Challenge Report
Team Rail B

Background
Challenge Report
Presentation
Team Members
20th ASEF Summer University (ASEFSU20)
Gateways to Asia and Europe: Connectivity by Land, Sea and Air

Background

The 20th ASEF Summer University (ASEFSU20) was held from 15 August – 3 September 2016 across China, Mongolia and the Russian Federation on the theme “Gateways to Asia and Europe: Connectivity by Land, Sea and Air”. 47 participants representing 45 ASEM partner countries joined the 3 week educational journey and solved real-life challenge scenarios on the topics of connectivity and transportation linked with 4 major transportation modes: 1) road, 2) rail, 3) maritime, and 4) air.

The route included Beijing, Harbin, Vladivostok, Chita, Irkutsk and Ulaanbaatar and each of the 6 cities visited focused on a different facet of connectivity. Participants attended lectures, trainings and workshops on the specific topic and also simultaneously explored it hands-on through site visits to historically important locations, transportation hubs and commercial centres.

The participants, carefully chosen from 8,222 applicants, developed business plans, mobile applications, social media strategies, policy briefs and promotional materials on the 9 following challenges:

- Safe transportation of cultural artifacts
- Accessibility to public transport for physically disabled people
- Green logistics
- Spread of infectious diseases through increased air traffic
- Security at railways
- Sustainable ecotourism
- Frameworks on the management of autonomous underwater vehicles
- Combat of human trafficking at major transportation hubs
- Enhancing the visibility of the ASEM Transportation Ministers’ Meeting (ASEM TMM).

Organised by the Asia-Europe Foundation (ASEF), the ASEFSU20 journey was made possible due to the joint efforts of many partners involved in this project: the Ministry of Foreign Affairs of the People's Republic of China, the Ministry of Foreign Affairs of Mongolia, the Ministry of Foreign Affairs of the Russian Federation, the Ministry of Education and Science of the Russian Federation, Beijing Jiaotong University, Harbin Institute of Technology, Vladivostok State University of Economics and Service, Transbaikal State University, Irkutsk State University, Mongolian Youth Federation and Ulaanbaatar Railway Joint Venture Company. The project was also supported by the Far Eastern Federal University, Russian Railway Tours, UNICEF, Heiko Seibel Fotografie, Fraport AG, Subnero, Safehouse Foundation, Chester Beatty Library, the European Network on Independent Living among many others.
Challenge
Team Rail B

#logistics #sustainability #connectivity
DHL Innovation Challenge:
Creating Sustainable Logistics Solutions for the World of Tomorrow.

www.dhlinnovationchallenge.com/fairchallenge/

DHL
DHL has a global workforce of more than 340,000 employees and a presence in over 220 countries. It is part of the world’s leading postal and logistics company, Deutsche Post DHL Group. DHL comprises of different entities: DHL Express, DHL Parcel, DHL e-commerce, DHL Global Forwarding, DHL Freight and DHL Supply Chain. DHL serves to be “the logistics company for the world” by being the choice logistics provider for shipping needs and career and investment opportunities. The company’s Strategy 2020 – Focus, Connect, Grow sees it working towards “ambitious yet achievable goals”. These goals include a commitment to green, sustainable and responsible business practices without compromising on its focus on logistics as a core business.

Pitch
What does a fair and responsible logistics-based model that creates value for all stakeholders look like?

#logistics #sustainability #connectivity
DHL is the global leader of the international air express industry, with sales of over 6.2 billion Euros in 2001, which accounted for a market share of 37.5%. Its 4,000 offices handle a total of 160 million shipments per year. These shipments are transported by 714 scheduled DHL flights and 2,335 flights by commercial aircrafts per day, as well as some 17,000 vehicles on the ground. (“DHL Worldwide Express,” DHL.) Logistics are therefore crucial to DHL’s success.

Over the years, there have been changes in the way that companies and organisations approach logistics. During the 1990s and early 2000s, the high availability and low transportation costs relative to the cost of holding inventory saw organisations utilising just-in-time delivery. However, increments in oil prices and transportation costs in recent years have seen companies packaging their products more efficiently and switching from offshoring to near-shoring to reduce the number of shipment miles. (Russell, Coyle, Ruamsook and Thomchick, “The real impact of high transportation costs.”)

Consumers have also shown a desire for cost-efficient and environmentally-friendly products. This is evidenced by how their purchasing decisions are increasingly based on whether products are manufactured and/or delivered in a fair and responsible manner.

DHL recognises and acknowledges this phenomenon and is committed to the provision of green logistics. In this regard, it has launched the “fair and responsible challenge” on the “creat(ion) of sustainable logistics solutions for the world of tomorrow”. (“Fair and Responsible Logistics: A DHL Perspective on how to create lasting competitive advantage,” DHL)

Your Mission: As a competitor in the Fair and Responsible Challenge, your mission is to create out-of-the-box, creative solutions that focus on developing a fair and responsible logistics-based model with value for all stakeholders. The outcome can be a new product or service solution or a great packaging concept. (“DHL Fair & Responsible Challenge 2016: Creating Sustainable Logistics Solutions for the World of Tomorrow,” DHL.)

1) Logistics is the process of planning, implementing and controlling the efficient, cost effective flow and storage of raw materials, in-process inventory, finished goods and related information from point of origin to point of consumption for the purpose of conforming to consumers’ requirements. (“Post Graduate Diploma in Supply Chain Management: Fundamentals of Logistics,” CII Institute of Logistics.)

2) Just-in-time delivery is a supply chain management system designed to reduce carrying costs to a minimum. A firm only orders what it expects for its immediate needs; therefore, it keeps a low inventory.
Further Reading

Information on DHL:


Information on green logistics:


REPORT

What does a fair and responsible logistics-based model that creates value for all stakeholders look like? - DHL Fair & Responsible Challenge 2016

Project “Bayan” is a sustainable logistics solution that can be applied not only to Mongolia and the cashmere industry, but also to other industries and remote areas in Asia and Europe such as Siberia etc. It addresses the issues of fair access, production, trade and also contributes to a circular economy.

The idea of the project is to make cashmere collection more environmentally and socially friendly by using a 3-word address system and mobile technology. This paper proposes DHL, in collaboration with local partners, to support an app that would be used by Mongolian herders to send the location of the pickup point. After receiving the location info, DHL would send its vans to collect the cashmere from the herder and deliver it to the respective factory.

Key Partners

3 key partners have been identified whose expertise will contribute to the feasibility of the project. The first key partner is What3Words who has already developed an easy to use, accurate address for every 3m x 3m square in the world. The second key partner is the Mongol Post (Government of Mongolia), currently in the process of making this address system integral to its services. The third partner would be a local app developing company that will create the free-of-charge software for Mongol Cashmere Concern, a state owned monopoly that procures all raw cashmere for domestic factories in Mongolia.

Key Activities

Key activities for the project “Bayan” would include off take agreements between the herders and the Mongol Cashmere Concern with predetermined prices for the respective quality of raw cashmere.

The availability of mobile technology together with the application would allow the herders to communicate their precise location and the amount of cashmere they have for purchase.

DHL’s responsibility would include the collection of raw cashmere from herder households and the shipping to Ulaanbaatar for factory use. This would be done by administering and operating a network of vans and drivers who would optimise the route and plan the amount to be collected as per the data received.

The delivery of raw cashmere to factories in the capital Ulaanbaatar could be then optimised with individual factories needs and operational flow.

Key Resources

Key resources needed are suitable vans for cashmere collection and a network of drivers that can be mobilised on a seasonal basis. The mobile application is another resource required to enable communication.

1 The word “Bayan” means “rich” in Mongolian and is derived from the cashmere rich province of Bayan-khongor in Western Mongolia.
The project’s assumption is a stable network of herders who maintain their number of livestock to supply the pre-agreed amount of cashmere annually.

**Value Propositions**

Essentially the project aims to support a stable income for Mongolian herders through an increased accessibility to the market due to more liquid and transparent market conditions. DHL would contribute to this development while operating a profitable business. The stable price of raw material will also allow the Mongol Cashmere Concern to prosper. Indirectly, the project would decrease air pollution and contribute to the livelihood of herders that constitute 1/3 of Mongolia's population.

**Customer Relations**

Since most of the customers would be members of herder families who don’t have permanent addresses, the fastest and sometimes the only way of maintaining the relationship is through a widely covering telephone/mobile network. Also, lower literacy rates among the herders indicate that the herders might prefer to negotiate the price through phone rather than via e-mail. Consequently, DHL would need to establish a call center to manage customer requests.

**Channels**

The first important channel is communication: Herders need uninterrupted access to the internet at a minimum cost in order to identify their location and schedule a pickup. Furthermore, they need a mobile network for business calls to contact cashmere collectors.

Another channel is transportation: Cashmere is a bulky material that needs to be transported by larger vehicles such as vans or trucks. The size of the vehicle would depend on the amount of shipments booked in the region.

**Cost Structure**

Shipping costs (including the pick-up and delivery of cashmere): These include fuel costs, vehicle maintenance costs and other costs related to the shipping business.

Salary cost (remuneration for drivers and other staff who support the shipping business): Together with fuel costs, this contributes to the highest percentage of the cost structure.

App maintenance costs (in line with the ever-changing advancements in mobile operating systems): Mobile applications need to be upgraded regularly and feedback by customers should be addressed as soon as possible.

**Revenue Streams**

The in-app advertising on the DHL app would be a great opportunity to reach a population that lives in remote areas where regular marketing methods are hardly implementable. This type of advertising would generate additional revenue for DHL that would not incur major costs.

Revenue from selling or offering their services to the Mongol Cashmere Concern would be the lifeline of cash flows for the project. The expertise and know-how of DHL, the existing inefficiencies could be eradicated and the services offered would be more competitive.

**Next Steps**

Looking forward, the Project “Bayan” firstly requires a feasibility study to be conducted in order to convince stakeholders and investors. Once the key stakeholders are established, the project could have
test-runs in pinpointed locations. Upon successful test-runs, the expansion of the project could be spread nation-wide. For example, Galuut county of the Bayan-Khongor province with 3,000 people could serve as a prime location for test-runs.

Higher regulatory hurdles can be expected at the initial stage of the project but once the test-runs are complete, the capital intensity of the project expansion would play a key role in attaining success and generating profit.
DHL Fair and Responsible Challenge; Cashmere collection in Mongolia
Mugi Bayarlkhaagva (Mongolia), Huw Thomas (United Kingdom), Andrea Topic (Croatia), Araya Na Manorom (Thailand), Petr Vnenk (Czech Republic), Bandit Mienmany (Lao PDR)
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Executive Summary

• DHL Fair and Responsible Challenge 2016 is a reflection of the current consumer tastes and potential impact of the logistics industry.

• Mongolia, a landlocked country with a significant nomadic population and sizable cashmere industry, can benefit greatly from the solution proposed by our team.

• Project “Bayan” offers to use the new addressing system, What3Words, recently adopted by Mongol Post and utilise it for the raw cashmere collection and transport purposes.

• The value proposition is to stabilise the cashmere market and eventually provide sustainable income for thousands of herders. Indirectly the model offers greater pasture management, predictable business environment and less demographic movement inside Mongolia.
Our Proposal: Project “Bayan”

Fair & circular model for Mongolian cashmere

WHAT IS DRIVING FAIR AND RESPONSIBLE BUSINESSES?

Changing societies, disruptive technologies, global economies, environment in trouble, stringent policies.

DHL Business Value Chain

- Raw Materials: “Responsible Spot Checking”
- Manufacturing
- Transportation
- Delivery: “Certified Fair Logistics”
- Sales: “Fair Smart Label” “Marketplace for fair products”

Source: DHL Fair & Responsible Challenge 2016
Mongolia’s Cashmere Industry

Economic importance

Cashmere, a luxury fabric made from the fine undercoat of hair found on certain species of goat, is Mongolia’s highest non-mineral export earner. Cashmere exports bring in an average of around $250m annually and provide employment for some 7000 people.

Over-grazing/pastureland management

Global warming could impact grazing conditions, as dryer summers and longer, colder winters threaten the supply of free-range feed. Similarly, an expanding mining industry contributes to the pastureland mismanagement and herders loosing their livelihood.

Domestic migration

Dzud, an especially hard winter combined with lack of fodder for livestock can result in huge migrations of herders to the urban centers. Those who have been affected and have migrated to the capital have scattered throughout Ulaanbaatar, settling on family plots primarily inside areas of the ger district.

Air pollution

2/3 of Ulaanbaatar’s population lives in the suburban “ger” districts that use coal and other pollutants for the heating and cooking purposes. This contributes to most of the city’s pollution and significantly affects public health.

Source: Oxford Business Group, Ministry of Agriculture and Industry of Mongolia
Project “Bayan”

- “Bayan” in Mongolian language means “rich” linked to the first part of the “Bayankhongor” province.
- Project “Bayan” will take place in the cashmere rich province Galuut county.
- Availability of infrastructure together with the size and combination of pastureland management issues served as key factors for choosing the location.

Source: Bayankhongor province administration, Mongol Post, What3Words
Value Proposition

- **Originality:** The idea is unique and will be groundbreaking for the Cashmere industry.

- **Functionality:** A pre-existing network of supplier herders can be established to guarantee quality and supply amount.

- **Feasibility:** The technology is cheap and will require equipment of cashmere collectors with GPS locators. The expenses of collecting will be born by the purchaser.

- **Potential:** The opportunity for DHL is to maximize its network of logistical services and part-time drivers. At the same time, the business know how can be used to cater to producers needs.

**Circular economy:**
The project “Bayan” will contribute significantly to eradicate inefficiencies, decrease CO2 emissions and maximize the utilization of raw cashmere. We also propose the factories to have 2nd hand cashmere collection centres for discounts.

**Fair access:**
The herders need access to better management of their cash and purchaser network for their main source of cash. By providing fair access, the project “Bayan” will support sustainable livelihood for thousands of people.

**Fair production & Trade:**
The cashmere production and pasturelands needs a better and sustainable management. Project “Bayan” strives to educate the herders for better livestock management. Simultaneously, the cashmere factory can utilize smart labeling for the promotion of greener products.

Source: ASEF Summer University 20
Moving forward

Project “Bayan”

- We propose for DHL to **co-fund** the project “Bayan”

- Stakeholder buy-in including the offtake agreements, government and local support as well as cashmere factories

- Project kick-off can be done in stages to minimise the risks

**Stages of development**

- Feasibility study
- Stakeholder buy-in
- Project test-run
- Expansion

Highly regulated

Less regulation & low Capex

Capital intensive

Source: ASEF Summer University
Project “Bayan” – let’s make Mongolian herders BAYAN!!!
TEAM MEMBERS

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