



envin





















“Dissatisfaction with development project results and performance dates back to the 1950s”

The World Bank, 2012

PROTOTYPE







“There is a tendency in Design for Development projects to focus on the early stages of product design, with insufficient consideration of the production, distribution and repair of the product”

Donaldson, 2009













1,108 km













The field experience of designers and engineers who have worked on Development projects represents a rich and valuable source of knowledge concerning project implementation.



This knowledge can (AND SHOULD) be gathered more systematically, in order to become readily available to other project developers.

What are the factors that impact successful project implementation?

Project Implementation is context dependent



Geographical area

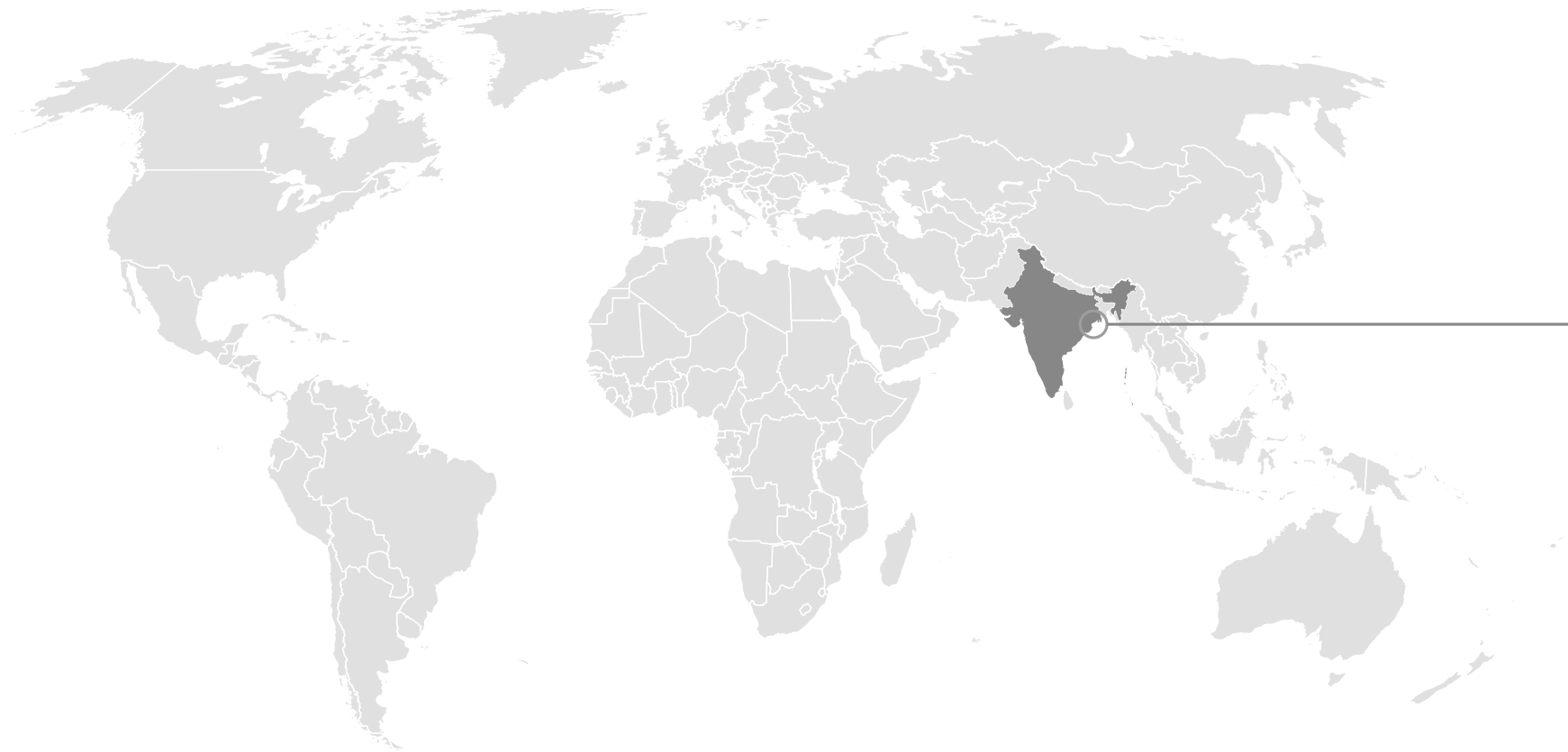





Industrial sector



Project category

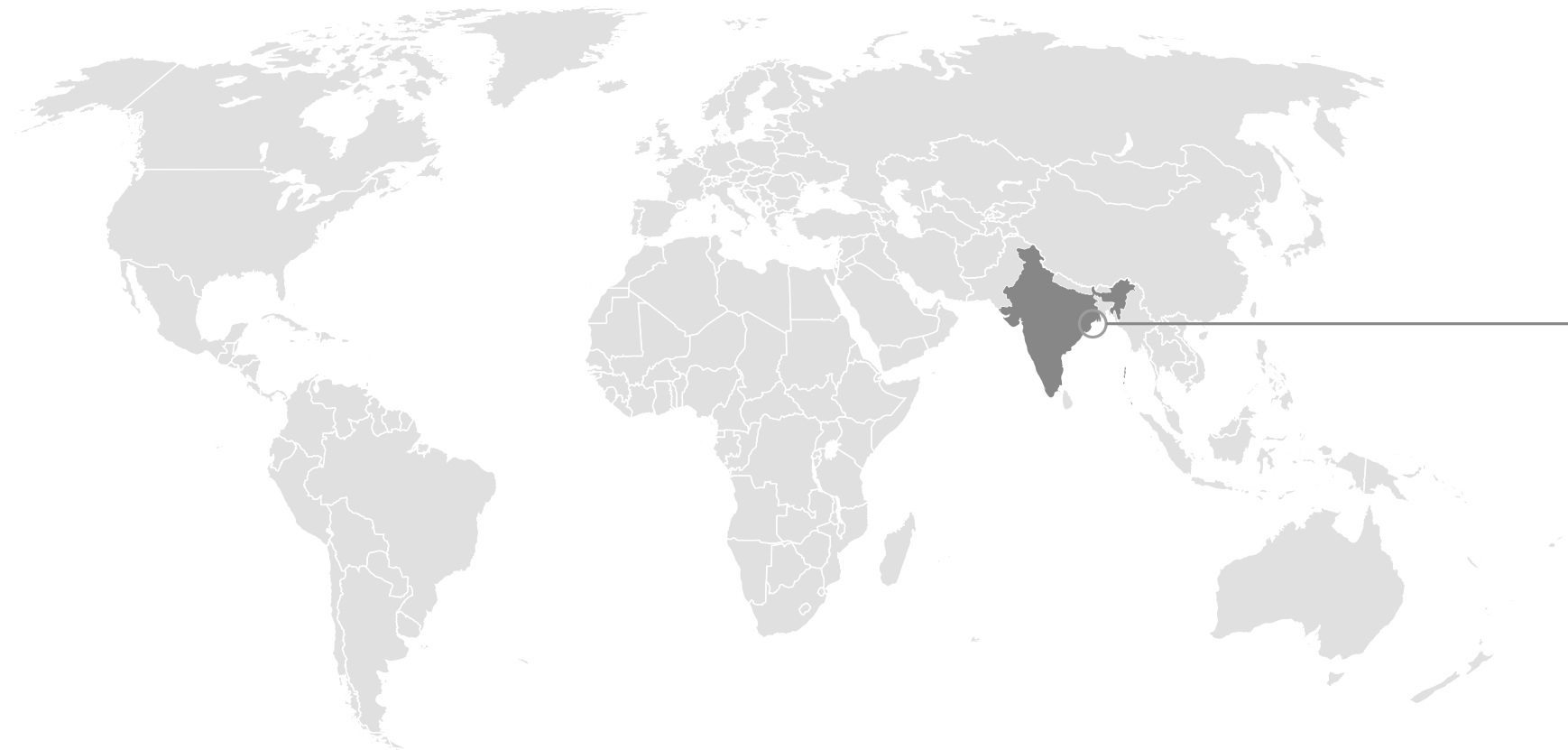
DfD PLATFORM






-  Varanasi (UP), North India
-  Cycle industry
-  Sustainable urban mobility

Business model	Partnerships	Budget	Distribution channels	Material supply	Production technologies	Scalability	Strategies
Profit	Technical skills	Organizational skills	Adaptation skills	Local participation	Local acceptance	Local capacity	Local education
Contextual Knowledge	External monitor	Data gathering	Measurments	Pre-defined criteria	Integration	critical long-term evaluation	

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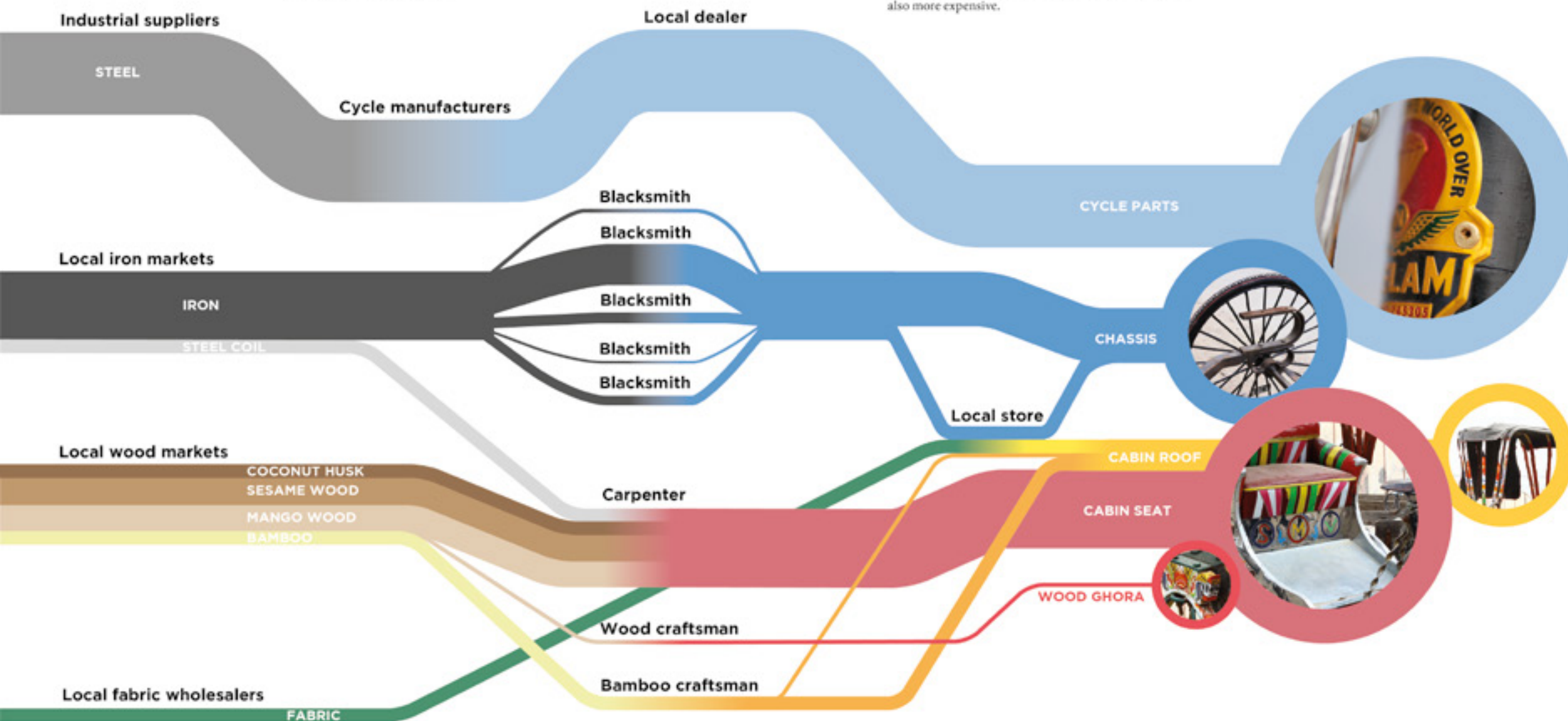
RICKSHAW MATERIAL FLOW AND SUPPLY CHAIN

Tata Steel is a top ten global steel maker and the world second most geographically diversified steel producer. Tata Steel was founded in India in 1907.

Neelam, KW, Bhogal and Avon are the major Indian suppliers of cycle spare parts used for assembling rickshaws. Their production facilities are all located in the industrial area of Ludhiana, in the region of Punjab, North India, from where they distribute all over the country. These competing firms have been producing the same parts for many years and they wish to supply their products to as many local dealers as possible while maintaining a privileged position in a market that is very closed and resilient to design innovation.

Mr. Sharmagji is the owner of a local store in the city selling rickshaw parts and accessories. He purchases custom parts from different craftsmen and sells them to various rickshaw assemblers. Gargi purchases these parts from him when they are not directly available at the source. This option is practically more convenient than going all the way to the craftsmen workshops but also more expensive.

Chawla Cycle Company is the local dealer currently in business with Gargi. It has a role of intermediary between Gargi and the suppliers, receiving and placing the orders for all cycle parts from different brands and gaining a profit margin on the sales.



Mr. Promod, Mr. Rijju, Mr. Bajianji, Mr. Sunio and Mr. Bije are the blacksmiths currently working for SMV-Gargi. They produce the chassis, rear axle, kamani and all the iron structural components of the rickshaw. They are all very specialized and each one produces only certain parts but not all of them. The blacksmiths are all located in the Suburbs of Varanasi, more or less 20 km from the city center. The quantity of pieces Gargi orders from them depends on availability, but usually it goes around 20 to 50 pieces which are picked up on the spot after 2 weeks and the blacksmiths always want to be paid in advance. They are often overloaded with work, interrupted by constants power cuts and therefore never deliver the parts on time. On top of this they do not provide any distribution service to their client and SMV has to go all the way to their workshops, located several kilometers away from the city, to pick up the orders. Such issues create supply chain bottlenecks that slow down production which is not able meet customers' demand and reach its breakeven point.

Mr. Suresh is the carpenter that currently works for Gargi. The carpenter purchases mango and sesame wood tablets, coconut wool, metal coil and plastic fabric in local wholesale markets and builds the whole rickshaw cabin. The bamboo structure for the cabin roof and the wood ghoras are produced by two different craftsmen and assembled in Gargi's workshop. All these craftsman are overloaded with work and do not distribute to the client. Such issues create supply chain bottlenecks that slow down production which is not able meet customers' demand and reach its breakeven point.

Gargi enterprises is a proprietorship firm under the umbrella of SMV. The two companies work closely together, almost as if they were two branches with different functions of the same company. Gargi purchases all the spare parts of the rickshaw from different suppliers, assembles them in a workshop and sells them to SMV who reaches the end customer.



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