



# POWERGEN RENEWABLE ENERGY

*Pioneering Electricity Service in Sub-Saharan Africa*

# Recent challenges

*With growth, PowerGen has been faced with organisational challenges and finding solutions to these has been a major focus of the past 12 months as we seek to build an organisation with solid foundations*

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## Supply chain, inventory and installation management

- In the past 12 months PowerGen has scaled up dramatically
- We are now fabricating many more microgrids
- We are liaising with many more suppliers and contractors
- We are conducting the bulk of our business in Tanzania but our warehouse is based in Kenya
- Our turnkey clients are expecting a more professional product with better reporting
- We are doing more installations in parallel
- We are standardising our PowerBox designs resulting in us holding more inventory

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## Site finding resource requirements

- Financing has enabled us to be more ambitious with our connection volumes
- Reviews of our existing portfolio has shown that there is a wide variation in customer demand performance
- Historically our site finding has been very laborious and success rates (sites developed vs. potential sites visited) have been low
- The cost of having team members on site finding visits is significant and can be demoralising for employees
- As well as scaling up our site finding team we need to increase efficiency to enable organisational growth

# Our solution to challenge 1: implement a full ERM system

*Implementing a corporate level enterprise resource management (ERM) system and associated processes across our organisation has been a challenge in itself*

*Nearly every team has had to adapt their working practices*

*But the accountability and control which the system gives us is going to be a key enabler of our growth path*

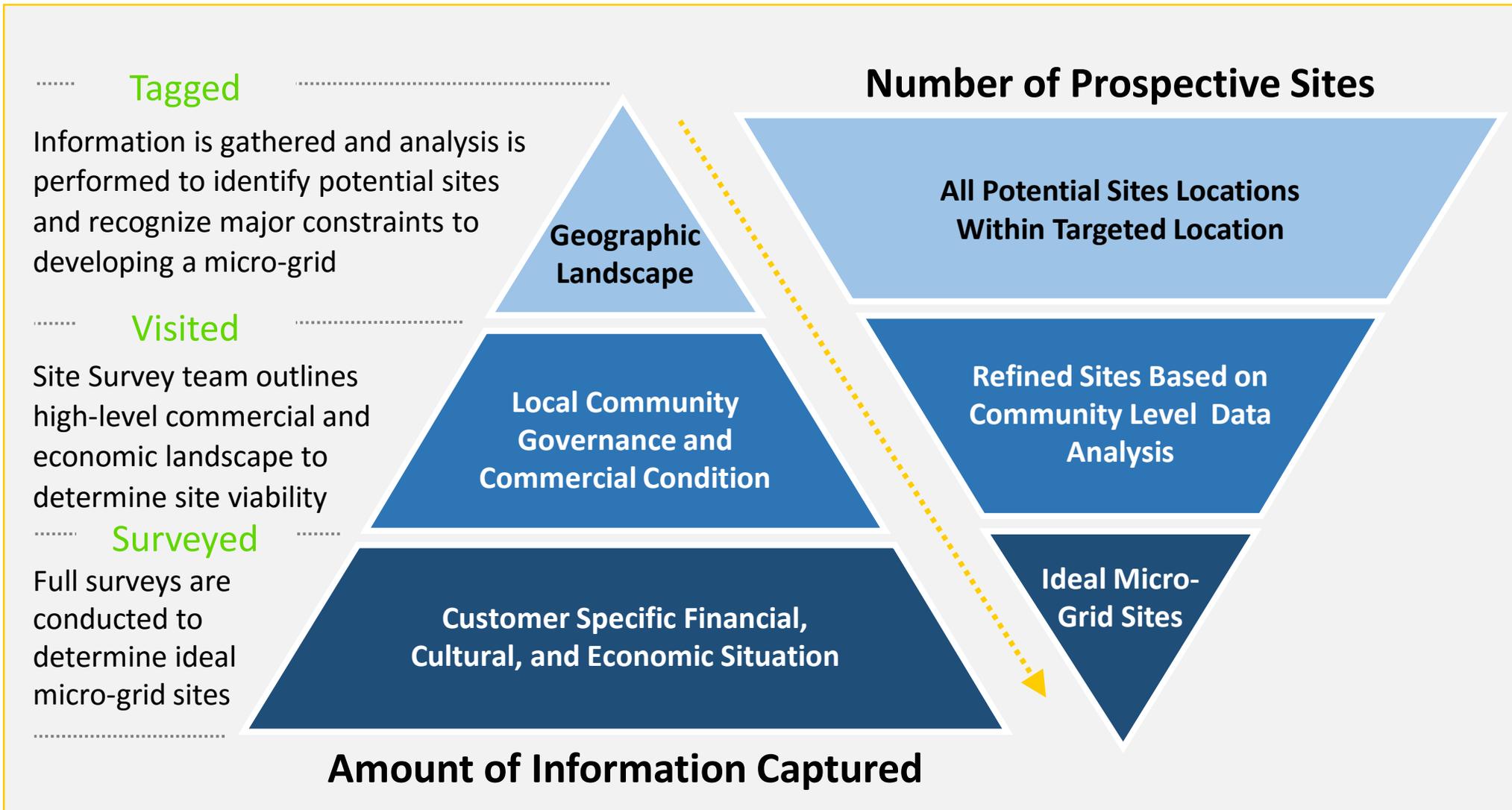
*Many accounting processes have been automated and the transparency of the inter-dependencies between our teams is greatly increased*

The screenshot displays the NETSUITE ERP system interface for PowerGen. The top navigation bar includes 'Activities', 'Transactions', 'Lists', 'Reports', 'Documents', 'Setup', 'Customization', and 'Support'. The main content area is divided into several sections:

- Home:** Features a 'Top 5 Items By Qty Sold' section with a 'Sales by Item Summary' pie chart. Below it is a 'Quick Search' box and a 'Reminders' section showing 'SuiteBundles to Update'.
- Intercompany Transactions:** A table listing transactions with columns for DATE, TYPE, DOC #, SUBSIDIARY, STATUS, MEMO (MAIN), and CLASS. It includes filters for 'CREATED BY' and 'CLASS'.
- PowerGen Transactions Pending Approval:** A table listing pending transactions with columns for TYPE, DOCUMENT NUMBER, NAME, AMOUNT, CURRENCY, MEMO, and DATE.
- Project Dashboard Kidete:** Includes 'Project Links' (Create Project Task, Gantt Chart, Enter Time, Enter Expenses), 'Project Info' (JOB NAME, CHILD OF, START DATE, ESTIMATED END DATE, STATUS), and a 'KPI Meter' showing 'Project % complete' at 0%.
- Gantt Chart:** A project schedule view for 'Kidete' showing tasks from 2016-4-28 to 2016-5-6. Tasks include Project Kick-Off, Customer Application Trip, Doc: Site Social Survey, Doc: Site Engineering Survey, PA - System Design, Doc: Full BOM, Doc: Power Drawings, Doc: Distribution Drawing, PA - Central Procurement, Buy: PV Panels, Buy: Batteries, and Buy: Metering Hardware.
- Project Tasks:** A table listing tasks with columns for ASSIGNEE, PROJECT, MILESTONE, ID, NAME, ESTIMATED WORK, ACTUAL WORK, and START DATE.

# Our solution to challenge 2: use data and automate

*Refined site finding process, leveraging GIS data analytics and customer data capture to improve operational efficiency, enabling us to scale*



# Outcomes

*Steady progress on our organisational challenges has been made, enabling us to build on our past success and meet the many external challenges which our industry faces on the strongest possible footing*

1

## Supply chain, inventory and installation management

- Digital tracking of full inventory down to the individual washer!
- Greatly improved budgeting and reporting controls
- A platform established which can grow with us and meet the requirements of a much larger organisation
- The implementation of our ERM platform has changed the companies culture – making us a more professional and accountable organisation

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## Site finding resource requirements

- We now have digital mapping, incorporating over ten data sets, for all of our target geographies
- Our most recent survey trip of rural Tanzania has had a greatly improved success rate in comparison to previous trips
- We can plan our next 12 months of site surveying in a much more structured manner, enabling us to provide our investors more confidence in our pipeline

# Way-forward

<p>Clarity on regulatory approach to grid integration</p>	<p>With over 70% of Kenya's rural population living within 1.2 km of a power line* the risk of microgrids becoming stranded assets within medium term time horizons is a real risk. Regulatory clarity as to how such a situation would be dealt with will enable us to continue funding microgrids in such locations and integrating it into our business plan</p>
<p>Progression up the chain of financing support</p>	<p>The microgrid asset class in East Africa is in the focus of many parts of the finance community. We must continue to show that as an industry we can responsibly use such facilities, evidencing that we are making progress towards the goal of ultimately using non-concessionary financing to really scale the asset class. There must be a concentration of actual deployment of microgrids.</p>
<p>Building organisations which reflect their markets</p>	<p>With the hot interest which our sector is attracting, many well-educated Westerners are being drawn to seeking employment here. Whilst this should be welcomed, organisations operating in regions such as East Africa which have very high levels of unemployment must reflect upon getting the balance between importing talent and building it locally right. We need to be embedded locally.</p>



# PowerGen

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