of residential and multiuse structures.	
<b>EMPLOYMENT METHOD</b>	Capability generally used to erect multiple modular structures within a master-planned project.	
<b>OPERATING ENVIRONMENT</b>	Modular components shipped to and erected within a large-scale, mature development site by a trained construction team.	
<b>KEY VALUE / IMPLICATIONS FOR WENDELL FALLS</b>	<b>Increase speed, decrease cost and improve sustainability of large-scale building construction with standardized building modules</b>	

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# Global technology trends for neighborhood design

**Concept** | Identify promising tech concepts to guide urban design

**Purpose** | Articulate promising concepts of engage strategic leaders and resources

**Method** | Review and synthesis of information from technology analysis and stakeholder interviews

**Outcome** | A set of technology use concepts to build support for detailed research and assessment

**GLOBAL TECH TRENDS LOCAL DESIGN IMPACTS**

- Connected Communities
- Additive Manufacturing
- Immersive Experiences
- Adaptive Mobility
- Smart Buildings
- Last-Mile Logistics
- Flexible Work Spaces
- Sustainability

Wendell Falls Master Plan  
©Zylter, Inc. 2018

**EXAMPLE TECH OPPORTUNITY LAST MILE DELIVERY**

Neighborhood-Centric Use of Technology for Last-Mile Delivery

Current Tech-Enabled Local Delivery (SHIPR)

Future Robotic Delivery "Push"

This concept represents an evolutionary approach to planning for, support and integrating neighborhood-focused technologies

©Zylter

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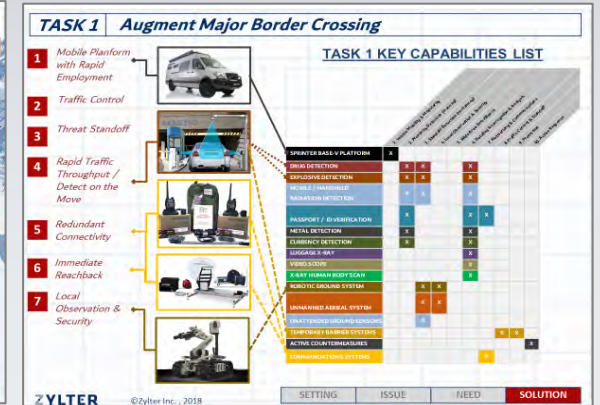
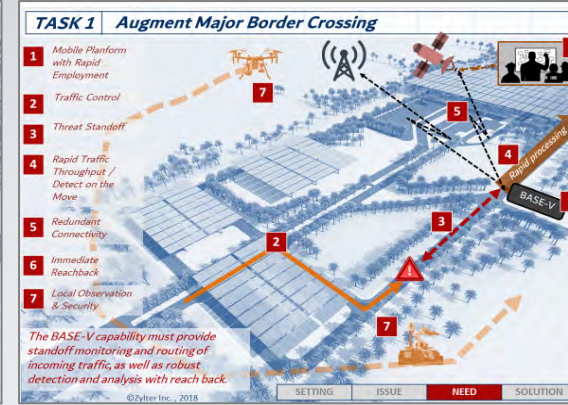
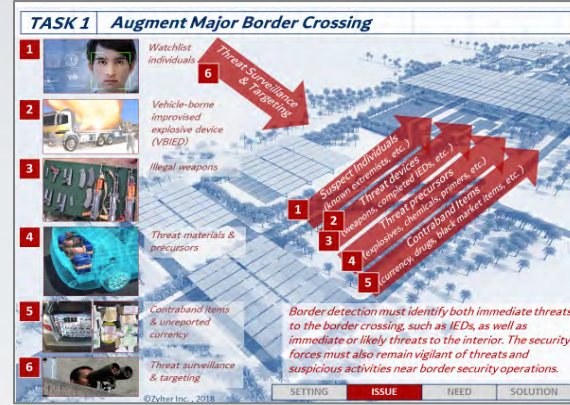
# Border security use case + need identification

**Concept** | Identify, describe + assess priority use cases to

**Purpose** | Guide design of mobile security platform for UAE Federal Customs Authority

**Method** | Develop detailed use cases for identification of required capabilities based on tactical expertise

**Outcome** | A set of four detailed use cases to identify and prioritize key capabilities for inclusion in the Border Area Security Enhancement Vehicle (BASE-V)



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# Autonomous vehicle research database

**Concept** | Database to compile, categorize + code qualitative data on the autonomous vehicle development + use

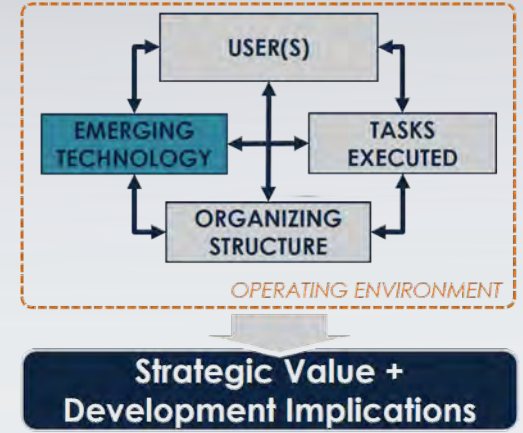
**Purpose** | Guide identification + prioritization of emerging opportunities in the emerging AV tech landscape

**Method** | Design + application of a qualitative database design (right) to enable rapid coding + sorting of harvested qualitative info

**Outcome** | Over 350 qualitative entries from over 100 sources

## Zylter Autonomous Vehicle Market Research Database

Industry Verticals	Socio-Technical System Areas	Technology Capability Areas	Support Capability Areas	Motivating Factors	System Design Considerations
<ul style="list-style-type: none"> <li>Engineering</li> <li>Logistics</li> <li>Energy</li> </ul>	<ul style="list-style-type: none"> <li>AV technology</li> <li>Tasks</li> <li>Workforce</li> <li>Work structure</li> <li>Operating environment</li> <li>General</li> </ul>	<ul style="list-style-type: none"> <li>Technology business case</li> <li>Computing / cognition</li> <li>Software</li> <li>Proximity awareness</li> <li>Navigation / positioning</li> <li>Environment</li> <li>Telematics</li> <li>Obstacle avoidance</li> <li>Autonomous operation</li> <li>General</li> </ul>	<ul style="list-style-type: none"> <li>Communications</li> <li>Infrastructure</li> <li>Maintenance</li> <li>Sustainment</li> <li>Training</li> <li>Fleet management</li> <li>Data analysis / diagnostics</li> <li>General</li> </ul>	<ul style="list-style-type: none"> <li>Safety</li> <li>Economy</li> <li>Efficiency</li> <li>Productivity</li> <li>Workforce requirements</li> <li>Enviro impacts</li> <li>Speed</li> </ul>	<ul style="list-style-type: none"> <li>Interoperability</li> <li>System performance</li> <li>Human-machine interaction (teaming)</li> <li>Site development</li> <li>Testing &amp; validation</li> <li>Task selection</li> <li>General</li> </ul>



IDENTIFY TECH-ENABLED OUTCOMES	<b>ASSESS TECH SOLUTION LANDSCAPE</b>	IDENTIFY + PRIORITIZE ROI CONSIDERATIONS	IDENTIFY + PRIORITIZE SOLUTION REQUIREMENTS	DEVELOP SOLICITATION FOR PROCUREMENT	DEVELOP DEPLOYMENT PLAN
DEFINE TECHNOLOGY USE CASE(S)	<b>ASSESS READINESS OF TECH OPTIONS</b>	ESTIMATE TOTAL COST OF OWNERSHIP (TCO)	IDENTIFY MEASURABLE SOLUTION ATTRIBUTES	ASSESS OFFERINGS	EXECUTE LIFECYCLE SUPPORT
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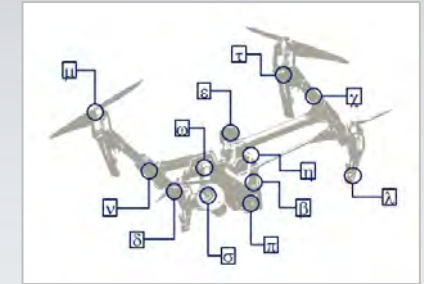
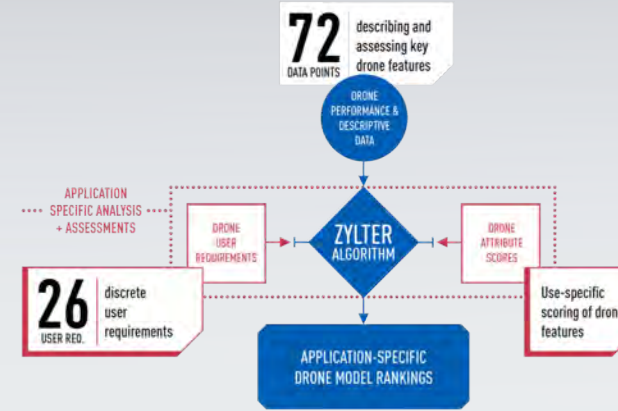
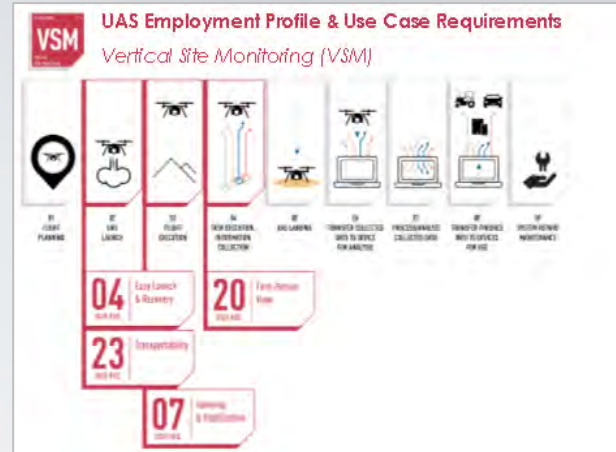
# Zylter Commercial Drone Assessment Database

**Concept** | A data-driven algorithm to assess drones for commercial use cases based on user requirements and drone performance

**Purpose** | Provide commercial tech seekers an objective resource to assess and compare drone options

**Method** | Apply algorithm with 26 user requirements + 72 performance attributes to assess + rank options

**Outcome** | Interactive + publicly-available database resource



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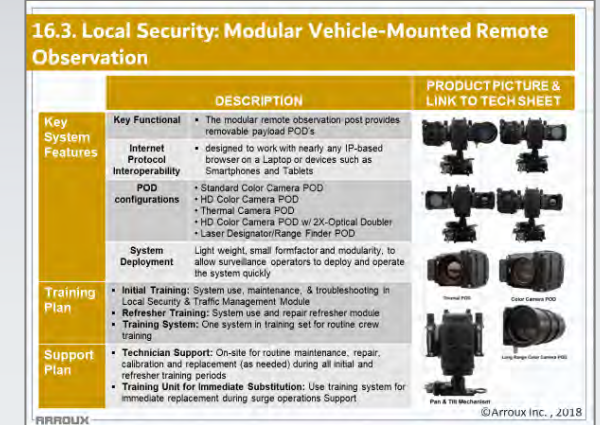
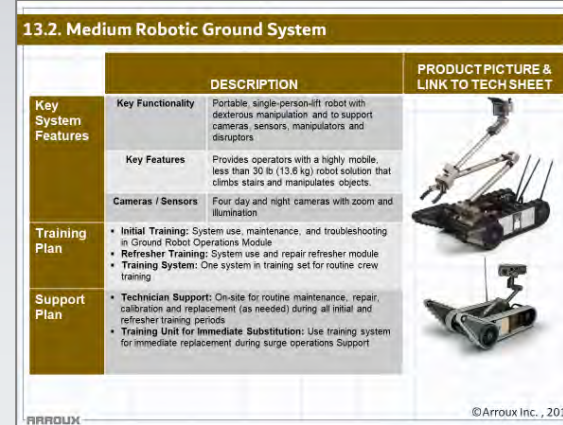
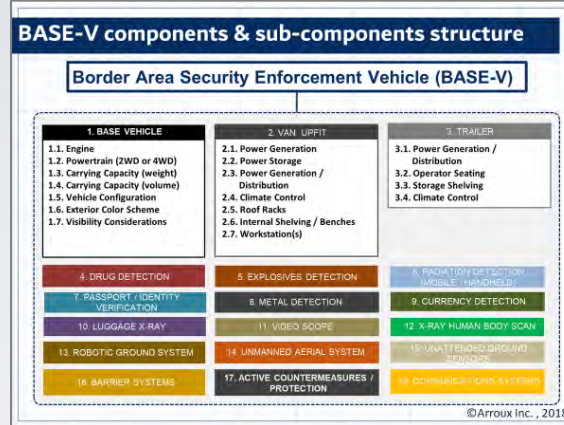
# Security technology assessment + selection

**Concept** | Identify and describe tech systems required to address key capability areas

**Purpose** | Define capability sets required to address Federal Customs Authority use cases

**Method** | Detailed technology scan to identify existing systems (TRL 8-9) to address key capability areas required

**Outcome** | Detailed description and specification of over 20 systems for integration into the BASE-V design



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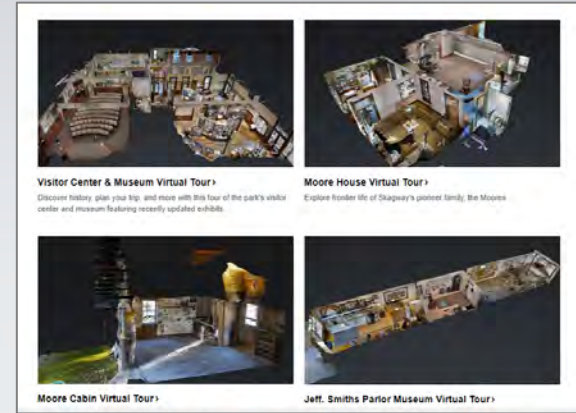
# 3D virtual tours for Shenandoah + Sitka National Parks

**Concept** | Develop 3-dimension virtual tours of Shenandoah and Sitka National Parks

**Purpose** | Enable widespread ability to experience locations of interest within U.S. national parks

**Method** | On-site filming and follow-on production using the Matterport technology

**Outcome** | 12 virtual tours of with narration and close-captioning providing detailed description of key locations of interest



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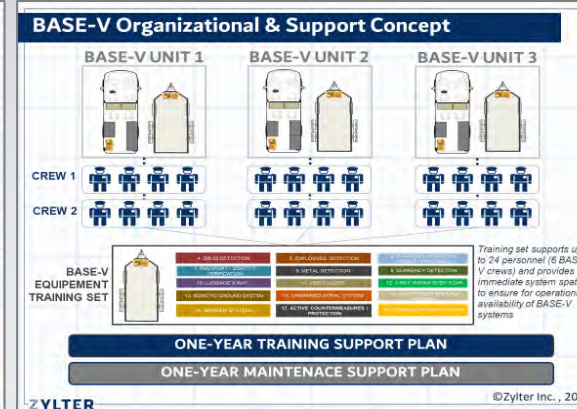
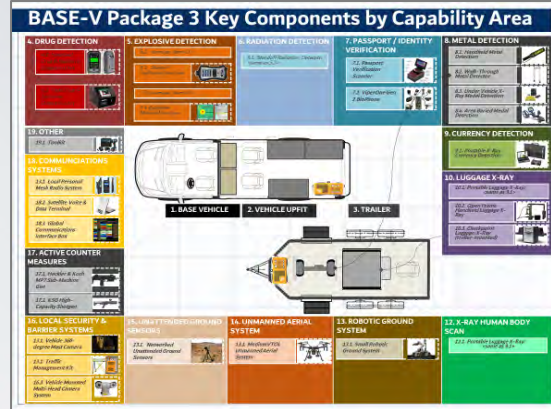
# BASE-V deployment + support plan

**Concept** | Provide plan to deploy, use + support the BASE-V system and associated technologies

**Purpose** | Enable immediate and effective use of BASE-V by UAE Federal Customs Authority (FCA)

**Method** | Design of integrated platform and support concept based on user, technical and SME input

**Outcome** | Detailed vehicle design plan with training + maintenance support packages



**The BASE-V system includes the set of capabilities required to address key operational requirements**

CAPABILITY AREA		VAN 1	VAN 2	VAN 3
CORE CAPABILITIES	DRUG DETECTION	X	X	X
	EXPLOSIVE DETECTION	X	X	X
	VIDEO SCOPE	X	X	X
	PASSPORT / IDENTITY DETECTION	X	X	X
	CURRENCY DETECTION	X	X	X
	LUGGAGE X-RAY	X	X	X
	METAL DETECTION	X	X	X
SUPPORTING CAPABILITIES	MOBILE / HANDHELD RADIATION DETECTION	X	X	X
	X-RAY HUMAN BODY SCAN			X
	ROBOTIC GROUND SYSTEM		X	X
	UNMANNED AERIAL SYSTEM		X	X
	ACTIVE COUNTERMEASURES	X	X	X

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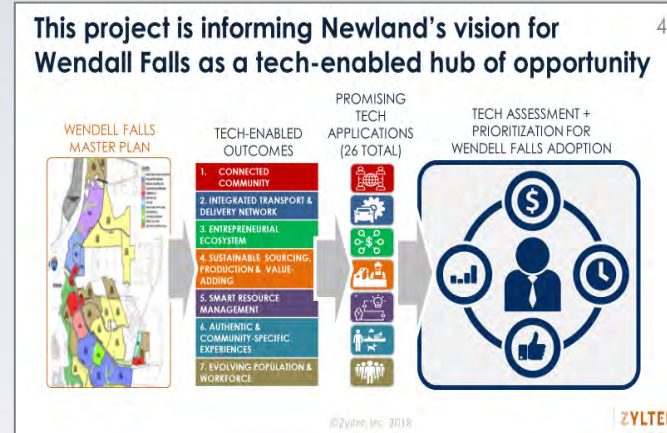
# Definition of tech-enabled outcomes for urban design

**Concept** | Provide systematic analysis for key elements of the Series-A pitch

**Purpose** | Guide integration of emerging tech into Newland strategic vision + design

**Method** | Detailed review of Wendell Falls design vision and development plan to identify and define priority tech-enabled outcomes

**Outcome** | A tech prioritization strategy based on seven tech-enabled outcomes and definition of user groups



TECH USER GROUPS | Wendell Falls Market Segments & Their Evolving Needs

Market Segments		CURRENT	NEAR-TERM (2-5 years)	MID-TERM (5- 10 years)
BUSINESS	Established Business			
	Emerging Business			
	Emerging Entrepreneur			
RESIDENTS	Domestic Engineer			
	Emerging Youth			
	Senior Entrepreneur			
	Resident Professional			
VISITORS / PROSPECTIVE RESIDENTS				

Assessment of personas and priority needs for each market segment should guide prioritization of technologies for the Wendell Falls road map

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WENDELL FALLS TECH-ENABLED OUTCOMES

Outcome	Description
1. CONNECTED COMMUNITY	...
2. INTEGRATED TRANSPORT & DELIVERY NETWORK	...
3. ENTREPRENEURIAL ECOSYSTEM	...
4. SUSTAINABLE SOURCING, PRODUCTION & VALUE ADDING	...
5. SMART RESOURCE MANAGEMENT	...
6. AUTHENTIC & COMMUNITY-SPECIFIC EXPERIENCES	...
7. EVOLVING POPULATION & WORKFORCE	...

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# Design requirements for Army ultralight tactical mobility

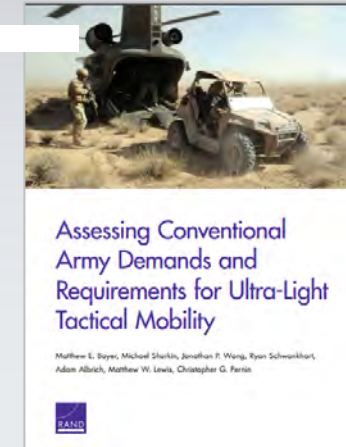
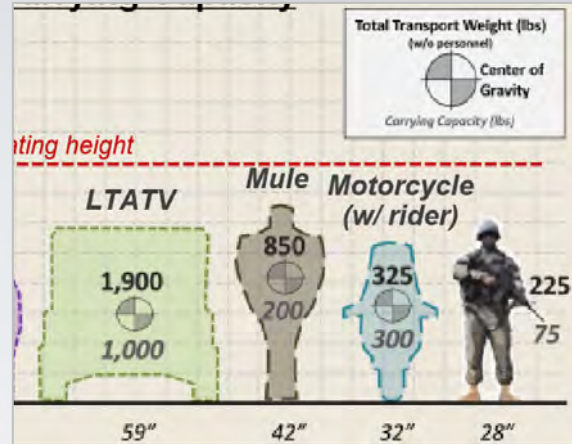
**Concept** | Provide systematic assessment of key user groups and requirements

**Purpose** | Guide program development and technology investment to address tactical needs

**Method** | Analysis of historical and contemporary Army requirements, as well as emerging technologies to address priority needs

**Outcome** | 200-page technical report with detailed analysis of mobility trends and requirements

▪ [Link to full report](#)



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# Create. Technology. Zylter.

**Matthew Boyer**

COO & Co-Founder, Zylter Inc.

W | [www.Zylter.com](http://www.Zylter.com)

E | [matt@Zylter.com](mailto:matt@Zylter.com)

M | 919.410.5175



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