

Cat® Advanced Productivity App

for Cat Production Measurement 2.0



PRODUCTIVITY



With detailed production history, productivity, and efficiency metrics at your fingertips, you can better develop future project cost and profitability estimates to help improve the bottom line. The Cat® Advanced Productivity application is a web-based tool used to visualize Cat machine production-related data and complements Cat Production Measurement 2.0, a Cat PAYLOAD technology. The tool is accessed from VisionLink® and includes a user customizable report dashboard, cycle by cycle downloadable data, and a list maintenance feature for truck and material ID lists.

Go beyond basic operational status and production with actionable information answering specific questions essential to improving your bottom line.

KEY PRODUCTION METRICS	QUESTIONS ANSWERED	VisionLink Subscription + Cat Connect Technology		Advanced Productivity
		Essentials	¹ Payload + Essentials	² Payload + Essentials
Utilization & Fuel Use				
*Run time (daily)	<i>Is my machine being utilized?</i>	✓	✓	✓
*Fuel Consumed (daily)		✓	✓	✓
◊ Working		✓	✓	✓
◊ Idling		✓	✓	✓
*Fuel Consumption Rate		✓	✓	✓
Basic Productivity				
*Total Payload (daily)	<i>Is my machine being productive? How efficiently is it producing?</i>		✓	✓
*Payload / hour			✓	✓
*Payload / liter (gal.)			✓	✓
Site & Material Management	<i>Is my machine doing what I expect?</i>			
*Application & segment detail	<i>What did it move? From where? To where?</i>			✓
◊ Time & Cycles	<i>How much time? How many cycles?</i>			✓
◊ Fuel & Distance	<i>How many tons of product X did I sell? To whom did I sell it?</i>			✓
*Productivity & efficiency by operator	<i>Which operators are my efficiency leaders?</i>			✓
*Production by material ID	<i>Which need more training?</i>			✓
*Production by truck ID	<i>Do bottlenecks suggest adjustments to number, type & capacity in my fleet?</i>			✓

¹Payload Technology versions: Cat Production Measurement v1.0, v1.1, or v1.2

²Cat Production Measurement v2.0

TOOLS FOR SITE OPERATIONS MANAGEMENT

1. User customizable graphical dashboard

- makes it easy to visualize your operation's **Key Performance Metrics (KPI)**
- **SAVE TIME** and increase a manager's **EFFECTIVENESS** by automating data collection with timely reporting and presenting information in ways that help managers make more informed and quicker decisions; helping them spot opportunities to improve operational **EFFICIENCY** and financial **PROFITABILITY**.
- Fine-tune operations to improve **BIDDING ACCURACY** and increase **PROFITABILITY**.
- Highlight signs that haul roads might need maintenance for **QUICKER CYCLES** or monitor where bottlenecks are occurring to correctly match loading and hauling units to help **OPTIMIZE FLEET SIZING** and correct machine assignments.

2. Export data in .csv file format

- Export detailed cycle by cycle production data tagged by date, time, operator, material ID, truck ID, and application profile.
- Upload into your business/accounting systems; or for further analysis in applications such as Microsoft® EXCEL™.

3. Wireless off-board list management

- Create and manage your truck ID and material ID lists from the back office and "push" them wirelessly to your loaders³ to update their on-board lists on-the-go with no need to stop their operations.
- **SAVE TIME**, travel, and avoid lost **PRODUCTION**.

AVAILABILITY

L Series	M Series
950L	950M
962L	962M
966L	966M / M XE
972L	972M / M XE
980L	980M
	982M

Equipped with:

1. Cat Production Measurement 2.0 and
2. Product Link™ Elite PLE641 3G cellular telematics

INDUSTRIES

- Materials producers: mining, aggregates, sand and gravel, cement and asphalt, plants, fertilizer
- Metals industries: mills, smelters, scrap processors
- Municipal: waste and recycling, transfer stations

Essential KPIs Reported

- **Application Time:**
 - Application time: load/haul/dump, roading
 - Segment time: load, travel loaded, dump, travel empty
 - Runtime
- **Application Fuel:**
 - Fuel burned
 - Fuel burn rate
 - Segment fuel burned
 - Segment burn rate
- **Cycles:**
 - Cycle count
 - Average cycle time
 - Average fuel burn per cycle
 - Average segment breakdown (fuel, distance, and time)
 - Day tracker cycle
- **Payload:**
 - Payload per hour
 - Payload per fuel
 - Payload distribution plot



KPI data visualized in dashboard with interactive charts that can be customized to suit your preferences.

Manage material and truck lists from the office and synchronize wirelessly with the onboard lists of just one or your entire loader³ fleet.



CAT Manage List Serial Number: EDW6214 Created Date: 23-08-2016 14:20:41 Created in: Off Board Available Lists Import Export

	Name	Material ID	Density - Agred
1	GRAVEL-PTOUN	1	1830
2	GRAVEL-DRY	3	1810
3	GRAVEL-WET	5	2020
4	SAND-DRY	2	1400
5	SAND-WET	4	1810

CAT Manage List Serial Number: EDW6214 Created Date: 23-08-2016 14:20:41 Created in: Off Board Available Lists Import Export

	Name	Payload ID	Target Weight - Name
1	TABC	1	35
2	T30	2	28
3	T10	99	19
4	Smith Exc	101	12
5	Smith Exc	102	12
6	Smith Exc	105	14
7	Dans Lintage	309	12

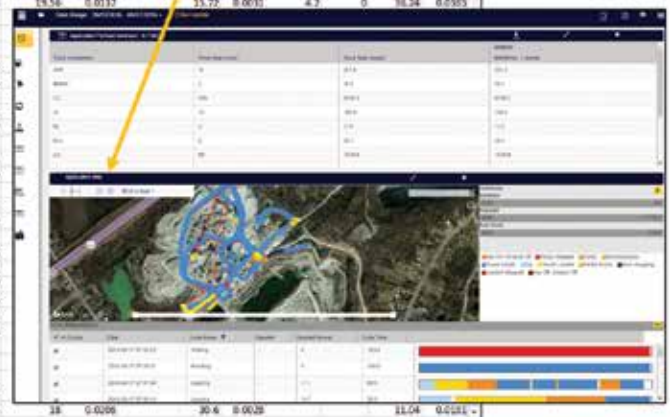
³Equipped with CPM 2.0 and subscribed in Cat Advanced Productivity app.

Export detailed production data as .csv files and import into Microsoft® EXCEL™ or your business accounting systems.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	
Bucket Payload Measurement Time (CST)	Bucket Payload Sequence	Bucket Payload (tonne)	Track Store Time/Date (CST)	Track Total Buckets	Operator Description	Material ID	Material Description	Track ID	Track Description													
1	5/12/2016 6:36	1	11.9246	5/12/2016 6:38	2	22.5603	B01	C46	CRSH AG6	309	Carier Rd.											
2	5/12/2016 6:37	2	10.4437	5/12/2016 6:38	2	22.5603	B01	C46	CRSH AG6	309	Carier Rd.											
3	5/12/2016 6:42	1	11.1278	5/12/2016 6:44	2	21.1397	B01	C52	CRSE SVDW2	246	Williams Contr.											
4	5/12/2016 6:43	2	12.0118	5/12/2016 6:44	2	21.1397	B01	C52	CRSE SVDW2	246	Williams Contr.											
5	5/12/2016 6:45	1	11.1771	5/12/2016 6:47	2	23.1069	B01	G63	GREY GRAIN3	141	Kien Trans.											

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	
Start Time (CST)	Operator	Application	Total Cycle Time(sec)	Total Cycle Dist(km)	Cycle Fuel(l)	Moved Payload (tonne)	Start Latitude	Start Longitude	Destination Latitude	Destination Longitude	Dig - Time (sec)	Travel - Dist (km)	Travel - Time (sec)	Loaded - Out(km)	Loaded - Time (sec)	Dump - Stopped (sec)	Dump - Time (sec)	Partial - Dump - Time (sec)	Partial - Dump - Dist (km)	Travel - Empty - Time (sec)	Travel - Empty - Dist (km)	
5	5/12/2016 6:34	Bob P.	Roading	101.4	0.4942	1.5218	38.5368184	-90.17524718	38.5387204	-90.17698793												
6	5/12/2016 6:35	Bob P.	Loading	54.36	0.0476	0.6009	11.9246	38.54061306	-90.17657471	38.54026198	-90.17652803	6.72	0.0026	20.4	0.0232		22.96	0.002	4.7	0	39.4	0.6942
7	5/12/2016 6:37	Bob P.	Loading	55.36	0.0586	0.7834	11.5667	38.54056075	-90.17657471	38.54056075	-90.17657471	5.28	0.0028	19.56	0.0137		15.72	0.0011			38.34	0.6385
8	5/12/2016 6:38	Bob P.	Waiting	100.92	0	0.3455	38.54049818	-90.1763882	38.54049818	-90.1763882												
9	5/12/2016 6:40	Bob P.	Other	16.44	3.00E-04	0.1628	0.4055	38.54049818	-90.1763882	38.54049818	-90.1763882											
10	5/12/2016 6:40	Bob P.	Roading	72.36	0.3423	0.7268	38.54049818	-90.1763882	38.53937912	-90.17703886												
11	5/12/2016 6:42	Bob P.	Loading	69.48	0.0536	0.6788	11.4282	38.53937912	-90.1779888	38.53944397	-90.1779888	8.24	0.0028									
12	5/12/2016 6:43	Bob P.	Loading	56.76	0.0275	0.5527	11.8	38.53942121	-90.1779888	38.53944397	-90.1779888	7.08	0.0041									
13	5/12/2016 6:44	Bob P.	Roading	75.48	0.2355	0.6587	38.53944397	-90.1779888	38.54061306	-90.17652803												
14	5/12/2016 6:45	Bob P.	Loading	54.8	0.0459	0.5904	11.171	38.54061306	-90.17657471	38.54057912	-90.17652803	5.88	0.0023									
15	5/12/2016 6:46	Bob P.	Loading	34.36	0.0199	0.3943	12.5435	38.54056075	-90.17652803	38.54056075	-90.17657471	20.32	0.0017									
16	5/12/2016 6:47	Bob P.	Roading	58.2	0.2586	0.6346	38.54056075	-90.17652803	38.53949818	-90.17739215												
17	5/12/2016 6:48	Bob P.	Loading	79.32	0.0541	0.4771	12.4408	38.53895187	-90.17939823	38.53884239	-90.17939823	6.24	0.0034									
18	5/12/2016 6:49	Bob P.	Loading	70.92	0.0304	0.6122	11.0743	38.53997476	-90.17939823	38.5399632	-90.17939823	4.56	0.0029									
19	5/12/2016 6:50	Bob P.	Roading	85.68	0.2157	0.4525	-1.7523	38.53895187	-90.17939823	38.5399632	-90.17939823											
20	5/12/2016 6:52	Bob P.	Loading	61.8	0.0927	0.3928	13.8826	38.53901672	-90.17939823	38.5390589	-90.17939823	6.48	0.0028									
21	5/12/2016 6:53	Bob P.	Loading	79.8	0.039	0.5867	10.3996	38.53902817	-90.17939823	38.5390589	-90.17939823	4.48	0.0012									
22	5/12/2016 6:54	Bob P.	Roading	137.28	0.5278	0.8063	38.5390358	-90.17939823	38.53963254	-90.17929132												
23	5/12/2016 6:58	Bob P.	Loading	97.34	0.0399	0.4657	11.6284	38.53963254	-90.17929132	38.53963254	-90.17939823	7.08	0.0016									
24	5/12/2016 6:59	Bob P.	Loading	122.28	0.0429	0.7723	12.5183	38.53963254	-90.17929132	38.53963254	-90.17939823	8	0.0013									
25	5/12/2016 6:59	Bob P.	Loading	96.88	0.0602	0.6321	14.7886	38.53963254	-90.17929132	38.53963254	-90.17929132	5.16	0.0017									
26	5/12/2016 7:01	Bob P.	Loading	90.48	0.0429	0.7002	18.3203	38.53962491	-90.17929132	38.53961346	-90.17939823	8.84	0.0035									
27	5/12/2016 7:02	Bob P.	Loading	98.84	0.0503	0.4468	12.1592	38.53996324	-90.17929132	38.53997912	-90.17929132	5.18	0.0023									
28	5/12/2016 7:04	Bob P.	Loading	56.28	0.0216	0.4126	11.9917	38.53962491	-90.17929132	38.53963254	-90.17929132	5.32	0.0035									
29	5/12/2016 7:05	Bob P.	Roading	183.36	0.824	0.8426	38.53962491	-90.17929132	38.53963254	-90.17939823												
30	5/12/2016 7:07	Bob P.	Waiting	81.48	4.00E-04	0.2359	38.53749584	-90.17488296	38.53749584	-90.17488296												
31	5/12/2016 7:09	Bob P.	Roading	277.08	1.185	1.4347	38.53749584	-90.17488296	38.53749584	-90.17488296												
32	5/12/2016 7:13	Bob P.	Pile Cleanup	24.36	0.0094	0.2233	15.0433	38.53517912	-90.17978186	38.53538918	-90.17978186	5.64	0.0024									
33	5/12/2016 7:14	Bob P.	Loading	85.76	0.0429	0.3924	10.509	38.53517912	-90.17978186	38.53538918	-90.17978186	6.12	0.0034									

Explore the "what, when, and where" of activity on your site with the "Application Map View" tool.



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