Wearables: Imagine the Possibilities

Impact on the Mining Sector

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Wearable technology is clothing and accessories that incorporate computer and advanced electronic technologies. The designs often incorporate practical functions and features, but may also have a purely critical or aesthetic agenda.

The wearable technology industry is set to grow from an estimated $3.3 billion to $8.1 billion over the next 3 years.
Our differentiated approach

MINING SAFETY STATISTICS

The Ontario Mining Sector
the past 10 years:
• 337 critical injuries
• 24 fatalities (including 6 in 2014)
Use Cases

https://vimeo.com/124782529
Wearables for Truck Operations

https://vimeo.com/122846215
Wearables for Health & Safety

https://vimeo.com/124783106
Intelligent Ventilation on Demand

Art of the Possible Session
Deloitte GreenHouse
“You’ll learn more in a day talking to customers than a week of brainstorming, a month of watching competitors, or a year of market research” - Aaron Levie, CEO, Box.com

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<tr>
<th>Name</th>
<th>Designation</th>
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<tr>
<td>Cam Duquette</td>
<td>Director, Health &amp; Safety</td>
<td>Centerra Gold</td>
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<td>Vern Baker</td>
<td>Vice President of Operations,</td>
<td>First Nickel Inc.</td>
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<td>Darren Parry</td>
<td>Director – Occupational Health &amp;</td>
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<td>Doug Brown</td>
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<td>Don Ritz</td>
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<td>Barrick Gold</td>
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<td>Don Duval</td>
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<td>Alex Gryska</td>
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<td>Dave Radu</td>
<td>CIO</td>
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<td>Afzal Jessa*</td>
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<td>Ian Cooper*</td>
<td>H&amp;S Manager</td>
<td>Hudbay Minerals</td>
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- Fatigue Management is a key concern leading to accidents and a wearable product will be of great help to the miners
- An injury incident costs about 80-100K $ while fatalities can result in millions of dollars
- Mining companies are eager to try out prototypes in the field and provide feedback
- Product should tap into an existing product or technology used in mines. Miners will be reluctant to wear an additional piece of equipment
- While Health and Safety is the ultimate reason for adoption, the business case for adoption should be around increased productivity or cost savings
- The product developed should be strong, durable and comply to regulatory standards (example Mine Safety and Health Administration (MSHA))
# Deloitte Offerings

## Wearables Consulting

### Power by the Hour

**#1 Wearable Strategy**
- Develop a wearable strategy, roadmap and implementation plan for an enterprise

**#2 Wearable Tech Integration**
- Integrate and operationalize wearable technology for the enterprise

**#3 Risk and Regulatory Advisory**
- Provide guidance to enterprise on issues related to Wearable – E.g.: Privacy, Security Policy

## Wearable Insights

### Actionable Insights

**#4 Analytical Models**
- Develop analytical models for clients to generate actionable insights from wearable data.

**#5 Subscription Based Insights**
- Analyze Historical data from various sources and Real time Wearable data to generate actionable insights for enterprise

## Wearable Ventures

### Co-design a product

**#6 Product Customization**
- Work with an existing Wearable manufacturer to customize a product for an enterprise
Our differentiated approach

DESIGNING WEARABLES FOR THE MINING SECTOR

- Allows all wearables to connect to the Platform
- Provides the infrastructure/communication platform for Wearables to operate inside a mine
- Leads the project, "brings all pieces together"
- Gathers requirements and evaluates benefits
- Provides access to the mine, miner and participates in pilot
- Generates actionable insights from the vast amount of data
- Customizes an existing wearable product based on the project requirements

Mining Company

Analytics

Integrator & Developer

Wearable Maker

Software Platform

Infrastructure Provider
Thank you
The future is now