

# Synchronizing complex systems in **real time** to accelerate **latrine sales**



## **Real-time data: synchronizing sales, production, and installation for 250 independent sales agents and 150 independent producers to deliver latrines in rural Cambodia at scale.**

**BACKGROUND** In 2011, iDE set out to improve national sanitation coverage in Cambodia, which had stalled at 29% for the preceding 20 years. Six years later, the Sanitation Marketing Scale-Up program is the largest of its kind globally with a network of sales agents and producers selling over 6,000 toilets per month to rural customers. The program stimulates both demand and supply, effectively building a market for sanitation. The program continues to invest in sales management activities to achieve 100% latrine coverage in the very near future. Having a more hands-on approach means we will achieve this finite goal of complete hygienic sanitation access more quickly and effectively.

## **Load Balancing: a new way to increase supply**

During the first phase of Sanitation Marketing Scale-up efforts in Cambodia, we learned three things that we now apply to supply chain management:

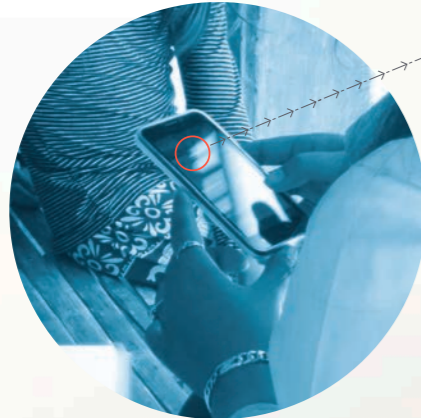
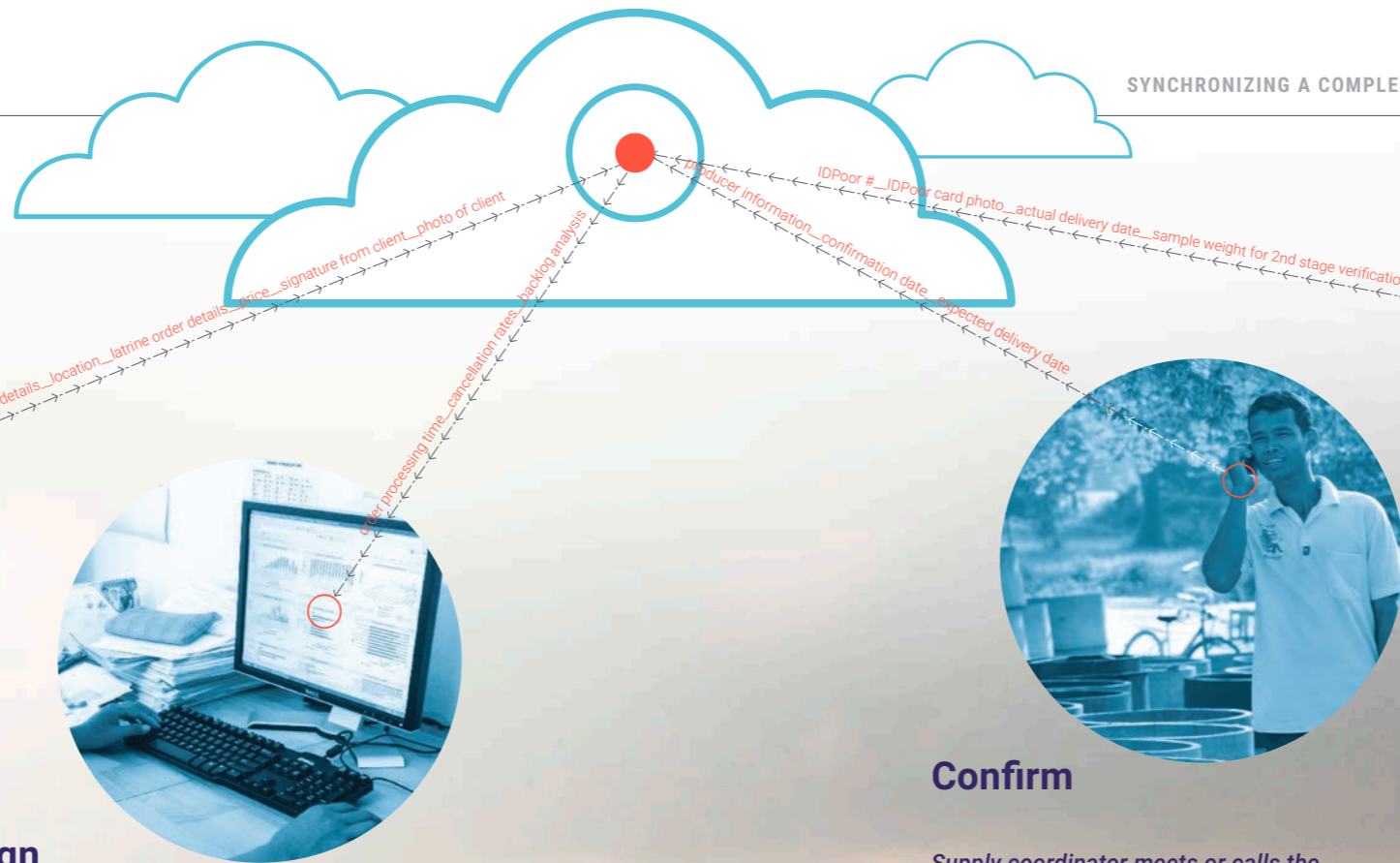
1. Well-trained and incentivized sales agents drive sales.
2. Latrine producers do not like volatility in their production.
3. Sales agents and latrine producers should not be tethered to one another.

With these guiding principles in mind, the iDE team envisioned a supply chain management tool that would match demand (orders) with available supply (production, delivery, and installation) to minimize customer wait times.

We call this “Load Balancing.”

## Load Balancing: A Supply Chain Management Tool

Load Balancing allows independent sales agents to place an order for a latrine that is then immediately sent to a producer best suited to fulfil the order (produce, deliver, and install the latrine) for the client within two weeks.



### Order

Orders (i.e., customer name, GPS location, latrine options) are entered into a smartphone app by sales agents and synced to Salesforce application.



### Assign

Supply coordinators are immediately notified of the new order, which the system automatically assigns to an optimal latrine producer based on distance to customer and producer's current backlog.



### Confirm

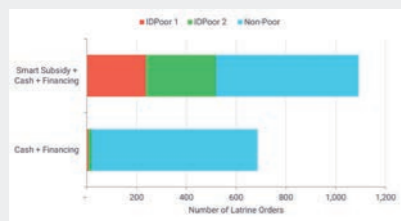
Supply coordinator meets or calls the latrine producer to confirm order. A delivery date is set and the supply coordinator updates the order record.



### Deliver

Producers deliver and install latrines, updating a paper-based record book. The supply coordinator visits the producer weekly to update status of all orders.

**RIGOROUS EVALUATION** Having granular data for every latrine order allows us to very easily explore research questions using randomization.



To better understand how we might sell to lower-income segments of the market, we randomized the offering of a targeted smart subsidy alongside cash-only and finance payment options.

Preliminary analysis shows that smart subsidies enable sales agents to sell more latrines, more effectively, to IDPoor households.

[Read More: Optimizing Smart Subsidies to Drive Toward 100% Coverage](#)

**PERFORMANCE MONITORING** Real time data flows and analysis allow all levels of management to effectively manage their staff and workflow.



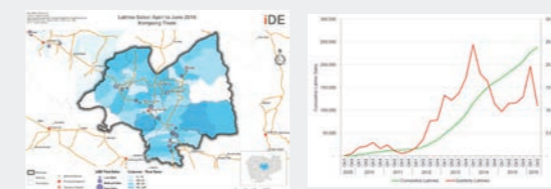
Management are given the data that they need, in the format that they need, and when they need it.

Supply chain coordinators have live information on latrine order status, pipeline of deliveries, and average order processing times.

District Sales managers can see sales closing rates of sales agents, individually and collectively, to ensure progress towards sales targets and sales leaderboards.

[Read More: Management Information System Overview](#)

**EASY DONOR REPORTING** When staff interact with the data on a daily basis, there is less burden placed on them during quarterly and annual reporting periods.

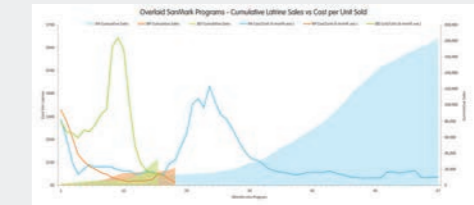


Data is geo-referenced allowing us to visualize and present information spatially, often leading to new insights for our sales and supply management teams.

Exporting data from the system can be done with the click of a button. Data can be stratified and aggregated in multiple ways—by gender, location, activity status of the producer, etc.—depending on our learning objectives and reporting requirements.

[Read More: Cambodia Sales Atlas, June 2016](#)

**COST-EFFECTIVENESS ANALYSIS** Linking our program output and outcome data to our audited accounting system allows for more nuanced analyses of iDE's cost effectiveness.



In an effort to see how iDE's sanitation marketing approach has been improving since the original SMSU funding from the Bill & Melinda Gates Foundation, we overlaid the cost-per-unit delivery of latrines over time and cumulative scale from our three most mature sanitation marketing programs.

Key takeaways: Upfront investment in R&D and staff are costly, but enable us to achieve scale earlier and faster in both Nepal and Bangladesh—suggesting iDE's approach to market development is improving.

[Read More: An Approach to Measurement of the Sustainability of Sanitation Marketing WASH Programs](#)

**Real-Time Data** — Constantly updated and available information using cloud-based servers and mobile applications.

**Load Balancing** — Matching immediate demand (orders) with available supply (production, delivery, and installation) to minimize customer wait times.

**Sanitation Marketing** — Sanitation Marketing is an emerging field that applies social and commercial marketing approaches to scale up the supply and demand for improved sanitation facilities.

**Direct Sales**— Face-to-face, demonstration, and sale of a product or service away from a retail location or storefront.


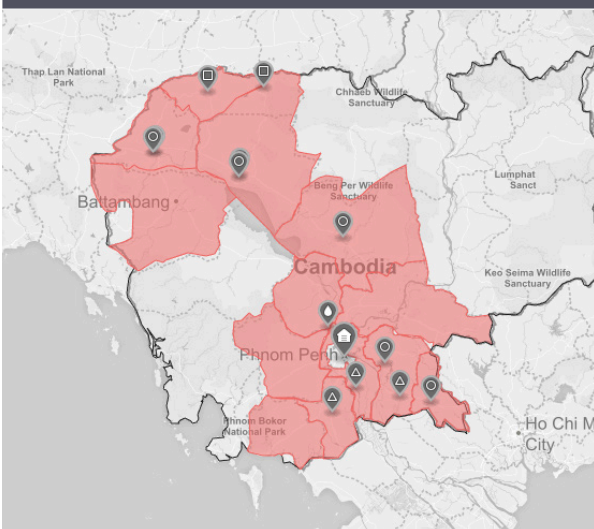
 **Read about iDE Cambodia's work building value chains and business models in agriculture, clean water, and sanitation:** <https://www.ideglobal.org/cambodia>



Photo: David Graham / iDE / 2012



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## **iDE**

iDE creates income and livelihood opportunities for poor rural households across Asia, Africa, and Latin America. iDE builds markets in a range of sectors, including agriculture, water, sanitation, hygiene, and access to finance.

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