



Global Andon Board

Overview

Milwaukee Vietnam

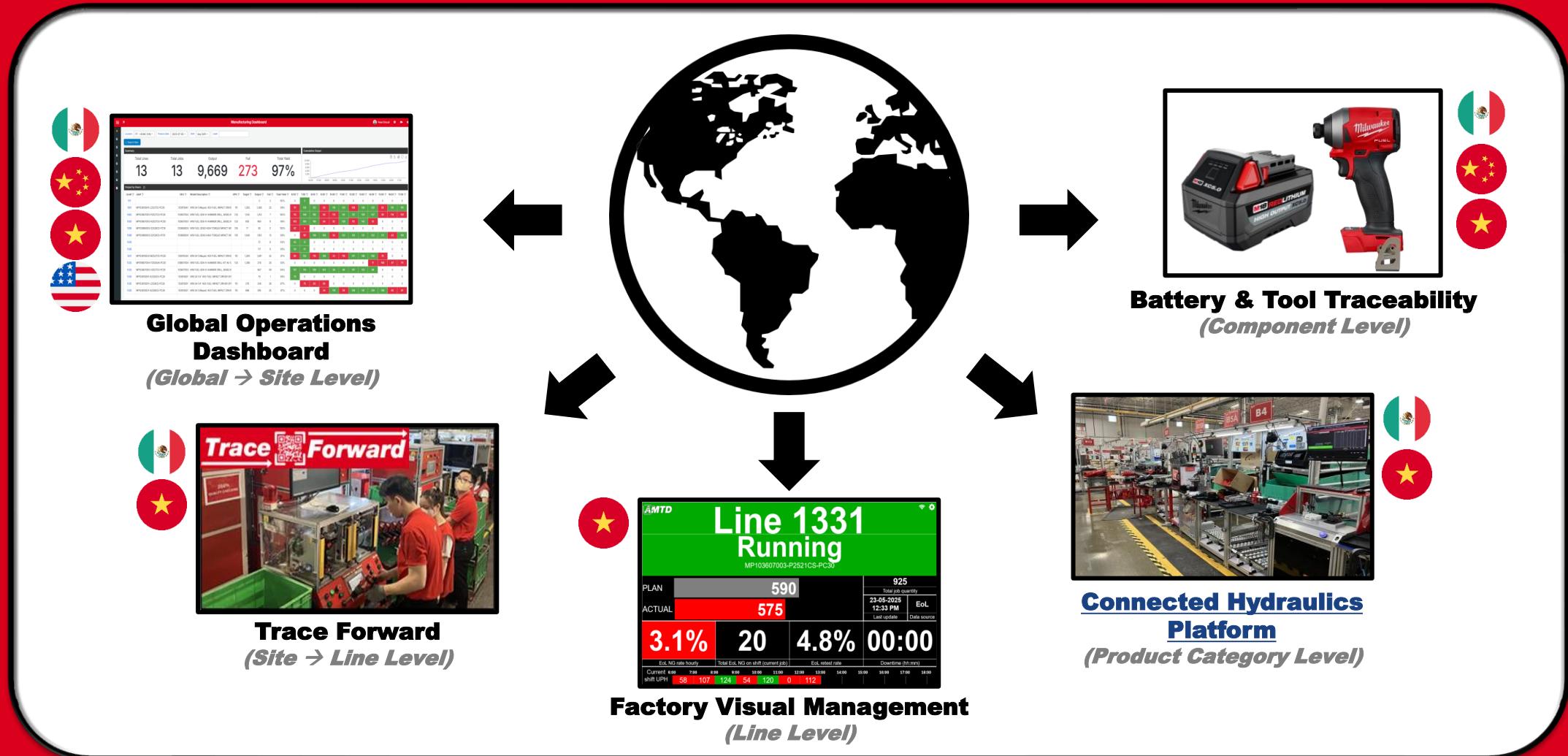
2025



Andon board

Project charter

Problem	Scope	Key date
<p>Production output relies on highly manual tracking:</p> <ul style="list-style-type: none">Time-consuming and human error.Difficulty in real-time monitoring.Delayed corrective actions.A manual approach limits transparency.	<p>In Scope:</p> <ul style="list-style-type: none">Built in SHPT (F5 and F3)Real-Time Production Data DisplayHourly Performance MonitoringDowntime and Waste Time TrackingUser training and explaining <p>Out of Scope:</p> <ul style="list-style-type: none">Production planning and scheduling transparencyWorkforce coordinationImmediate response execution	<ul style="list-style-type: none">31/Oct/2024: Complete prototype in F3Feb/2025: apply for all rotor, stator, and battery linesJun/2025: Scale up for all connected lines.Dec/2025: Complete for 42 lines in Console
Value Proposition	Project objective	Metrics
<ul style="list-style-type: none">Real-Time Visibility: Provides accurate, up-to-date production data for immediate insights.For PRD,PM, QC: Improve issues awareness, enables proactive responses, reducing downtime and keeping production on track.For manager: Data reliability, automates data collection, ensuring accuracy and consistency for trustworthy production tracking.	<p>Build an ANDON board for production to visualize output and status of each line.</p> <ul style="list-style-type: none">Increase Line Visibility: Provide quick access to the status of production lines and the shop floor.Promote Data-Driven Decisions: Enable informed, timely decisions with real-time production data.Support QA control NG rate real-time actual: Continuously track defect rates and quality metrics to enable early issue detection.	<p><u>Baseline Metrics:</u></p> <ul style="list-style-type: none">Manually update production progress.Manually updated UPHManually change line status.EoL NG rate NOT visualized. <p><u>Target Metrics:</u></p> <ul style="list-style-type: none">Automatically update production progress: 100% linesAutomatically updated UPH: 100% linesAutomatically change line status: 100% linesEOL NG rate visualized: 70% lines
Risk of Doing Nothing		
<p>Without visibility into line status, quality, and production progress, line leaders will:</p> <ul style="list-style-type: none">Wasting time on report manual and missing early signs of risk.Lack of data-driven insights leads to slower response issues.Increasing operational costs.		
Executive sponsor BH, HK, Hiep N	Business owner Linh H	Project leader Michael P
Project partner QC, PRD, PM, AUT		





ANDON Project

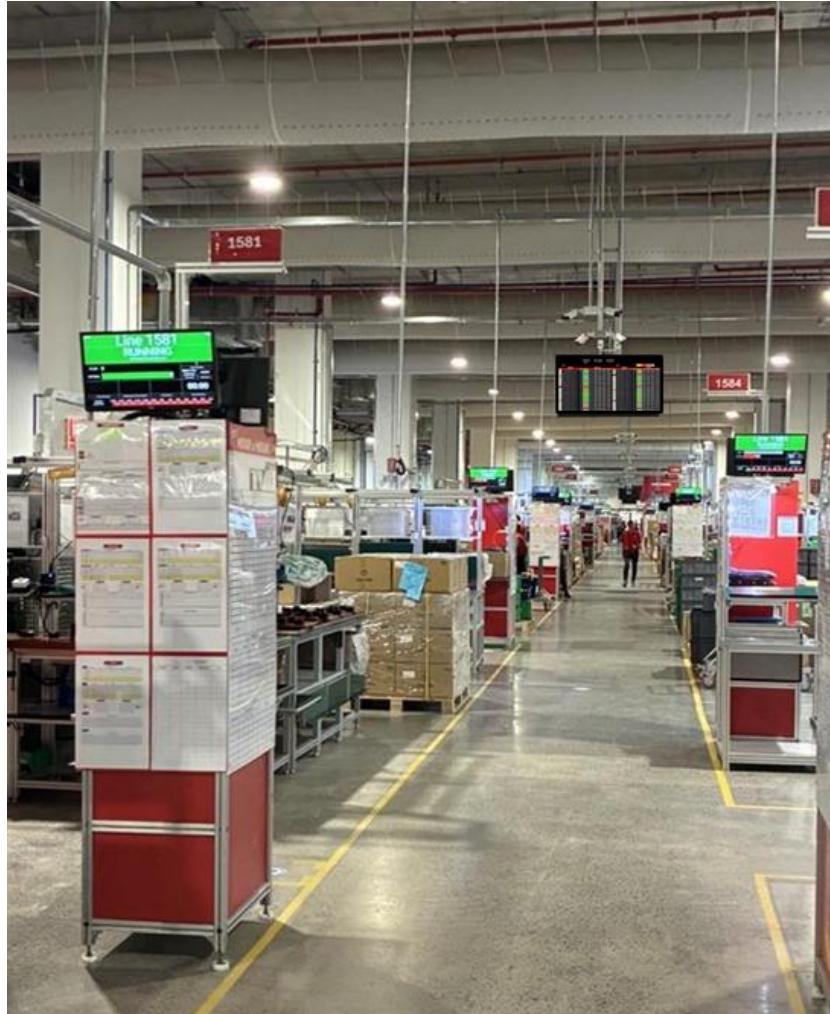
Project Management FLOW





ANDON Project

Data Sources



Connected
Equipment
Data

E-Factory MES
Data

Manual
Control



databricks

Combines Multiple Data Sources For **True Line Status**



Global Site Tiers

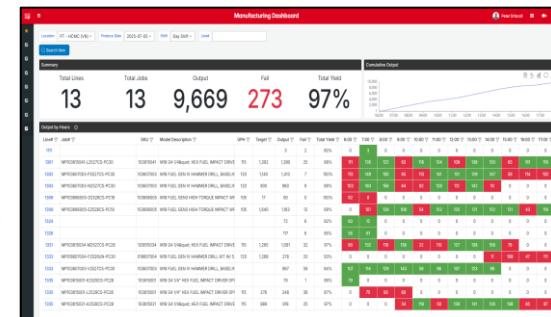
AMTD Tools Build For the Sites

Global

Year	Category	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	2024	2025	YTD
	Standard Cost of Production															
	Actual-Fast															
	Budget	\$115,415	\$115,415	\$115,704	\$122,114	\$135,089	\$140,843	\$152,718	\$165,529	\$178,340	\$191,150	\$203,961	\$215,772	\$115,415	\$122,114	\$135,089
	Prior-Fast															
	Prior Year															
	Units Produced															
	Actual/Fast	2,007	2,745	3,625	3,984	4,055	5,610	5,651	2,718	5,084	5,461	5,458	5,458	2,007	2,745	3,625
	Budget	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250
	Prior Year	2,198	2,515	2,147	2,541	3,029	2,913	3,116	2,459	2,159	2,627	2,265	2,265	2,198	2,515	2,147
	3,256	3,074	2,784	3,059	2,368	2,615	2,697	2,235	2,439	2,856	3,293	3,293	3,293	3,256	3,074	2,784
	Delivery															
	Actual-Fast	549	1,044	895	932	895	1,140	1,083	886	929	1,113	1,141	1,141	549	1,044	895
	Budget	676	644	710	760	875	867	1,059	875	770	869	754	8179	676	644	710
	Prior Year	479	279	740	740	883	883	1,000	883	883	883	883	883	479	279	740
	1,010	810	841	844	739	852	823	697	637	789	804	804	804	1,010	810	841
	Quality															
	Actual	226	168	800	216	362	211	297	274	281	227	189	189	226	168	800
	Prior Year	61	207	95	173	128	218	210	67	348	237	485	206	61	207	95
	Target	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
	IPOC (PPM)															
	Actual	24	43	43	43	43	43	43	43	43	43	43	43	24	43	43
	Prior Year	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200
	Target	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200
	DOC (PPM)															
	Actual	62	64	47	54	42	25	17	63	10	8	127	80	62	64	47

Digital Scorecard

Tier 3 – Site Level



Tier 2 – Area Level

Phase 1	Total lines		Line Running		Downtimes		Phase 2	Information		Production		Information		Production			
	UpH	DownH	UpH	DownH	UpH	DownH		UpH	DownH	UpH	DownH	UpH	DownH	UpH	DownH		
1301	CT103000001-A2435CS-PC23	A625	Running	0	0	0	1312	CT1030000016-A2435CS-PC23	A626	Running	0	0	1320	643	535	0	
1302	MP103000001-A2435CS-PC23	A627	No Plan	130	0	0	1313	MP1030015001-A2432CS-PC23	A627	No Plan	0	0	0	0	0	0	0
1303	MP1030000016-A2435CS-PC23	A628	Running	130	1072	1075	1314	MP1030015001-A2431CS-PC23	A628	Running	130	1072	1075	0	0	0	0
1304	MP103000001-A2435CS-PC23	A629	Running	130	130	943	1315	MP1030015001-A2434CS-PC23	A629	Running	130	130	951	0	0	0	0
1305	MP103000001-A2434CS-PC23	A630	Running	130	0	0	1316	MP103000001-A2434CS-PC23	A630	No Plan	0	0	0	0	0	0	0
1306	MP103000001-A2434CS-PC23	A631	Running	130	130	700	1317	MP103000001-A2434CS-PC23	A631	Running	130	130	700	0	0	0	0
1307	MP103000001-A2434CS-PC23	A632	Running	130	130	700	1318	MP103000001-A2435CS-PC23	A632	Running	130	130	700	0	0	0	0
1308	CT103000002-A2436CS-PC23	A633	Running	130	130	700	1319	MP103000001-A2435CS-PC23	A633	Running	130	130	700	0	0	0	0
1309	CT103000001-A2435CS-PC23	A634	Running	130	130	700	1320	MP103000001-A2435CS-PC23	A634	Running	130	130	700	0	0	0	0
1310	CT103000001-A2435CS-PC23	A635	Running	130	130	700	1321	MP103000001-A2435CS-PC23	A635	Running	130	130	700	0	0	0	0
1311	MP103000001-A2435CS-PC23	A636	Running	130	130	700	1322	MP103000001-A2435CS-PC23	A636	Running	130	130	700	0	0	0	0
1312	MP103000001-A2435CS-PC23	A637	Running	130	130	700	1323	MP103000001-A2435CS-PC23	A637	Running	130	130	700	0	0	0	0
1313	MP103000001-A2435CS-PC23	A638	Running	130	130	700	1324	MP103000001-A2435CS-PC23	A638	Running	130	130	700	0	0	0	0
1314	MP103000001-A2434CS-PC23	A639	Running	130	130	700	1325	MP103000001-A2434CS-PC23	A639	Running	130	130	700	0	0	0	0
1315	MP103000001-A2434CS-PC23	A640	Running	130	130	700	1326	MP103000001-A2434CS-PC23	A640	Running	130	130	700	0	0	0	0
1316	MP103000001-A2434CS-PC23	A641	Running	130	130	700	1327	MP103000001-A2434CS-PC23	A641	Running	130	130	700	0	0	0	0
1317	CT103000001-A2435CS-PC23	A642	Running	130	130	700	1328	CT103000001-A2435CS-PC23	A642	Running	130	130	700	0	0	0	0
1318	CT103000001-A2435CS-PC23	A643	Running	130	130	700	1329	CT103000001-A2435CS-PC23	A643	Running	130	130	700	0	0	0	0
1319	MP103000001-A2435CS-PC23	A644	Running	130	130	700	1330	MP103000001-A2435CS-PC23	A644	Running	130	130	700	0	0	0	0
1320	CT103000001-A2435CS-PC23	A645	Running	130	130	700	1331	CT103000001-A2435CS-PC23	A645	Running	130	130	700	0	0	0	0
1321	CT103000001-A2435CS-PC23	A646	Running	130	130	700	1332	CT103000001-A2435CS-PC23	A646	Running	130	130	700	0	0	0	0
1322	CT103000001-A2435CS-PC23	A647	Running	130	130	700	1333	CT103000001-A2435CS-PC23	A647	Running	130	130	700	0	0	0	0
1323	CT103000001-A2435CS-PC23	A648	Running	130	130	700	1334	CT103000001-A2435CS-PC23	A648	Running	130	130	700	0	0	0	0
1324	CT103000001-A2435CS-PC23	A649	Running	130	130	700	1335	CT103000001-A2435CS-PC23	A649	Running	130	130	700	0	0	0	0
1325	CT103000001-A2435CS-PC23	A650	Running	130	130	700	1336	CT103000001-A2435CS-PC23	A650	Running	130	130	700	0	0	0	0
1326	CT103000001-A2435CS-PC23	A651	Running	130	130	700	1337	CT103000001-A2435CS-PC23	A651	Running	130	130	700	0	0	0	0
1327	CT103000001-A2435CS-PC23	A652	Running	130	130	700	1338	CT103000001-A2435CS-PC23	A652	Running	130	130	700	0	0	0	0
1328	CT103000001-A2435CS-PC23	A653	Running	130	130	700	1339	CT103000001-A2435CS-PC23	A653	Running	130	130	700	0	0	0	0
1329	CT103000001-A2435CS-PC23	A654	Running	130	130	700	1340	CT103000001-A2435CS-PC23	A654	Running	130	130	700	0	0	0	0
1330	CT103000001-A2435CS-PC23	A655	Running	130	130	700	1341	CT103000001-A2435CS-PC23	A655	Running	130	130	700	0	0	0	0
1331	CT103000001-A2435CS-PC23	A656	Running	130	130	700	1342	CT103000001-A2435CS-PC23	A656	Running	130	130	700	0	0	0	0
1332	CT103000001-A2435CS-PC23	A657	Running	130	130	700	1343	CT103000001-A2435CS-PC23	A657	Running	130	130	700	0	0	0	0
1333	CT103000001-A2435CS-PC23	A658	Running	130	130	700	1344	CT103000001-A2435CS-PC23	A658	Running	130	130	700	0	0	0	0
1334	CT103000001-A2435CS-PC23	A659	Running	130	130	700	1345	CT103000001-A2435CS-PC23	A659	Running	130	130	700	0	0	0	0
1335	CT103000001-A2435CS-PC23	A660	Running	130	130	700	1346	CT103000001-A2435CS-PC23	A660	Running	130	130	700	0	0	0	0
1336	CT103000001-A2435CS-PC23	A661	Running	130	130	700	1347	CT103000001-A2435CS-PC23	A661	Running	130	130	700	0	0	0	0
1337	CT103000001-A2435CS-PC23	A662	Running	130	130	700	1348	CT103000001-A2435CS-PC23	A662	Running	130	130	700	0	0	0	0
1338	CT103000001-A2435CS-PC23	A663	Running	130	130	700	1349	CT103000001-A2435CS-PC23	A663	Running	130	130	700	0	0	0	0
1339	CT103000001-A2435CS-PC23	A6															



ANDON Project

Display information

PM
Production
Quality

Office

Phase 1		Information				Phase 2		Information		Production					
Line	Job No.	Model	Status	Uph	Target	Actual	Downtime	Line	Job No.	Model	Status	Uph	Target	Actual	Downtime
1301	CTR103606036-A2435CS-PC23	A615	Running	120	700	700	0.0	1311	CTR103615021-A2438CS-PC23	A615	Running	120	700	700	0.0
1301	CTR103606036-A2435CS-PC23	A609	Running	120	645	535	0.0	1312	CTR103606036-A2435CS-PC23	A609	Running	120	643	535	0.0
1301	CTR103606036-A2435CS-PC23	A615	Change over	120	0	0	0.0	1313	CTR103615021-A2438CS-PC23	A615	Breakdown	110	0	0	0.0
1303	MP103615001-A2423CS-PC23	A615	No Plan	110	0	0	0.0	1315	MP103615001-A2431CS-PC23	A615	Running	130	1072	1075	0.0
1304	MP103615001-A2431CS-PC23	A615	Running	130	1072	1075	0.0	1316	MP103616001-A2431CS-PC23	A615	Running	120	409	241	0.0
1305	MP103616001-A2431CS-PC23	A617	Running	120	390	391	0.0	1318	MP103616001-A2434CS-PC24	A609	Running	120	1230	953	0.0
1306	MP103616001-A2434CS-PC24	A609	No Plan	120	0	0	0.0	1319	MP103761001-A2434CS-PC24	A705	Running	120	1307	1017	0.0
1307	MP103761001-A2434CS-PC25	A705	Running	120	1307	1017	0.0	1320	CTR103606036-A2435CS-PC23	A615	Running	120	700	700	0.0
1308	CTR103615022-A2438CS-PC23	A615	Running	120	700	700	0.0	1321	CTR103606036-A2435CS-PC23	A609	No Plan	0	0	0	0.0
1309	CTR103606036-A2435CS-PC23	A609	No Plan	0	0	0	0.0	1322	MP103616001-A2431CS-PC17	A617	Breakdown	110	1302	989	0.0
1310	MP103615001-A2435CS-PC23	A617	Breakdown	120	1321	987	0.0	1323	MP103616001-A2431CS-PC23	A615	Running	110	1302	1045	0.0
1311	MP103615001-A2435CS-PC23	A617	Running	110	1302	1045	0.0	1324	MP103615001-A2431CS-PC23	A615	No Plan	130	1072	1076	0.0
1312	MP103615001-A2433CS-PC23	A617	Running	130	1072	1076	0.0	1325	MP103616001-A2433CS-PC23	A617	Running	120	409	241	0.0
1313	MP103616001-A2433CS-PC23	A617	Running	120	400	241	0.0	1326	MP103615001-A2444CS-PC23	A616	Running	120	1230	953	0.0
1314	MP103615001-A2444CS-PC23	A616	Running	120	400	241	0.0	1327	MP103616001-A2444CS-PC23	A616	Ranger down	120	1230	986	0.0
1315	MP103616001-A2444CS-PC23	A616	Change over	120	0	0	0.0	1328	MP103761001-A2434CS-PC25	A716	Running	120	1307	1017	0.0
1316	MP103761001-A2434CS-PC25	A716	Running	120	1307	1017	0.0	1329	CTR103615022-A2438CS-PC23	A615	Running	120	700	700	0.0
1317	CTR103615022-A2438CS-PC23	A615	Running	120	700	700	0.0	1330	CTR103606036-A2435CS-PC23	A609	Running	120	643	235	0.0
1318	CTR103606036-A2435CS-PC23	A609	Running	120	643	235	0.0	1331	MP103617001-A2422CS-PC17	A617	Running	120	1321	987	0.0
1319	MP103617001-A2422CS-PC17	A617	Running	120	1321	987	0.0	1332	MP103616001-A2431CS-PC23	A615	No Plan	0	0	0	0.0
1320	MP103615001-A2431CS-PC23	A615	No Plan	0	0	0	0.0	1333	MP103616001-A2431CS-PC23	A615	Running	130	1072	1072	0.0
1321	MP103615001-A2431CS-PC23	A615	Running	130	1072	1072	0.0	1334	MP103616001-A2431CS-PC23	A617	Change over	0	0	0	0.0
1322	MP103616001-A2433CS-PC23	A617	Change over	120	400	242	0.0	1335	CTR103615022-A2438CS-PC23	A615	No Plan	0	0	0	0.0
1323	CTR103615022-A2438CS-PC23	A615	No Plan	0	0	0	0.0	1336	CTR103606036-A2435CS-PC23	A609	Breakdown	120	643	666	0.0
1324	CTR103606036-A2435CS-PC23	A609	Breakdown	120	643	666	0.0	1337	MP103617001-A2422CS-PC17	A617	Running	120	643	1248	0.0

Production line



Viewer:

- Group leaders
- Production supervisor
- PM supervisor

Position: PM office, Prod office and QC office.

Information put on view:

- Total lines running
- Overall line status
- Model runs on each line
- Actual/target quantity

Viewer:

- Operators
- Line leaders
- Line QC
- Line PM

Position: at the beginning of the lines

Information put on view:

- Line number
- Line status
- Shift target quantity
- Planning quantity
- Actual output quantity
- Tracking information



Global ANDON Project

Vietnam - Display Information

