

VISIONLINK[®] PRODUCTIVITY

MACHINE AND JOBSITE DATA AT YOUR FINGERTIPS



VISIONLINK® PRODUCTIVITY TECHNOLOGY

MEASURE. MONITOR. MANAGE.

While every jobsite engages in production, productivity remains a challenge for many. Low productivity means low revenue and has a direct impact on profitability. VisionLink® Productivity helps you measure, monitor, and manage your assets to maximize productivity - on or off the jobsite.



REAL AND MEASURABLE RESULTS

⊕ ANALYZE PERFORMANCE

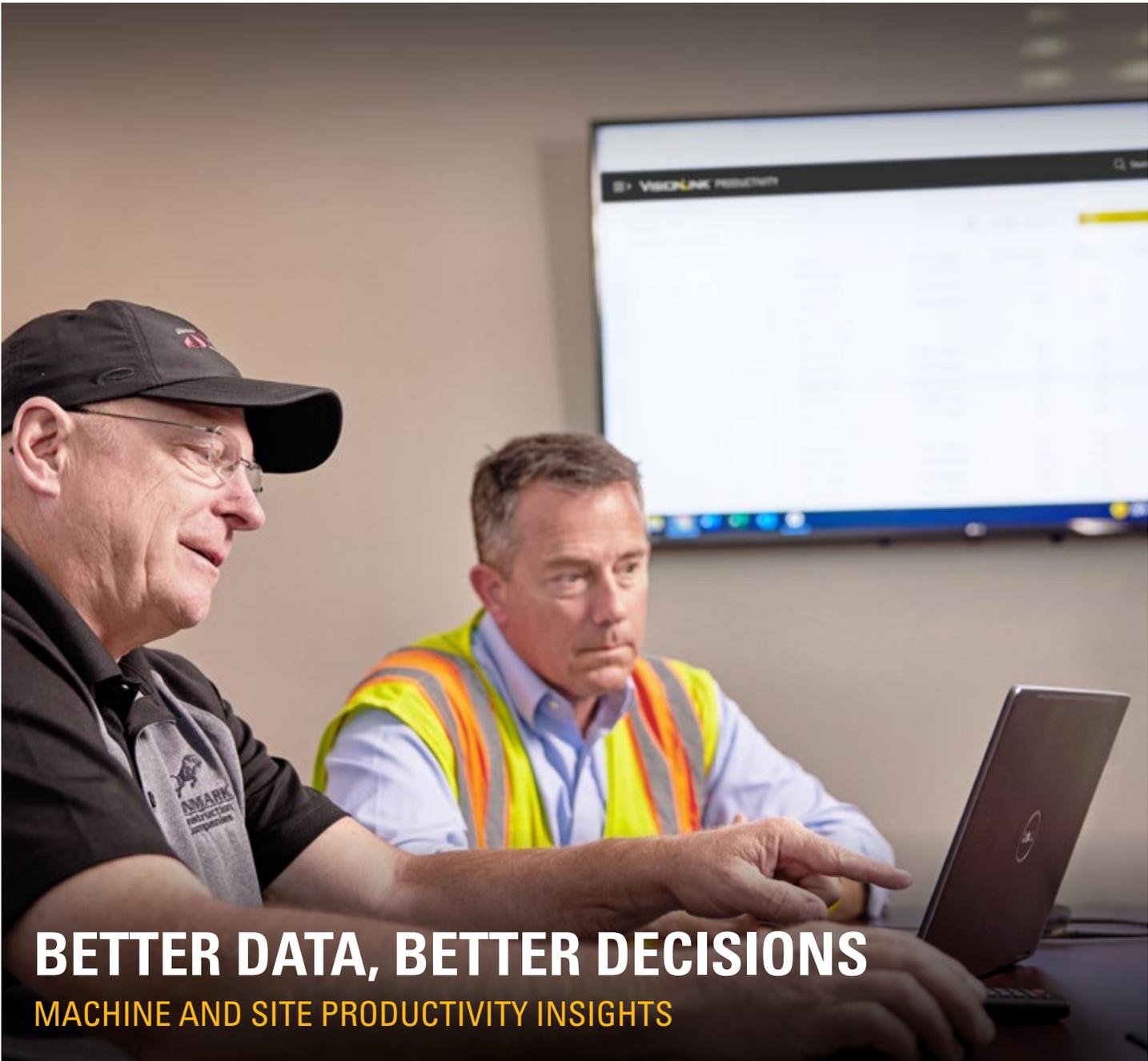
- + Track material types and tonnage moved.
- + View payload data for analysis.
- + Compare productivity between shifts or jobsites.
- + Identify opportunities to improve operator efficiency.

⊕ IMPROVE PRODUCTIVITY

- + Track hourly and daily production totals.
- + Use equipment data to optimize cycle segments.
- + View location and duration of long idle events.
- + Redeploy equipment based on utilization data.

⊕ INCREASE PROFITS

- + Identify instances of high fuel burn and implement ways to reduce unproductive idle time.
- + Reduce costs by analyzing material movement and productivity metrics to improve jobsite efficiency.
- + Use historical data for more accurate bids on future projects.
- + Monitor utilization levels to help optimize fleet size and makeup.



BETTER DATA, BETTER DECISIONS

MACHINE AND SITE PRODUCTIVITY INSIGHTS

VisionLink Productivity is an easy-to-use cloud-based platform that gathers and summarizes machine telematics and jobsite data from all your equipment - regardless of the manufacturer.*

Actionable information such as idle time, fuel burn, location, payload, load counts, total cycles, and more is transmitted from the onboard cellular Cat Product Link™ device to the web platform for users to access anywhere, anytime via a mobile, tablet, or desktop device - on or off the jobsite.

BOOST MACHINE PERFORMANCE AND JOBSITE PRODUCTIVITY

As a site manager, owner or operator, it is critical that you understand how your assets are being utilized and how work is flowing through your operations. The data summary provided by VisionLink Productivity delivers a deeper level of actionable insights, allowing users to improve machine efficiency, productivity, utilization, and reduce per-unit costs.

Note: A VisionLink subscription is required for equipment data reporting. Availability may vary by region and model. Consult your Cat dealer for details.

** Data field availability can vary by equipment manufacturer.*

Use detailed machine and site data to manage changes and improvements across the jobsite.

- Improve site productivity
- Lower cost per ton
- Improve fleet utilization
- Lower fleet costs
- Decrease idle time
- Reduce fuel burn



HOW IT WORKS

DELIVER REAL BENEFITS

Detailed payload* and machine data is transmitted from the onboard cellular Product Link™ devices on your mixed fleet of equipment to the web platform. Data is analyzed by VisionLink Productivity to provide actionable insights into jobsite productivity and equipment utilization.

- + Telematics data from all subscribed machines is analyzed to determine machine interactions and the location of events on the jobsite.
- + Location data is joined with fuel and payload* to provide a more detailed view of the machine work done on a cycle.
- + Create zones (geofences) to categorize areas and identify boundaries for improved cycle recording and tracking by zone.

** Machines must be equipped to provide payload data. Contact your Cat Dealer for more details regarding payload reporting.*

NOTE: VisionLink Productivity is capable of receiving more advanced data from machines equipped with a Cat Payload system (CPM or TPMS), which provides more in-depth data.

STEPS TO GET CONNECTED:

- 1. CONTACT YOUR CAT DEALER**
To ensure successful integration of VisionLink Productivity, consult with your Cat dealer during the setup process.
- 2. CONNECT YOUR ASSETS***
For new Cat equipment, activate the built-in hardware. Install cellular Product Link™ devices on older Cat machines and other OEM brands.
- 3. CHOOSE A SUBSCRIPTION**
Obtain a VisionLink subscription (per machine). Your Cat Dealer can help determine the best subscription to fit your business needs.
- 4. IMPLEMENT CHANGE MANAGEMENT**
Utilize data-driven insights by educating users on the platform and implementing change management.

** Machines equipped with Cat Payload (CPM or TPMS) may require additional hardware.*

ENTIRE FLEET CONNECTIVITY

BUILT IN SCALABILITY

VisionLink Productivity captures data from any subscribed machine equipped with a cellular Cat Product Link™ device, so fleets with mixed OEM equipment brands can all be incorporated into one data platform.

PRODUCTION REPORTING

- Track material types moved
- Identify trucks loaded
- Know the tonnage loaded
- Download detailed payload and cycle reports in PDF, Excel and CSV formats
- Schedule reports and dashboards to be delivered to your inbox

CYCLE SEGMENTATION ANALYSIS

- Measure performance of segments within the cycle
- Estimate fuel burn by application, and by individual parts of cycles
- Compare operations between shifts
- Optimize profit by reducing cost and fuel usage

NOTE: Some advanced data reporting requires a Cat Payload system (CPM or TPMS)



EXCAVATORS



WHEEL LOADERS



ARTICULATED TRUCKS



OFF-HIGHWAY TRUCKS



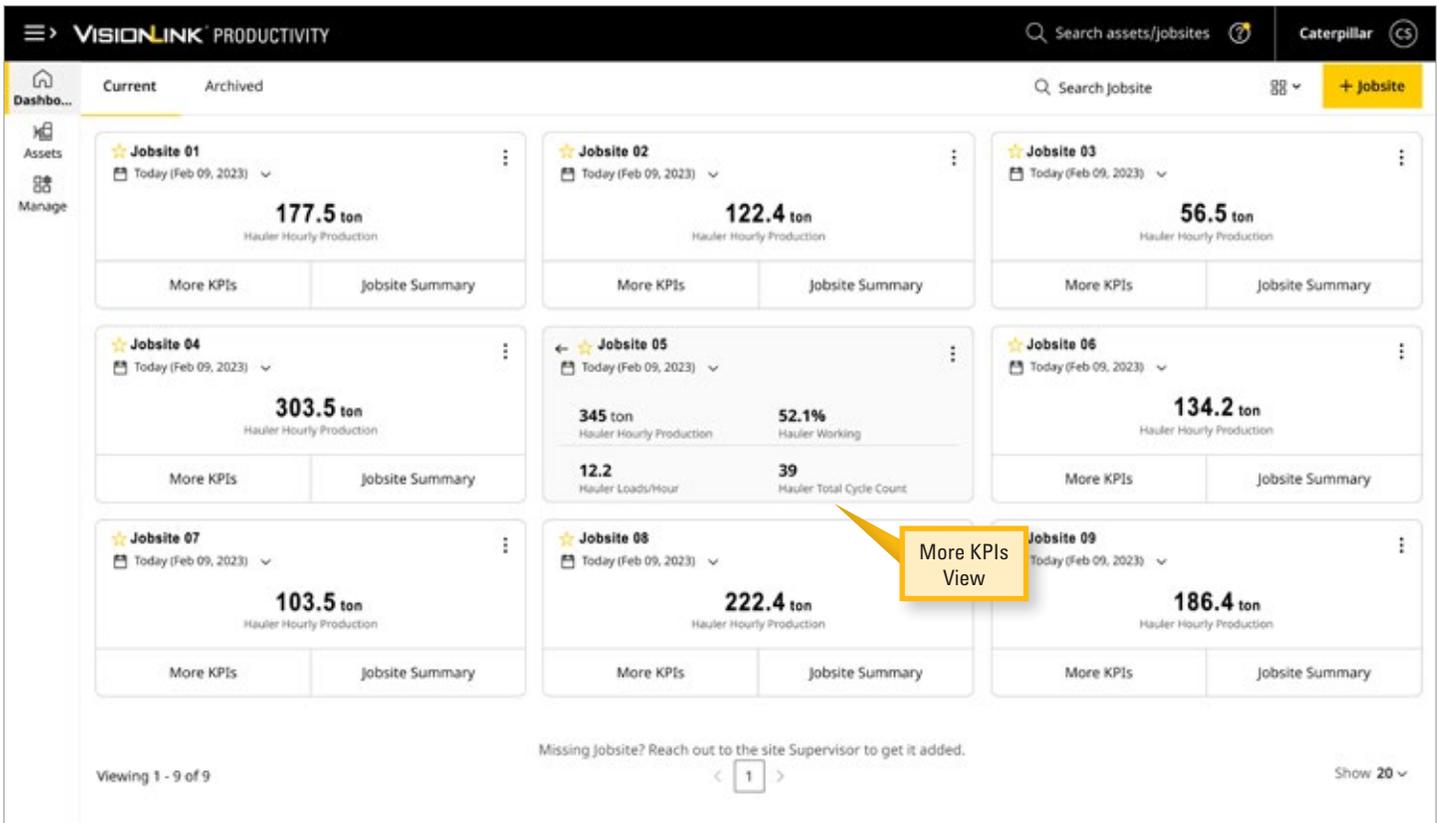
WHEEL TRACTOR-SCRAPERS

YOU HAVE QUESTIONS

VISIONLINK PRODUCTIVITY HAS THE ANSWERS

Whether you are an operator, foreman or owner, you will have questions about your operations. VisionLink Productivity can provide answers on how work is progressing wherever you are, on and off the jobsite.





JOBSITE DASHBOARD

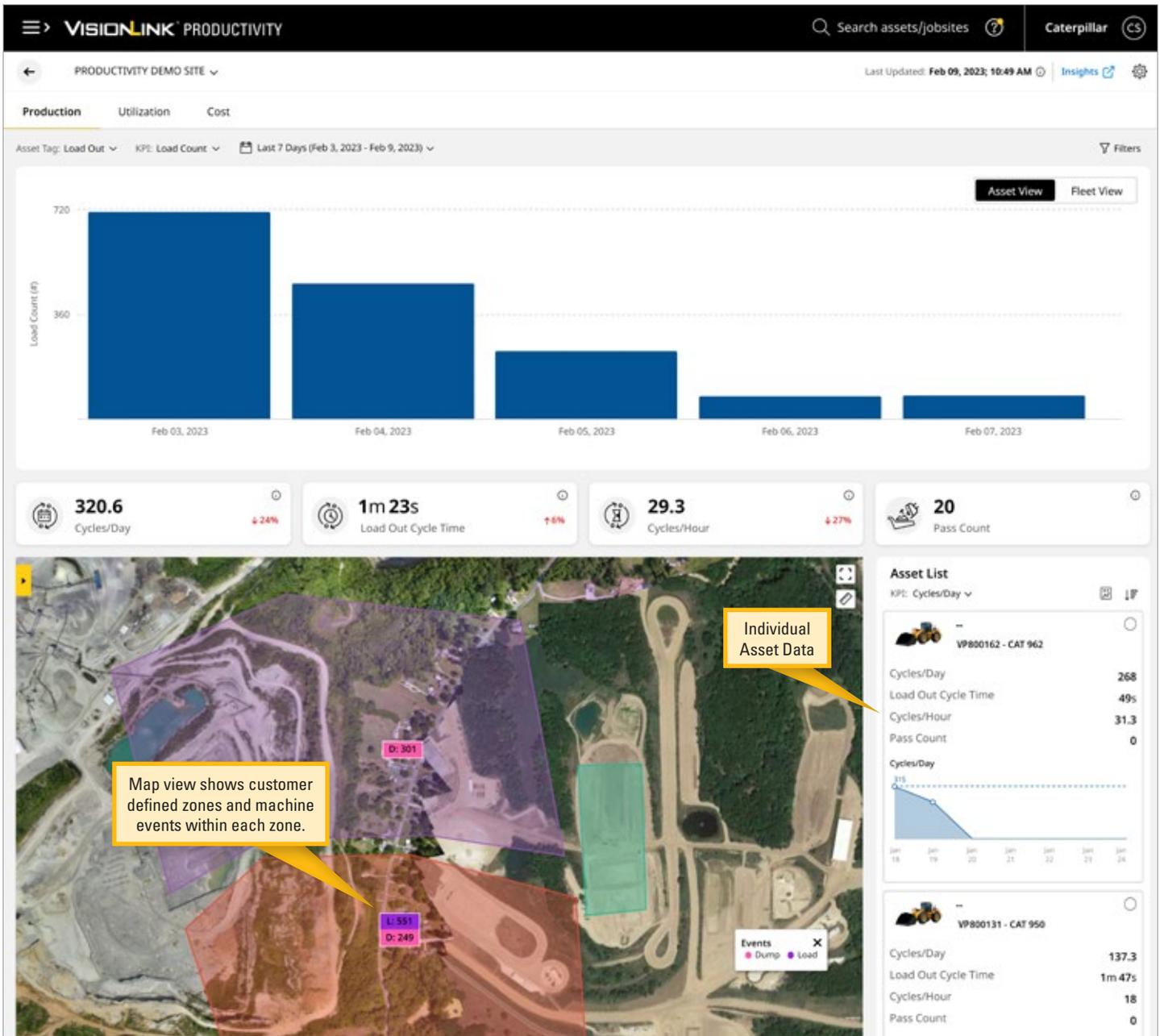
The Jobsite dashboard summarizes production and utilization details for all jobsites that have been created. Users can drill down to an individual jobsite and view details at each location.

- Overview of all created jobsites per account.
- View jobsite performance by the current day, the previous day, or over the past seven days.
- Compare key performance indicators (KPIs) across jobsites.

HOW EASY IS IT TO MANAGE MULTIPLE JOBSITE, ANYWHERE IN THE WORLD WITHIN VISIONLINK PRODUCTIVITY?

VisionLink Productivity was made for this. With jobsite information, you are able to view a summary of multiple jobsites and high-level metrics quickly and all on the same screen. Whether you're in the office, or on the go, as long as you have a web-enabled device and an internet connection, you'll have access to your jobsite information.





PRODUCTION DASHBOARD

The Production dashboard displays the efficiency of operations at a single jobsite. Detailed asset and fleet information can be reviewed, and a map view offers additional detail within customer defined zones (fill/dump, cut/load). Available data includes four KPI categories:

LOAD COUNT

- Loads Per Day
- Hauler Load Time
- Loads Per Hour
- Loader Cycle Time

SEGMENT

- Total Runtime
- Empty Stopped Time
- Loaded Stopped Time
- Cycle Time

PAYLOAD

- Hourly Production
- Loader Cycle Time
- Payload Per Cycle
- Total Payload

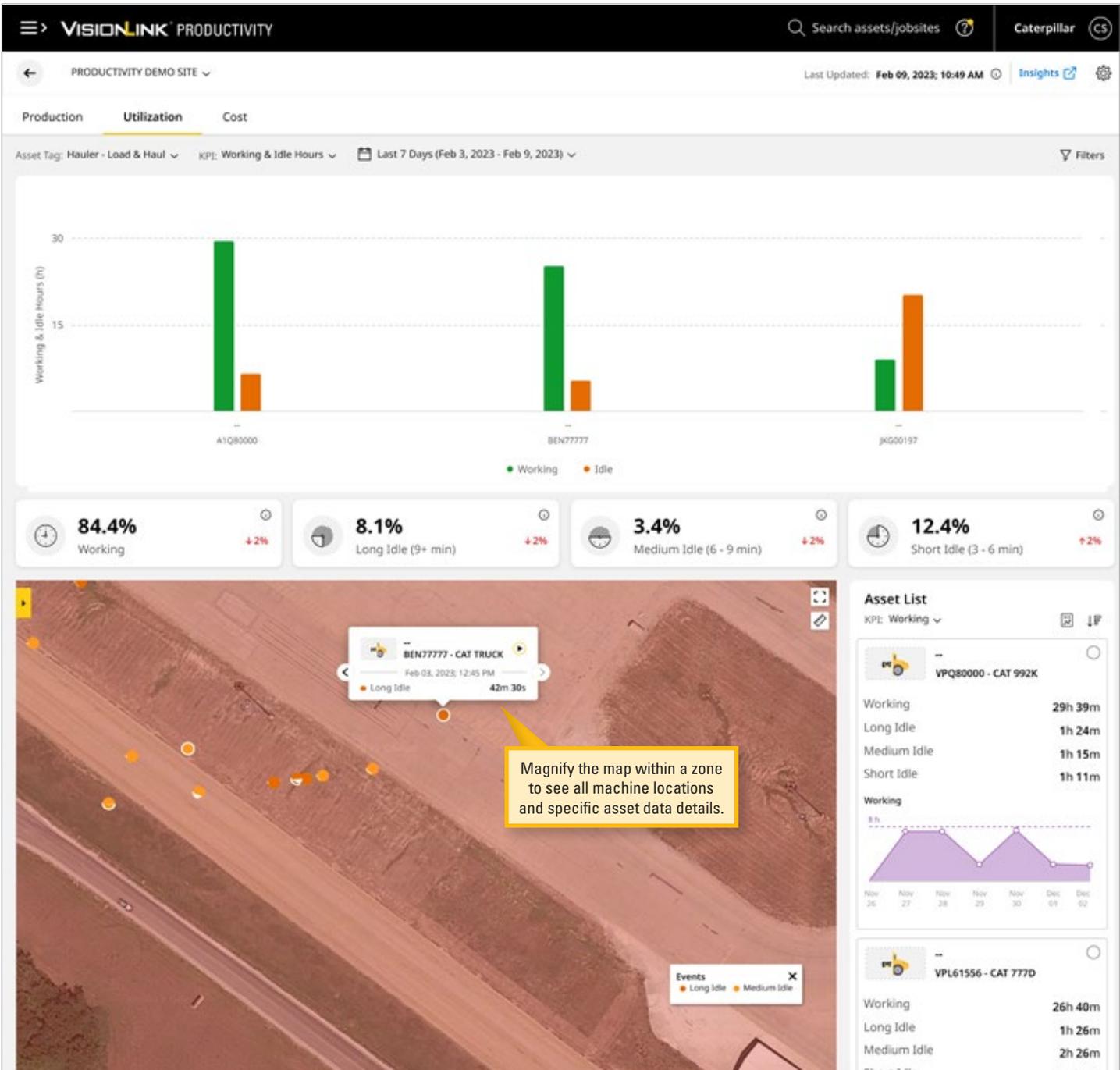
ESTIMATED VOLUME

- Estimated Fleet Volume
- Hauler/Scrapper Cycle Time
- Cycles Per Hour
- Average Pass Count/Cycle

HOW CAN I IMPROVE FLEET EFFICIENCY?

VisionLink Productivity provides data such as hourly fleet performance to help identify opportunities for increased productivity in your daily operation. For example, optimized management of shift changes, refueling process and breaks.





Magnify the map within a zone to see all machine locations and specific asset data details.

UTILIZATION DASHBOARD

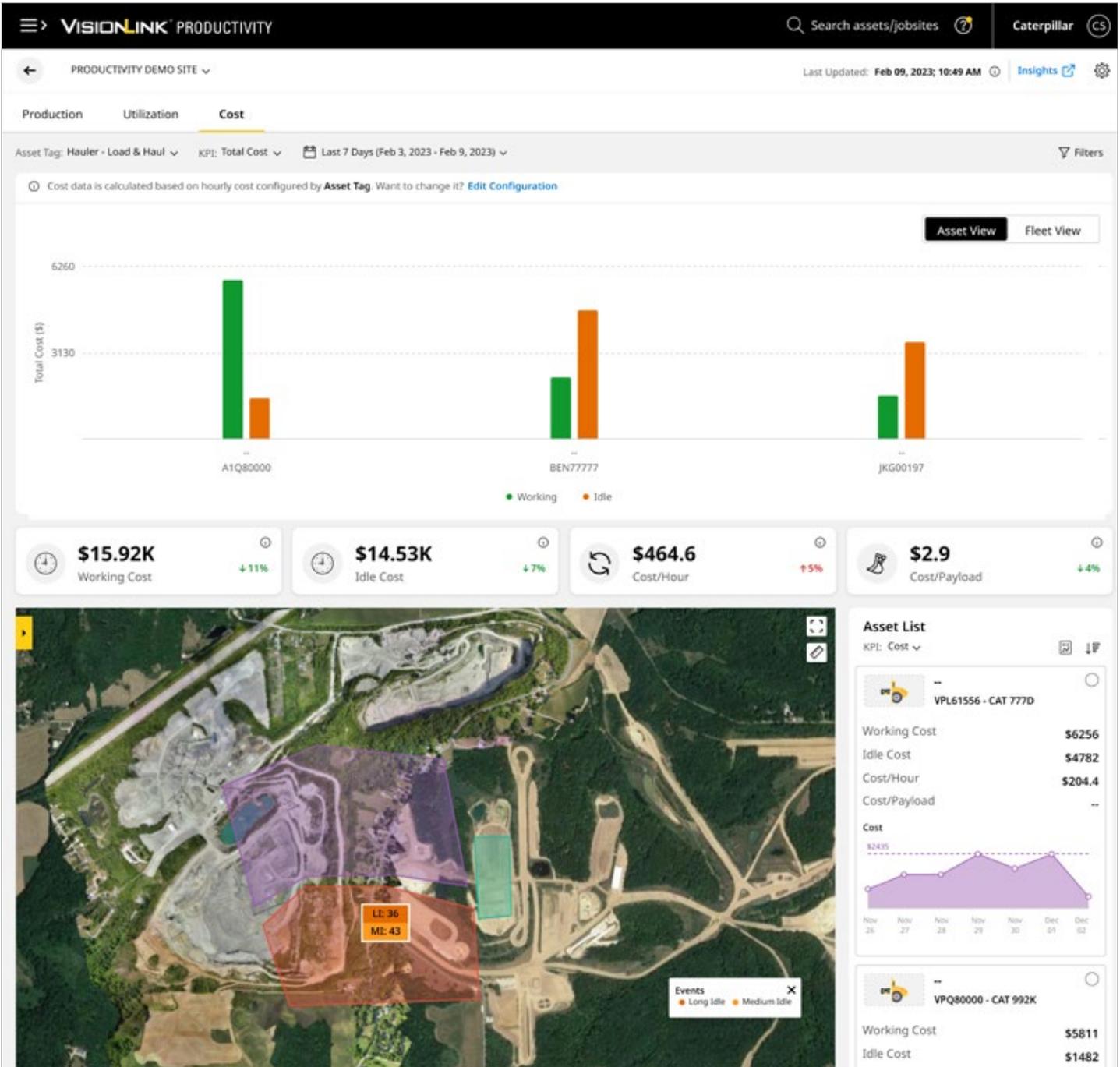
The Utilization dashboard allows jobsite managers to compare the performance of individual machines and fleets at a single jobsite based on the times they are working versus when they are idle. If a utilization issue is identified, the dashboard can be used to explore performance issues in more detail.

- Working and Idle Hours by machine
- Fleet Working Percentage
- Fleet Long Idle Percentage (9+ Minutes)
- Fleet Medium Idle Percentage (6 - 9 Minutes)
- Fleet Short Idle Percentage (3 - 6 Minutes)

HOW CAN I REDUCE EQUIPMENT IDLE TIME?

VisionLink Productivity provides utilization information, including machine working versus idle time, machine fuel burn, and map view showing idle event location. Monitoring idle activity means you can make informed adjustments to jobsite operation.





COST DASHBOARD

The Cost dashboard displays the working and idle costs broken down by individual machine, or by the entire fleet, while the map view allows users to see expenses by jobsite location. By looking at the dashboard, users can determine whether machines or jobsites are operating at higher costs than expected.

- Total Working Time Cost
- Total Idle Time Cost
- Cost Per Hour
- Cost Per Payload

HOW CAN I TRACK SITE COSTS?

VisionLink Productivity site reporting provides detail on site costs including total site costs, fuel costs, cost trends, and fuel consumption.



VISIONLINK PRODUCTIVITY Search assets/jobsites

PRODUCTIVITY DEM. Last Updated: --

Production **Utilization** Summary Map

Asset Tag: Hauler - Load & Haul Group By: None Last 7 Days (Feb 3, 2023 - Feb 9, 2023) Search Asset

Asset	Asset Start Time	Asset End Time	Total Duration	Total Fuel Burn (gal)	Working State	Sub State	Zone	Total Cost (\$)	Working Cost (\$)
BEN7777	08:59 AM Feb 09, 2023	08:59 AM Feb 09, 2023	2 m 46 s	0.1	Idling	Productive Idling	Load	8.4	--
BEN7777	08:58 AM Feb 09, 2023	08:59 AM Feb 09, 2023	2 m 24 s	0.1	Idling	Productive Idling	Load	7.3	--
BEN7777	08:58 AM Feb 09, 2023	08:58 AM Feb 09, 2023	54 s	0.3	Working	Working	Load	3.5	3.5
BEN7777	08:57 AM Feb 09, 2023	08:58 AM Feb 09, 2023	1 m	0.3	Working	Working	Load	3.9	3.9
BEN7777	08:56 AM Feb 09, 2023	08:57 AM Feb 09, 2023	42 s	0.2	Working	Working	Load	2.8	2.8
BEN7777	08:56 AM Feb 09, 2023	08:56 AM Feb 09, 2023					Load	5.4	5.4
BEN7777	Feb 09, 2023						Load	1.7	1.7
BEN7777	08:55 AM Feb 09, 2023						Load	4.1	4.1
BEN7777	08:55 AM Feb 09, 2023						Load	8	--
BEN7777	08:54 AM Feb 09, 2023						Load	3.9	--
BEN7777	08:54 AM Feb 09, 2023						Load	3.4	--
BEN7777	08:53 AM Feb 09, 2023						Load	6.7	--
BEN7777	08:52 AM Feb 09, 2023						Load	0.5	--
BEN7777	08:51 AM	08:52 AM	1 m 38 s	0	Idling	Productive Idling	Load	4.8	--

Viewing 1 - 20 of 8272 Show 20

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INSIGHTS DASHBOARD

The Insights dashboard provides a deeper level of operational data for equipment at a selected jobsite. By analyzing insights, users can determine what is causing production and utilization issues and implement corrective measures. The details for each machine are organized into Production, Utilization, Summary, and Map View.

- The Production tab displays cycle and asset production data.
- The Utilization tab displays asset utilization data.
- The Summary tab displays asset summary data.
- The Map view makes it easier to visualize an entire jobsite by displaying site images, asset event locations, and zone locations.
- Playback view shows the movement of assets on a jobsite map.
- Insights data can be downloaded and imported into other business systems for further analysis.

HOW CAN I STOP RELYING ON WHITE-BOARDS AND MANUAL COUNTING?

VisionLink Productivity monitors all connected assets on your jobsite all day long. It never takes a break, never forgets, and never runs out of ink.*

** Subject to network and system availability and normal data retention practices.*



Assets

Last 7 Days (Feb 3, 2023 - Feb 9, 2023)

1 - 20 of 2005

Assets	Cycle Count	Total Payload (ton)	Date Last Reported	Average Payload (ton)	Average Cycle/Hour	Payload/Hour (ton/h)	Payload/Fuel (ton/gal)	Total Distance
VPX00153- C... 950...	40	164.2	Feb 07, 2023; 04:24 PM	4.1	3	12.5	8	
315_IT VPX001... 315	12	6.6	Jan 30, 2023; 09:09 AM	0.6	5.3	2.9	2.6	
VPL700151- C... 950...	0	0	--	--	0	0	0	
WTN00101 VPI N00101- CAT 627K...	24	694.5	Feb 09, 2023; 11:28 AM	28.9	3.4	97.9	14.5	
VPK00154- ... 745C	--	--	Feb 09, 2023; 11:34 AM	--	--	--	--	
VPTC00445- ... 627K	264	5807	Feb 09, 2023; 10:13 AM	22	10	220.1	17.4	
STEEVE VPLW99999- C... 966...	14.28K	1788	Feb 09, 2023; 11:39 AM	0.1	717.5	89.8	--	
VPI200152- C... 950...	2150	12.81K	Feb 08, 2023; 07:01 PM	6	41.2	245.6	61.8	
VPI C99999- ... 627K	3	299.8	Feb 09, 2023; 12:00 PM	99.9	0.2	16.6	--	
VP1H00... 330	2	0	Feb 06, 2023; 01:08 PM	0	0.8	0	0	
VP1H20... 330	1	2.2	Feb 09, 2023; 09:34 AM	2.2	6.2	13.6	17.6	
VPL001... 325	1512	3376	Feb 08, 2023; 05:06 PM	2.2	85.9	191.8	53.3	
VPL003... 325	49	50.7	Feb 09, 2023; 11:57 AM	1	18.8	19.4	9.7	
VPI B00101- C... 352...	301	1582	Feb 09, 2023; 05:23 PM	5.3	74.4	391.1	52.1	
DUT13165 VPI B00001- C... D6R...	--	--	Feb 09, 2023; 05:55 PM	--	--	--	--	
VPL000... 325	--	--	--	--	--	--	--	

ASSETS DASHBOARD

The Assets dashboard summarizes production and utilization details for individual machines. Users can drill down to a particular asset and view details by date range. Available data includes:

- Cycle Count
- Total Payload
- Date Last Reported
- Average Payload
- Average Cycle/Hour
- Payload/Hour
- Payload/Fuel
- Total Distance
- Runtime Hours
- Idle Hours
- Fuel Burned

HOW CAN I ENSURE THAT EACH ASSET IS UTILIZED IN THE MOST OPTIMAL WAY?

VisionLink Productivity individual assets can be analyzed by load counts, payload and key metrics.



**ANALYZE PERFORMANCE.
IMPROVE PRODUCTIVITY.
INCREASE PROFITS.**



“IN THE PAST, WE THOUGHT WE KNEW . . . NOW WE KNOW. WE CAN MAKE DECISIONS BASED ON DATA INSTEAD OF GUT FEELINGS.”

– DR. KRISTIAN DAUB, MANAGING DIRECTOR, SCHWINGER QUARRY



VISIONLINK PRODUCTIVITY IN ACTION

Over the past decade, Schwinger Granit, a quarry operation near Nittenau, Germany, has taken a remarkable journey. By analyzing fleet and site performance data, the company has seen a significant increase in efficiency and productivity. Using this data to guide decision-making has also improved engagement and created an efficiency culture at Schwinger. And that has brought tangible results to the bottom line.

REMARKABLE RESULTS THROUGH DATA INSIGHTS

Having data insights that can be shared with operators and other employees educates everyone on the value of efficiency. It also builds engagement. And greater engagement boosts site performance. Working with the insights provided by VisionLink Productivity, Schwinger Quarry has achieved some remarkable results.

Through the increased use of VisionLink Productivity data since 2020, Schwinger has lowered fuel consumption, reducing CO₂ emissions from engine exhaust by an estimated 150 tons.* The operation has also moved from two shifts per day to one, giving employees more time for improved work-life balance.

MEETING TODAY'S CHALLENGES

VisionLink Productivity helps Schwinger Granit meet the challenges of rising fuel prices and price-sensitive customers. By helping to improve overall productivity, it improves quarry profits while reducing fuel burn which equates to comparatively lower CO₂ emissions.

With this valuable Cat technology tool, Dr. Kristian Daub says the quarry was able to track idle time, identifying when and where it occurs. He adds, “You can save operating hours, and in the end you have less cost, more profit, and you can handle your challenges for the future.”

* Schwinger emissions estimation based on 2.64 kg CO₂ per liter of diesel. Schwinger CO₂ emissions take into account the annual fuel consumption of their primary production fleet (face to crusher and face to waste dump). Yearly emissions benchmark based on annual calculations starting in 2020.



LOWER CO₂ EMISSIONS

Insights from VisionLink Productivity led to an estimated decrease of 150 tons of carbon dioxide from engine exhaust emissions.*

TECHNICAL REQUIREMENTS

HOW TO GET CONNECTED

AVAILABLE ON THE FOLLOWING

VisionLink Productivity can be used with new and legacy Cat equipment and other OEM machines with a cellular Product Link™ device.

VisionLink Productivity is also capable of receiving advanced productivity data from machines equipped with a payload system (Cat Production Measurement [CPM] or Truck Payload Measurement System [TPMS]), for more data reporting.

Please contact your local Cat dealer for more information on payload and cycle segmentation kits available for your equipment.

Supported Machine Models:

- + Articulated Trucks
- + Excavators
- + Off-Highway Trucks
- + Wheel Loaders
- + Wheel Tractor-Scrapers

TECHNICAL REQUIREMENTS

1. Machine must have good cellular coverage
2. Cellular Product Link telematics system
3. VisionLink subscription (per machine)
4. Note: Machines equipped with Cat Payload (CPM or TPMS) may require additional hardware.

Web Application Requirements:

- + Mobile, tablet or a desktop device
- + Internet connection
- + Subscribed machines in your customer account
- + Cat customer login credentials (CWS & UCID)
- + All machines must be subscribed for data summary to be updated every 30-60 minutes.

In addition, VisionLink Productivity:

- + Supports mixed fleets
- + Advanced logic data is standard with the latest Cat machines
- + Upgrade kits to support older machines, for advanced logic data
- + Does not require any land-based infrastructure
- + Can be set up as a GPS based only system

WWW.CAT.COM/PRODUCTIVITY

VisionLink Productivity availability may vary by region. Consult your Cat dealer for details.

For more complete information on Cat products, dealer services and industry solutions, visit us on the web at www.cat.com.

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(Global)

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Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment. See your Cat dealer for available options.

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