MEENU SATIYA  
MS Engineering  
Management  
2017

YILIN WANG  
MS Engineering Design  
Innovation  
2016

MOEIN HASSINENI  
PhD Transportation  
Systems Analysis and Planning  
2020

SANGEETA SRINIVASAN  
MS Engineering Design  
Innovation  
2017

RYAN CALLAGHAN  
MS Engineering Design  
Innovation  
2017

ADVISORS

YILIN WANG  
MS Engineering Design  
Innovation  
2016

MOEIN HASSINENI  
PhD Transportation  
Systems Analysis and Planning  
2020

SANGEETA SRINIVASAN  
MS Engineering Design  
Innovation  
2017

JASON SCHMITT  
Special Advisor to the Board of Directors,  
EPIC Academy Charter School

LINSEY RUBENSTEIN  
Vice President of Information Technology  
The Boeing Company

IQBAL ARSHAD  
Former Senior Vice President  
Engineering,  
Global Product Development,  
Motorola
PROBLEM

Increasing Air traffic

More congestion at the airport terminals

"Airports are among the "MOST VULNERABLE" soft target and likely always will be.” – CBC News

“Attackers may have exploited relatively LIGHT SECURITY at the ENTRANCE to the arrivals hall.” – CNN
SOLUTION

• Sensor based trackable security system.
• GRID network system across whole airport.
CHICAGO O’HARE AIRPORT Terminal 5
<table>
<thead>
<tr>
<th>CODE</th>
<th>NAME</th>
<th>CITY</th>
<th>STATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BTR</td>
<td>Baton Rouge International Airport</td>
<td>Baton Rouge</td>
<td>LA</td>
</tr>
<tr>
<td>BIL</td>
<td>Billings Logan International Airport</td>
<td>Billings</td>
<td>MT</td>
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<tr>
<td>AMA</td>
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<td>CO</td>
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<td>ACY</td>
<td>Atlantic City International Airport</td>
<td>Egg Harbor Twp</td>
<td>NJ</td>
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</tbody>
</table>

**Billings Logan International Airport**

**Baton Rouge Metropolitan Airport**
VALUE PROPOSITION

- Trustworthy and efficient tracking
- More spatial coverage
- Continuous monitoring
- Valuable information leads to optimization of current resources
- Visual detection leads to early action
- Enhanced hidden security
- Saving lives by prevention of attacks.
- Could be easily installed in airport premises.
- Easy to manage
- Valuable information leads to optimization of current resources
- Visual detection leads to early action
- Trustworthy and efficient tracking
- More spatial coverage
- Continuous monitoring
VALUE CHAIN

SUPPLIERS
- Sensor Suppliers
- Server Suppliers

PRODUCT DEVELOPER
- Tracking Software
- Product Development
- Maintenance Suite

SECURITY AGENCIES
- Tracking Activities
- Responsible for Action
COMPETITIVE ADVANTAGE

1\textsuperscript{st} to Market with Distinctive Competency
Scope and opportunity
Similar devices exist - but none in CLAEM target market

Driving Product and Service innovation
Airport security infrastructure advanced

Superior Responsiveness
Reaction time to the threats is very less

Optimizing Improvement
Software real time data feed leads to security optimization capabilities.
REVENUE MODEL

With a 100% gross margin on sensor packages

CLAEM
*Cost for fitting out a Smaller Airport:
$91,621

CLAEM
*Cost of Deployment in 5 Smaller Airports in 2017:
$458,106

Revenue in 2017:
$550,000

Profit: $51,678

* CLAEM offering Cost is inclusive of a 5 year maintenance contract with the airports along with software licensing.
CHALLENGES AND RISKS

Investment Risk

Technology Protection

Regulation Authorities

Competitors
NEXT STEPS

2016 – Early 2017
- Find and test specific technologies quantifiably
- Create unobtrusive platform
- Demonstration of the Idea to authorities

2017
- Deploy the technology at 5 identified smaller airports
- Monitor the performance closely for 3 months
- Fix the issues identified during deployment phase

2018
- Expand the business by deploying in new airports
- Exploring the opportunity in new areas like hotels, subways

2019
- Deployment in new identified areas
ASK

$ 400,000

Sensors
Server
Casing
Develop Technology
Deploy Technology
Salaries
Thank You!
TECHNICAL VIABILITY

Sensor Coverage Area

Sensor Packages Map Design

Software Configuration

\[
\frac{\partial u}{\partial t} = D \nabla^2 u = D \left( \frac{\partial^2 u}{\partial x^2} + \frac{\partial^2 u}{\partial y^2} + \frac{\partial^2 u}{\partial z^2} \right)
\]

Diffusion

Doppler effect

\[
f = \frac{c + v_r}{c + v_s} f_0
\]
ALTERNATIVE MARKETS

CINEMAS

MALLS

SUBWAYS
Why it has not been done before?

**Infrastructure Issues**

Analysts believe requiring a checkpoint just to enter the airport can create new targets.

**Psychological Issues**

Battling traveler anxiety about terror, versus the safety and security of those customers.

**Evolution of Sensor Technology**

Advances in sensor technology leads to ubiquitous deployment of large-scale wireless sensor networks.
What have people said about our Idea?

David Cush,
President and Chief Executive Officer
Virgin America

- Excellent Idea
- Easy to work with government authorities like TSA then private agencies

Virginia Buckingham,
Former Executive Director and CEO
Massachusetts Port Authority

- Government and Agencies do not generally act proactively in such situations, TSA came into existence after 9/11
Thank you