

Slide 1

**Technologies and Strategies  
to  
Increase Profits & Reduce Risk  
in  
Afghan Mining Projects**

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In this presentation, we will outline a plan to leverage technologies to overcome current challenges to increase investment in mining in Afghanistan. First, we will describe some of the current challenges. Then we will outline a range of new and existing technologies and strategies to overcome these challenges.

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**Experienced Partners**

- Think Renewables has been working with partners in Canada, the US, Afghanistan and Africa for over 8 years on renewable energy, virtual reality and communication system related projects. 
- Development Policy Group International (DPGI) has implemented several capacity building projects for the Gov't of Afghanistan over the past 5 yrs. 

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## Slide 3

**Current Problem:**  
Lack of Investment in Mining

- Investors are avoiding Afghan investments due to physical security and business risks.
- Cost of providing security and utilizing foreign expertise reduces mining profits substantially.
- Some needed experts will not relocate to Afghanistan.

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Currently, there is a lack of investment in mining in Afghanistan. This is due to three main reasons. First, investors are avoiding Afghan investments due to perceived insecurity and business risks. Second, providing adequate security and utilizing foreign expertise increase mining costs substantially and finally, some experts needed to develop and operate a mine will not relocate to Afghanistan.

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**Solution:**  
Reducing Risk Through Technology & Strategy

**To reduce costs and risks, take three innovative actions:**

- Virtual reality (VR) and augmented reality (AR) to evaluate opportunities and monitor operations.
- Communication and data sharing technologies to enable remote monitoring, training and tech. support.
- International transparent accounting office to process revenue payments for all stakeholders.

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Our solution is to reduce the costs and risks of operating in Afghanistan through range of innovative technologies and strategies. For example, to reduce costs and risks, we recommend that companies first utilize virtual reality (VR) and augmented reality (AR) to evaluate opportunities and monitor operations. Then, second, utilize communication and sharing technologies to enable remote monitoring, training and technical support and finally, utilize an international transparent accounting office to process revenue payments for all stakeholders.

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Shown here is an example of mine visualization using virtual reality. It illustrates the plan for development and operation of the mine. In addition to showing existing topography, it can show the planned buildings, roadways and excavations. This imagery can be viewed simultaneously via a virtual reality headset and a TV screen to allow multiple people to view and discuss it at the same time.

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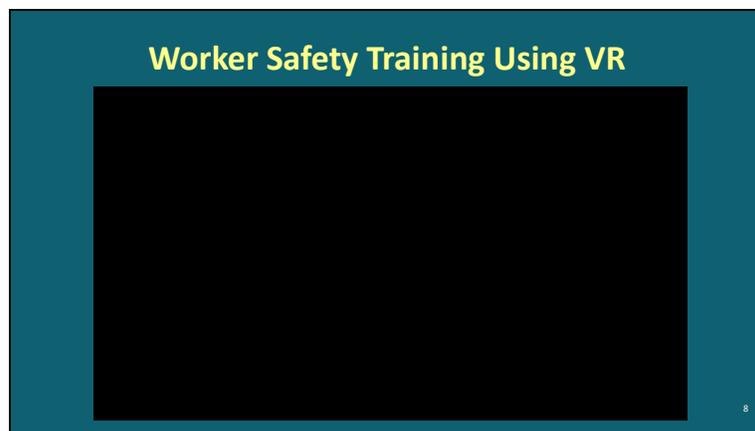
Shown here is an example of software that allows for mine operation planning using virtual reality. It is called MineLife VR by LlamaZoo and allows a mine manager located outside Afghanistan to plan the operations of a mine and interactively communicate this plan with his or her staff inside Afghanistan. If desired, both the mine manager and this staff can view the images simultaneously while talking to each other.

## Slide 7

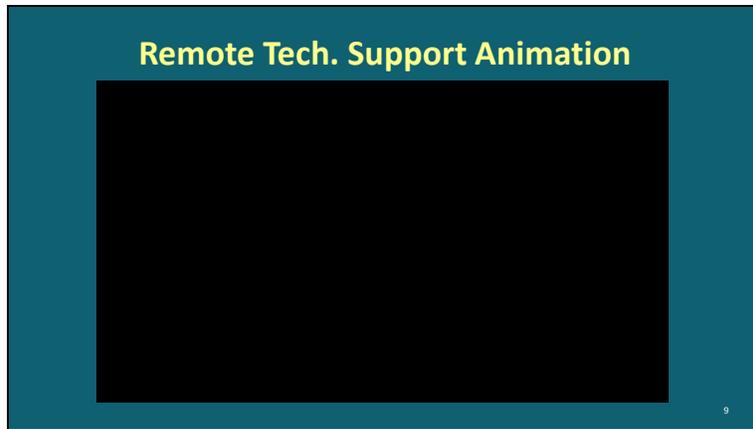


To verify that work has been completed and estimate the amount of material in inventory, a drone survey of mine can be completed. Shown here is a survey completed by Drone2GIS that records the materials that have been stockpiled. In addition, they can remotely identify and estimate the volume of each stockpile of mined materials.

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Shown here is how an employee can extinguish a virtual fire using a real fire extinguisher that is coupled to a virtual reality headset. The employee you see on the left is using the fire extinguisher to put out the virtual fire shown on the right.



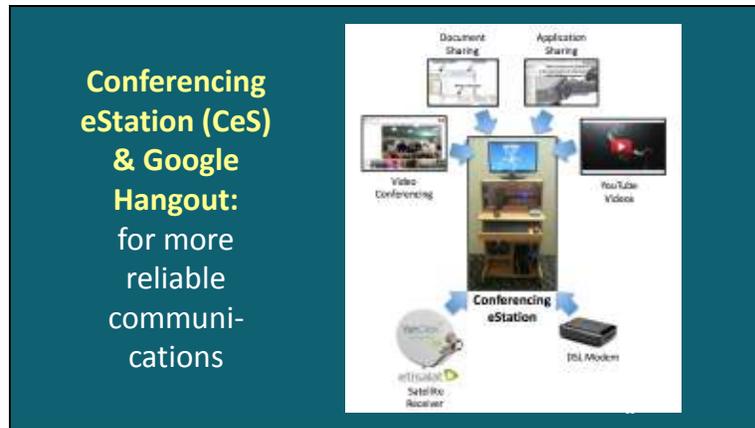
Shown here is an animation of how companies can reduce their costs and risks of operating in Afghanistan by doing their training and support via new technologies. Here is an example how you can combine the Yachlick high speed satellite based internet service by Etisalat with the Conferencing eStation by Think Renewables and a low cost tablet computer connected by WiFi.

Using this combination, an engineer located in another country can share a live 3D model of a machine with a technician in Afghanistan via a free service by Google called Hangout. The example machine shown here is a rock cutting head that is fitted to a hydraulic telescoping arm. After it is fitted, it is set in operation and then repaired by replacing one of its cutting bits.



Shown here is a more detailed animation of the maintenance and operation of a rock cutter.

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**Conferencing eStation (CeS) & Google Hangout:** for more reliable communications

Shown here is a Conferencing eStation to enable a more reliable way to communicate, even when power and Internet service are intermittent. It contains a large back battery, combines multiple sources of Internet into one and enables priority to be given to a designate user for more reliable video calls.

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**Combining CeS with Graphical Animation to Support Equipment Maintenance**

Show here is an animation to show how a remotely located technical specialist can show a on-site technician how to disassemble and repair a rock cutting arm. First the specialist shows how it is to operate and then digitally removes parts to illustrate the gears contained inside the rock-cutting arm.

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### **International Accounting & Payment Office**

#### **Transparent accounting and payment office:**

- To process revenue payments for all stakeholders including Afghan Gov't, owners and investors
- Connected electronically to office at mine
- Payments to all stakeholders calculated and implemented transparently

Note: Some international financing agencies are already doing this.

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To enable all stakeholders including investors to monitor revenues and payments of a mine operation, an International Accounting & Payment Office can be utilized. This office can be located outside Afghanistan and process revenue payments for all stakeholders including Afghan Gov't, owners and investors. It would be connected electronically to the office at the mine location so operations can be monitored in real-time. It should be noted that this approach has already been implemented successfully by some international financing organizations.

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### **Reduce Risk by Closely Monitoring & Supporting Afghan Mine Operations**

Improvements in technologies now enabling:

- Distance learning
- Remote technical support via 3-D models
- Video monitoring of repairs & process
- Interactive collaboration of business processes
  - Eg. Accounting, Production Scheduling and Marketing

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Technologies are now enabling mining companies to reduce the risk by closely monitoring and supporting their Afghan Mine Operations. For example, improvements in technologies now enabling distance learning, remote technical support via 3-D modelling software, video monitoring of repairs & processes and lastly, interactive collaboration of a range of business activities including accounting, production scheduling and marketing.

### Increase Local Community Support

Increase local community support for mine by:

- Engaging local tribes to help provide security
- Implementing training centres to enable local people to obtain jobs in mine
- Facilitating entrepreneurship to help local people provide products and services to mine and its employees
- Provide call centre to support entrepreneurs via telephone, video calls and data sharing

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Several measures can be taken to lower costs and increase community support for a mine. This includes engaging local tribes to help provide security, implementing training centres to enable local people to obtain jobs in mine, facilitating entrepreneurship to help local people provide products and services to mine and its employees. Facilitating entrepreneurship can include providing a call centre to support entrepreneurs via telephone, video calls and data sharing.

### Team

 <p><b>Paul Stevers</b> President Think Renewables Group</p> <ul style="list-style-type: none"><li>✓ Over 30 years' experience in developing technology and named on over 14 patents</li><li>✓ Over 5 years experience operating in develop. countries</li><li>✓ Part of a management team that raised over \$10m</li></ul>	 <p><b>Ahmad Javed Jalali</b>, President &amp; CEO, Development Policy Grp. International (DPGI)</p> <ul style="list-style-type: none"><li>✓ Has over 15 years of exp. In Afghan Min. of Finance</li><li>✓ Served as Director General of Budget in Min. of Finance</li><li>✓ COO of Afghan Finance Company</li></ul>	 <p><b>Dr. Lelf Rosenberger</b>, Director of Education, Economics &amp; Security</p> <ul style="list-style-type: none"><li>✓ Has over 30 years of exp. In U.S. Gov't</li><li>✓ Taught at leading universities in the USA</li><li>✓ Led New Silk Road Initiative with CENTCOM</li></ul>
 <p><b>Roger Eshleman</b>, President Think Renewables Inc.</p> <p>Over 30 years' exp. in design and manuf. Over 5 years in 3D design and VR</p>	 <p><b>Michelle Moore</b>, Director of Finance, Think Renewables Group</p> <p>Over 15 years' experience in Accounting and Finance</p>	

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Shown here is our management team. I have over 30 years' experience developing technologies and am named on about 14 patents. As well, I was part of a team that raised over 10 million dollars and has over 5 years of operating experience in developing countries.

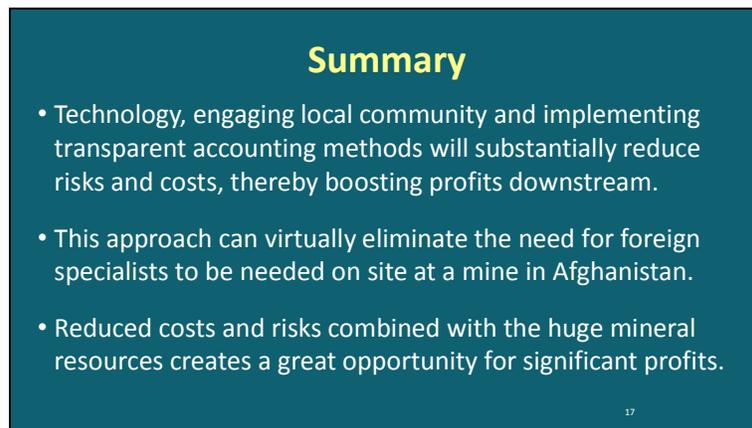
Ahmad Javed Jalali is President & CEO of Development Policy Group. International. Has over 15 years of exp. In Afghan Min. of Finance, served as Director General of Budget in Ministry of Finance and was the COO of the Afghan Finance Company.

Dr. Rosenberger is our Director of Education, Economics & Security. He has over 30 years of experience in the U.S. government and teaching at leading universities in the USA.

Roger Eshleman leads our U.S. operations. He has over 5 years' economic development experience in Africa and 30 years of experience in the USA.

Michelle Moore is our director of finance and has over fifteen years of operational, accounting, and administrative experience.

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**Summary**

- Technology, engaging local community and implementing transparent accounting methods will substantially reduce risks and costs, thereby boosting profits downstream.
- This approach can virtually eliminate the need for foreign specialists to be needed on site at a mine in Afghanistan.
- Reduced costs and risks combined with the huge mineral resources creates a great opportunity for significant profits.

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Costs and risks of mining in Afghanistan can be substantially reduced by using technology, engaging local community and implementing transparent accounting methods. This approach can virtually eliminate the need for foreign specialists to be needed on site at a mine in Afghanistan.

By combining these substantially reduced costs and risks with the huge mineral resources available at low mining concession prices, investors now have a great opportunity to make significant profits in mining in Afghanistan.

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*Thank you for your time*



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Note: More information in the Appendix below...

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Thank you for your time.

For more information, please visit the Think Renewables website [thinkrenewables.com](http://thinkrenewables.com).

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**Appendix**

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Appendix

### **An Afghan Firm that is Planning to Further Invest in Mining in Afghanistan**

- Akbarzai & Co. – Afghan company trading internationally for over 45 years.
- Now one of the largest coal exporters in Afghanistan.
- Has request from existing customer to supply over 100,000 tonnes per year of iron ore.
- Also exploring options for mining lithium.

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A good illustrative example of an Afghan company that is planning to invest in mining would be Akbarzai Company. Akbarzai is an Afghan company that has been trading internationally for over 45 years. It is now one of the largest coal exporters in Afghanistan. It has a request from an existing customer to supply over 100,000 tons of iron ore year. Akbarzai is also exploring options for mining lithium.



### **Akbarzai & Co. Ltd**

*Import - Export*

*Mining*

*Logistics*

*Building Prosperity Through Trade and Innovation*

*Afghanistan – Pakistan - UK*

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Akbarzai & Co. Ltd is creates jobs in both Afghanistan and Pakistan. Its strategy is to build prosperity through trade and innovation. We feel Akbarzai & Co can be a role model company for companies that want to help build peace in Afghanistan and Pakistan through shared prosperity.



Thank you for your time.

For more information, please visit the Think Renewables website [thinkrenewables.com](http://thinkrenewables.com).