Our smart garment for law enforcement officer training enables physiological and emotional control for the officer to mitigate the possibility of future ‘Rodney King’ type incidents.

Videos
Lessons Learned https://youtu.be/Zid0RajWm2Q
Technical Description https://www.youtube.com/watch?v=zpc1CowsuVI
You emerge from your recent fog and get down to business. Life becomes more serious and realistic. If a person takes no thought about what is distant he will find sorrow near at hand.

There is a need for good business judgement now. When things are going well it is all too easy to become over-confident and not give proper attention to one's duties. If this tendency is recognized early it may be corrected and no harm will be done. You will also find time after business is settled for friends and or lovers. It is easy to see, hard to foresee.

PLAY AGAIN!
Your Lucky Numbers: 03, 13, 16, 22, 34, 32

FOR ENTERTAINMENT PURPOSES ONLY
Who Are We?

Dr. Jesse Jur, PI

- PI for NEXT (nano-extended textiles) research group
- Thrust leader for Wearability & Data for NSF funded ASSIST ERC, NC State
- Thinks bow-ties are cool

Raj Bhakta, EL

- BS in Physics, UT-Austin, 2014
- PhD student in NEXT group doing printed electronics on textiles
- Believes tech, entrepreneurship, and invention can solve the world’s pressing problems

Robert (Bob) Sheehan, M

- MBA, UNC-W, 2001
- National Sales and Marketing at Gillette for 11 years
- Pharmaceutical entrepreneurship for 12 years
- Start-up mentor at Council for Entrepreneurial Development (CED)
This was our first BMC...

**Example**

<table>
<thead>
<tr>
<th>Key Partners</th>
<th>Value Propositions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Garment manufacturers (outsource, cut-and-sew integrator, fit design company)</td>
<td>Helping their employees live a healthy lifestyle which makes them more productive employees.</td>
</tr>
<tr>
<td>Electronics manufacturers (PCBs, packaging)</td>
<td>Improved health of employees resulting in reduced insurance costs, improving the cognitive efficiencies of workforce, and an understanding of personal wellness for the user.</td>
</tr>
<tr>
<td>Full-service distributor (order processing, shipment, and invoices/collection)</td>
<td>Device, data management, and analysis.</td>
</tr>
<tr>
<td>Data analytics companies</td>
<td></td>
</tr>
<tr>
<td>Data app company</td>
<td></td>
</tr>
<tr>
<td>Health insurance companies</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Key Resources</th>
<th>Customer Relationships</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel (direct-sales people), capital requirements (fundraising - VC)</td>
<td>Direct-marketing and sales to corporate wellness program managers.</td>
</tr>
<tr>
<td>Revenue streams will require outsourced accounting functions, initially.</td>
<td>Marketing materials for employees when they receive their device.</td>
</tr>
<tr>
<td></td>
<td>Possibility of sharing the data with the insurance companies.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cost Structure</th>
<th>Revenue Streams</th>
</tr>
</thead>
<tbody>
<tr>
<td>COGS, maintenance of device and data, overhead, R&amp;D (validation, benchmarking), sales &amp; marketing.</td>
<td>Revenue streams (device and data).</td>
</tr>
<tr>
<td></td>
<td>Device hardware sales and data collection and analytics subscription model.</td>
</tr>
<tr>
<td></td>
<td>Competitive device price-point and value based pricing for data analytics</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Customer Segments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate wellness programs that want to have healthy employees and save on healthcare costs.</td>
</tr>
<tr>
<td>Employees that do and do not live healthy lifestyles by being aware of their health, receiving actionable insights about their biometrics such as cognitive efficiencies through HRV, and reducing healthcare costs.</td>
</tr>
<tr>
<td>Health Insurance companies that want to de-risk their patients by improving their patient’s health and tracking their biometrics.</td>
</tr>
</tbody>
</table>
Our Motivation...

Study: Fitbit Corporate Wellness Programs Cut Employer Healthcare Costs

October 5, 2016 by Heather Landis

San Francisco-based company Fitbit, a fitness wearable device maker, announced study results that indicate two companies that deployed Fitbit corporate wellness programs saw healthcare cost savings and improved health outcomes of employees.

The two employers are Fitbit Group Health customers. In one study, Dayton Regional Transit Authority calculated the costs of its Fitbit corporate wellness program and determined that the program demonstrated $2.3 million in employer cost savings and healthy outcomes for program participants.
Got out of the building and...sat in traffic in LA
Here’s who we talked to…

**Corporate Wellness Customers**
- LADOT
- BlueCross BlueShield of North Carolina
- TruPosture
- John Hancock

**Fitness/Training Customers**
- DICK'S Sporting Goods
- lululemon
- DEPOT CrossFit

**Wearables Trends**
- BCG Digital Ventures
- IDTechEx
- enflux
Here’s what we found…

“Wearable devices are too fragmented…users don’t see the benefit yet in corporate wellness”

“Corporate Wellness is on the down slope as a market…”
Here’s what we found…

- **Corporate Wellness**
- **E-textiles**
- **Peak of Inflated Expectations**
- **Plateau of Productivity**
- **Slope of Enlightenment**
- **Trough of Disillusionment**
- **Technology Trigger**

**PIVOT**

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nano-extended textiles research group
Our #1 interview
Could our biometric garment really help as a solution?
Value Chain Ecosystem

- General Public (City Council)
- Chief of Police
- Police Foundation/City Beneficiary
- Police Union
- Police Officer
- Deputy Chief
- Police Training Specialist
- Uniform Committee
- Information Technology Bureau
- Chief Psychologist
- William Murphy LAPD

Dr. Kevin Jablonski LAPD

Dr. Kevin Jablonski LAPD

nano-extended textiles research group
Here’s what we did to build our final BMC...

Key Partners

Law Enforcement

Wearables Trends

nano-extended textiles research group
“To be frank, nobody is making any money in the textile wearable market...because sports & fitness is a nice-to-have and production cost is high”
Here’s what we found…

**NEED** exists for our wearable in law enforcement training

Police departments budgets are tight!

Sensor Reliability

**however…**

Economy of scale for price reduction does not yet exist
BMC Final version...

Key Partners
- Textile (Compression)
- Electronics manufacturer
- Data management
- Printed electronics
- Printed electronic and data analytics company that
- Polyurethane films supplier
- SBIR/STTR grants

Key Activities
- A pilot study at LAPD with
- Apply for SBIR/STTR
- License patents from
- Craft intellectual

Key Resources
- Human resources
- Intellectual property
- Office space
- Venture capital

Value Proposition
- Tracking of data provides
- A police force following
- Reducing litigation

Customer Relation
- Trade shows and expos
- Police magazine

Customer Segments
- Deputy Chief of Police
- Chief Psychologist
- Uniform Committee
- Information Technology
- Police Officer Cadet (USER)
- Citizen Joe & Jane
- Police unions (INFLUENCER)

Channels
- Direct sales to law
- A distributor of police

Revenue Streams
- Subscription to ‘actionable insight’ delivered during debriefing at the end of
- Selling the device(s) and data subscription

Cost Structure
- Cost of goods and services
- Data management and analytics cost
- Salaries for employees

nano-extended textiles research group
A need exists in police training!
...but the tech needs to be proven to establish *data quality*.

WE ARE A ... NO GO *(today)*!
## Next Steps

<table>
<thead>
<tr>
<th>Opportunity to GO?</th>
<th>Concerns</th>
<th>Next Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>We have a product someone cares about</td>
<td>No one has been able to do this in a garment to get high-quality data</td>
<td>Trial MVP out with LAPD/Houston PD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cost of manufacturing needs to be better understood</td>
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<td></td>
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<tr>
<td></td>
<td>Cost Structure vs Revenue Stream</td>
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</table>
Thanks!