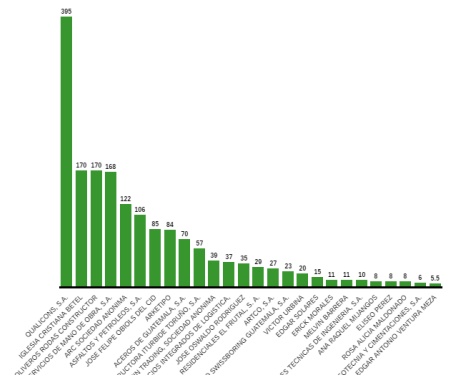


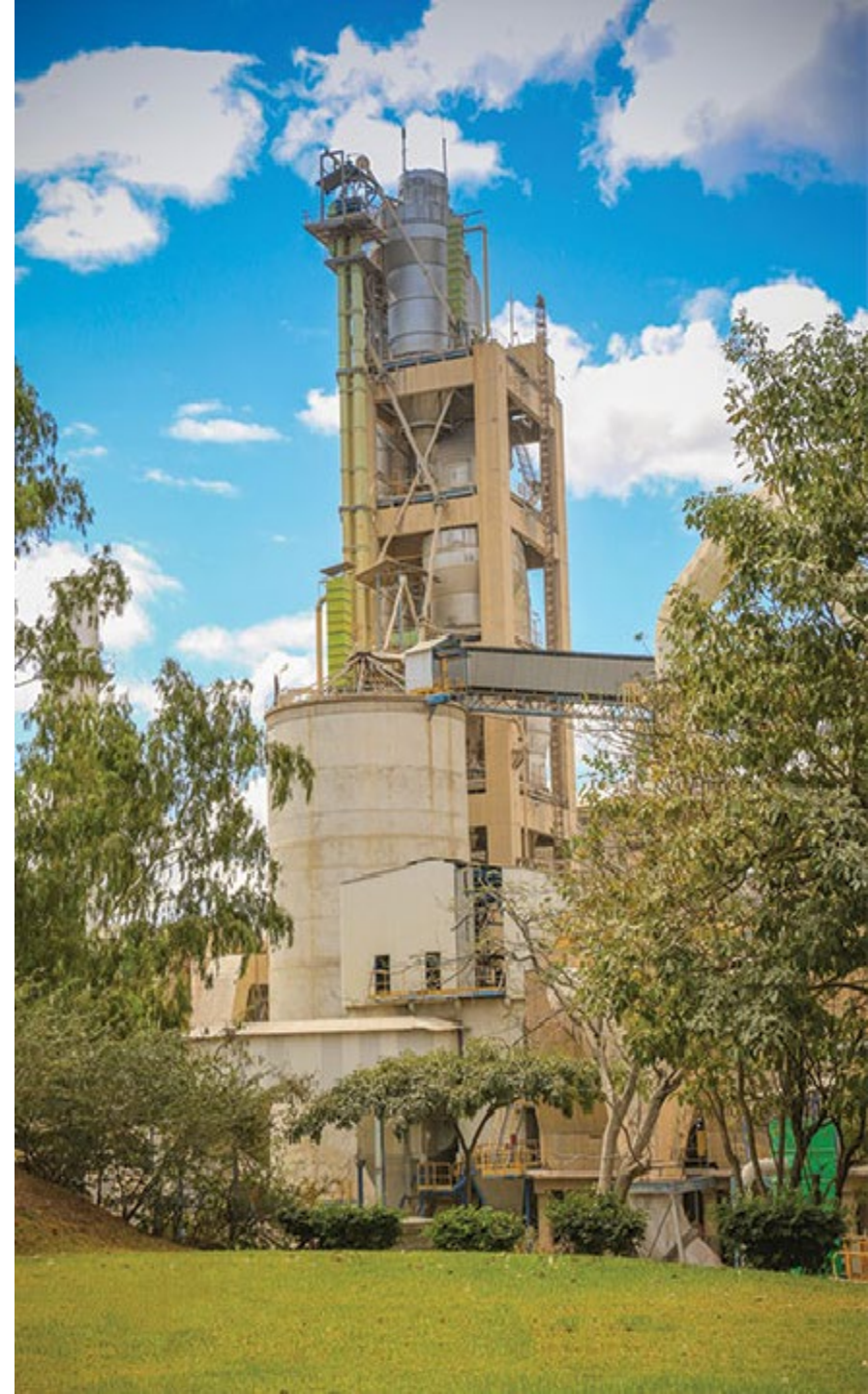
How Cementos Progreso is leveraging Techonology Expertise to Maximize the value of Advanced Analytics in the Cloud

Jorge Díaz
BI Business Partner



About Cementos Progreso

- Progreso is a regional group based on Guatemala, leader in comprehensive solutions for construction.
- Cementos Progreso was founded in 1899 in Guatemala as a Company dedicated to manufacturing and selling cement.
- Since then, Progreso has developed more than 10 leading brands in the building materials and solutions sector.
- In 2006 evolves to become a also a provider of comprehensive construction solutions
- Currently Progreso group covers different business areas such as
 - Cement manufacturing
 - Lime manufacturing
 - Agregates manufacturing
 - Ready mix production
 - Building materials stores
 - And others

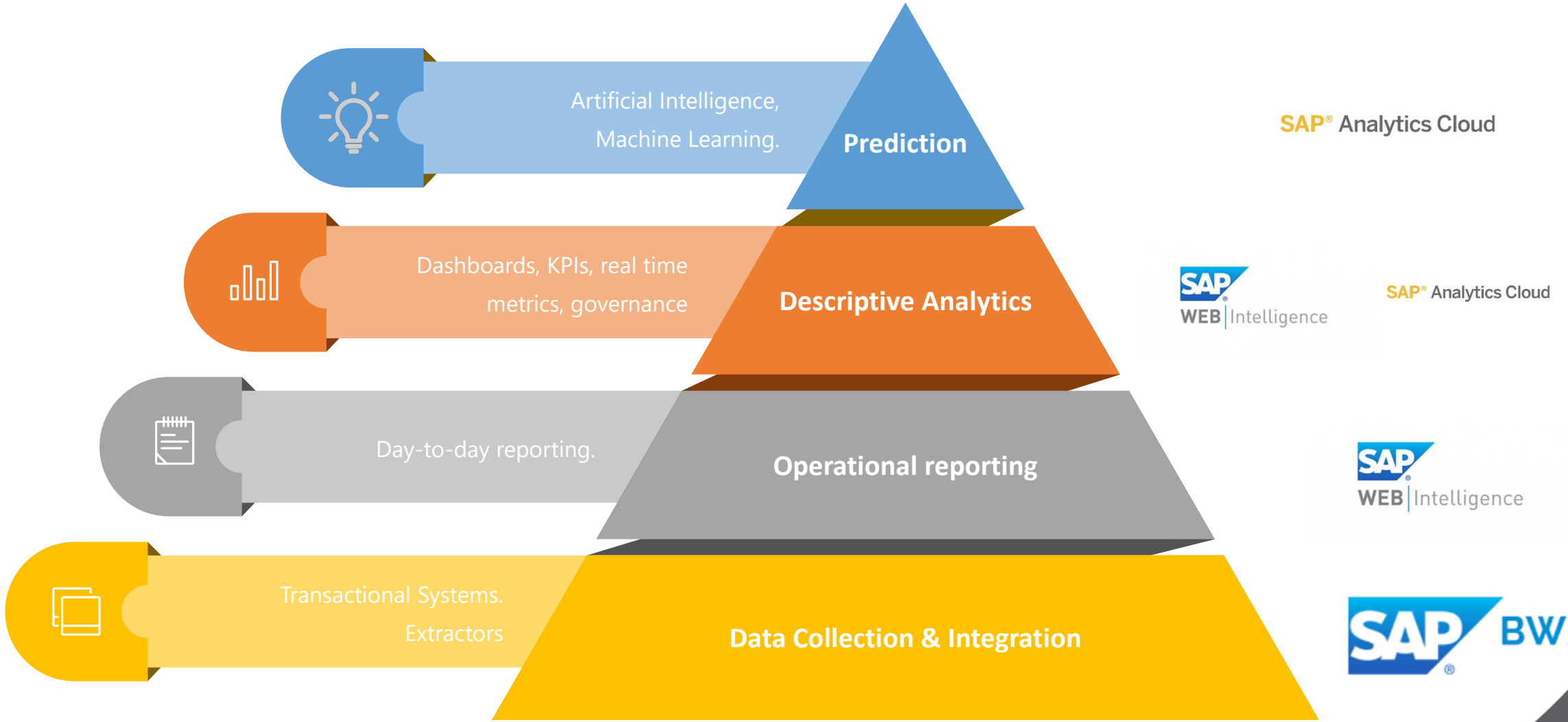


About Cementos Progreso

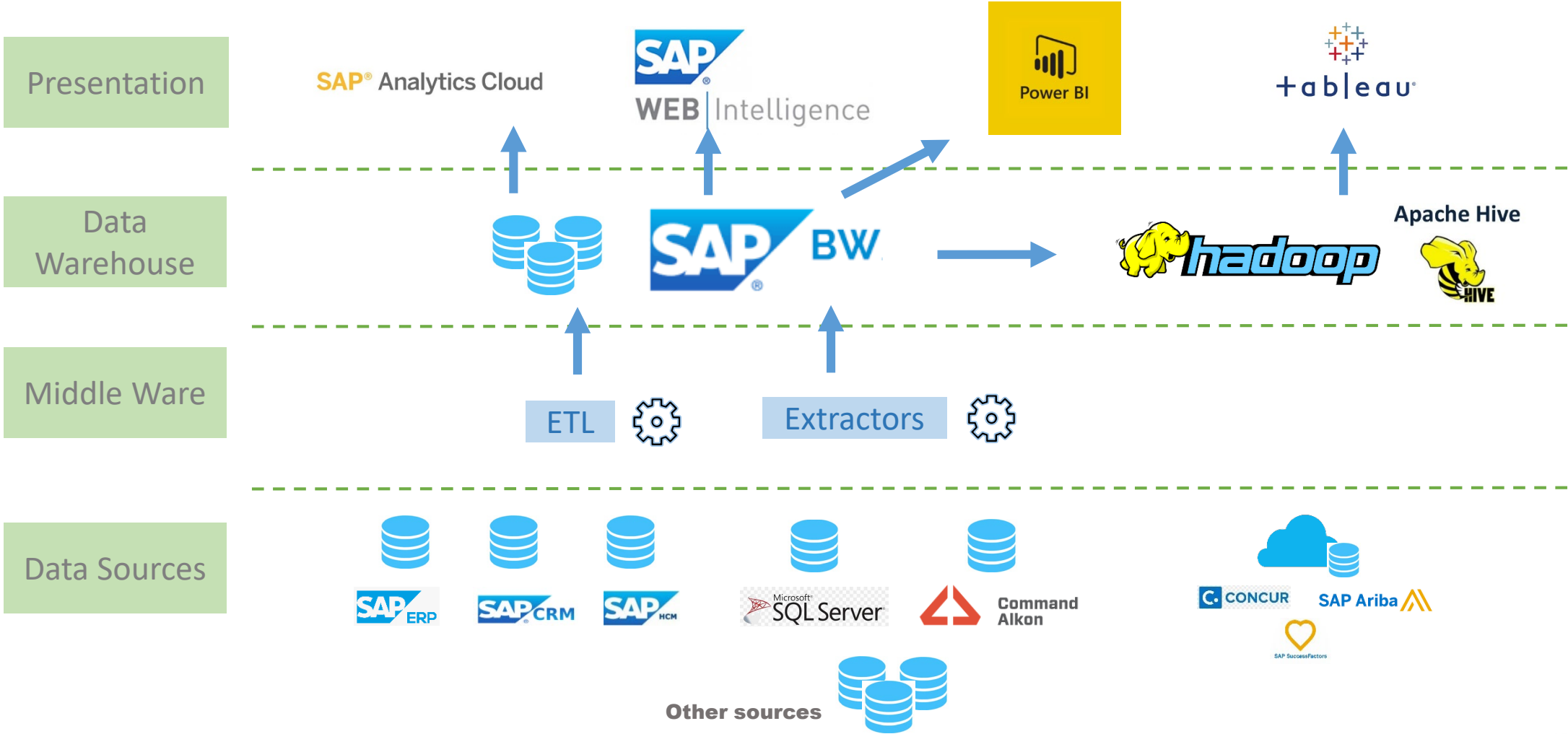
- Progreso is currently organized in two main divisions
 - Cement division
 - Building materials distribution división
- Cementos Progreso operates three production plants in Guatemala.
- Progreso has expanded to cover cement and building materials distribution in other Central America countries and more recently, is also serving Colombia.
- To efficiently serve its customers, Progreso needs to keep track of demand, supply and other market trends.
- All operations within the Company are automated by Information Systems that generates relevant transactional data volumes.
- Progreso has traditionally developed its core IT architecture based on SAP technologies.
- In the last years, Progreso has integrated relevant non-SAP technologies to its digital core, generating important data sources for analysis purposes.



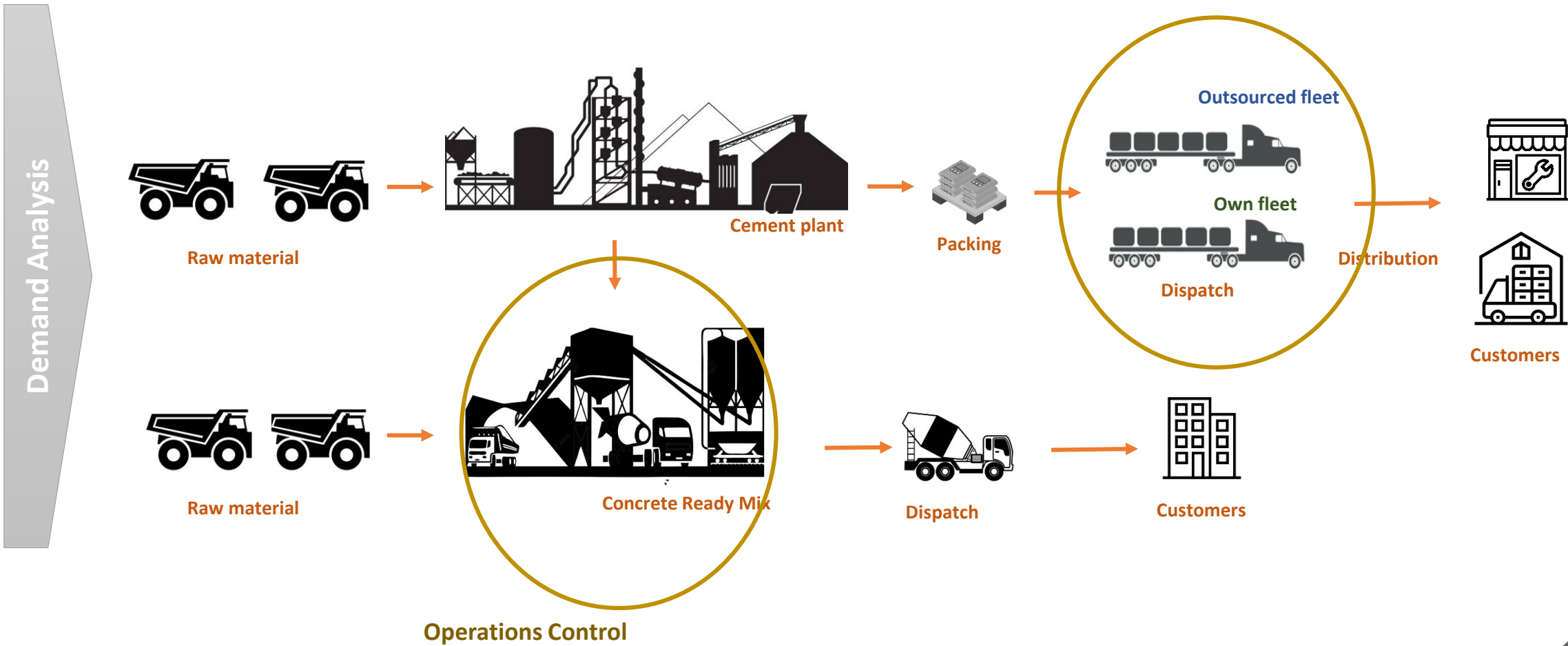
Cementos Progreso Analytics Path



Analytics Architecture Overview



Logistics Use Case



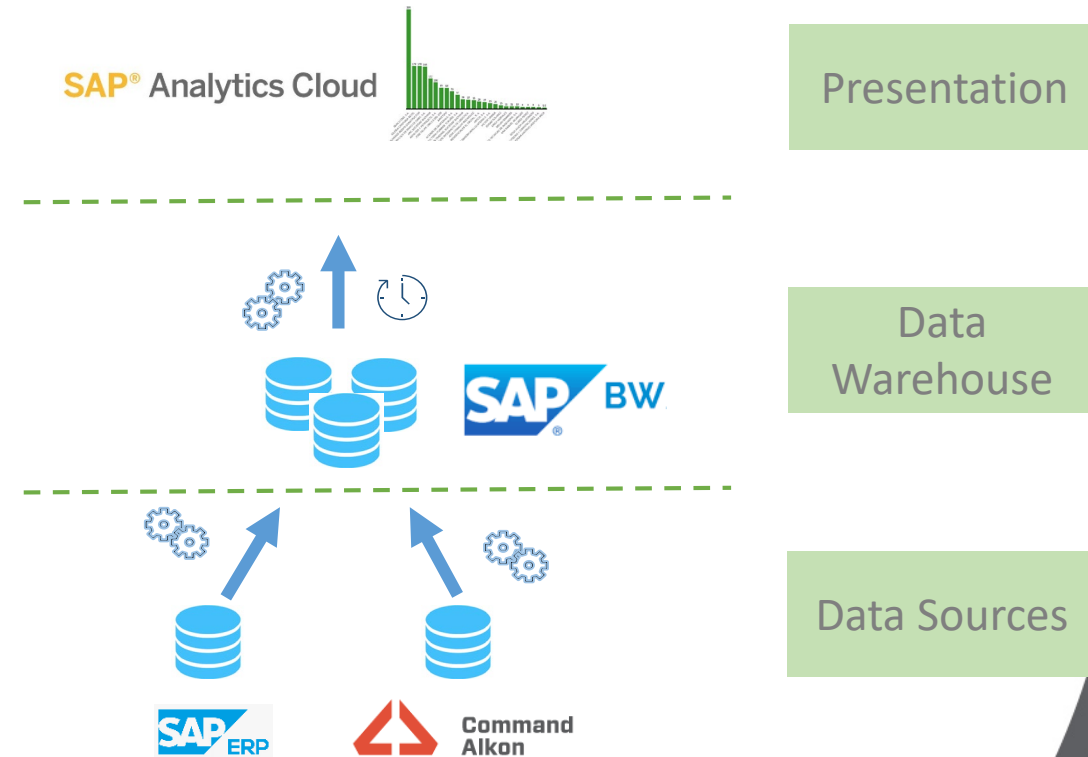
Logistics Use Case

- **Partial self owned fleet** (minority). Progreso has a small number of owned trucks for bags and bulk delivery.
- **Partial outsourced fleet.** Most of the trucks in the fleet are outsourced. Progreso has agreements with many different transportation contractors
- **Fleet status and availability control.** Information about the self-owned and outsourced trucks, to determine the daily availability.
- **Delivery time control.** Automated through geo-fences monitoring
- **Proactive fleet planning** based on demand and truck availability

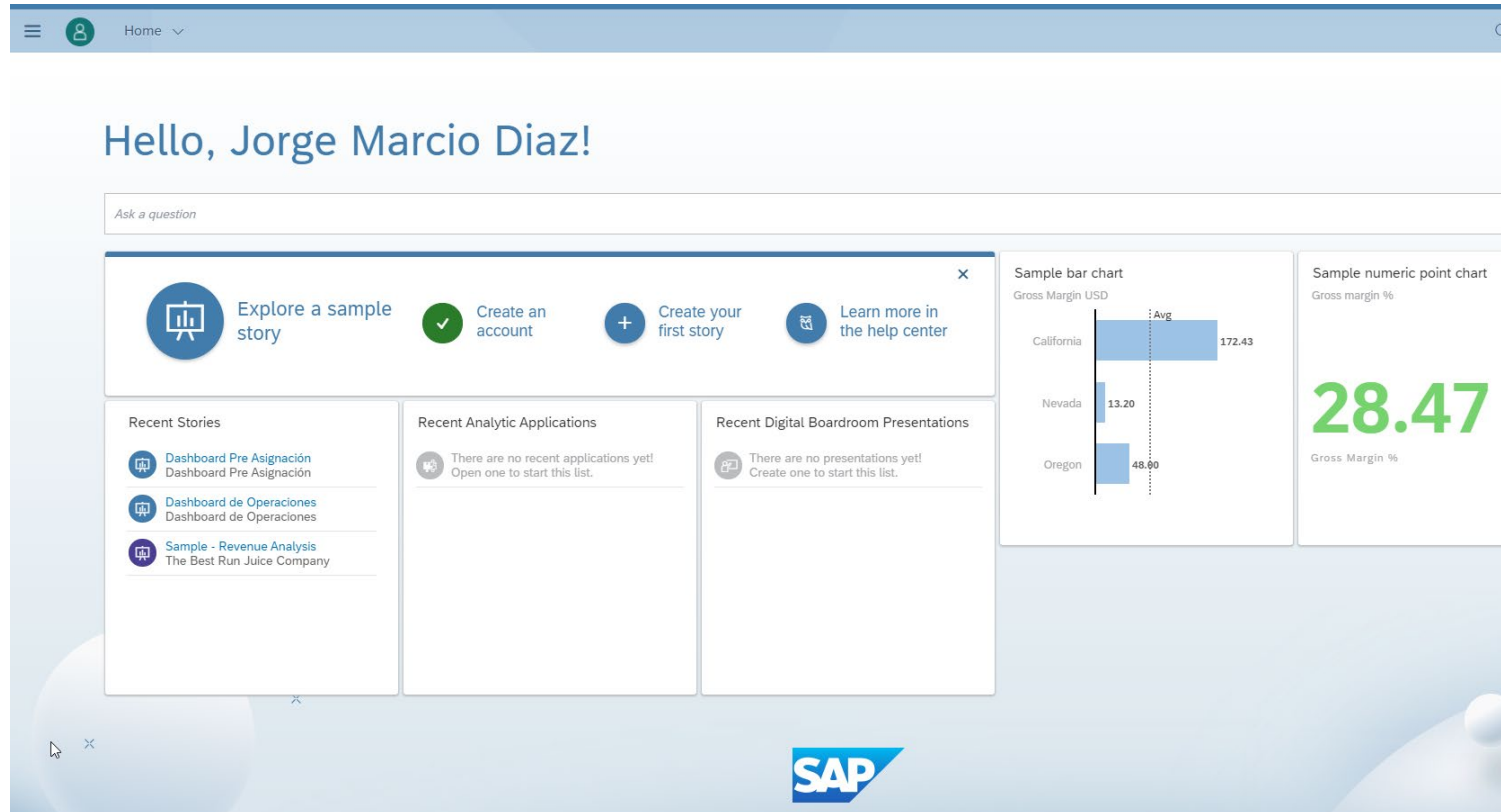


Solution

- Use of SAP Analytics Cloud
- Data consolidation and modeling in SAP Business Warehouse
- Data view consumed and automatically updated to SAP Analytics Cloud every hour
- Data Exploration in SAP Analytics Cloud
- Dashboard design and publication in SAP Analytics Cloud



Fleet Assignment Dashboard



SAP Analytics Cloud Solutions

Fleet Assignment Dashboard

Contract type

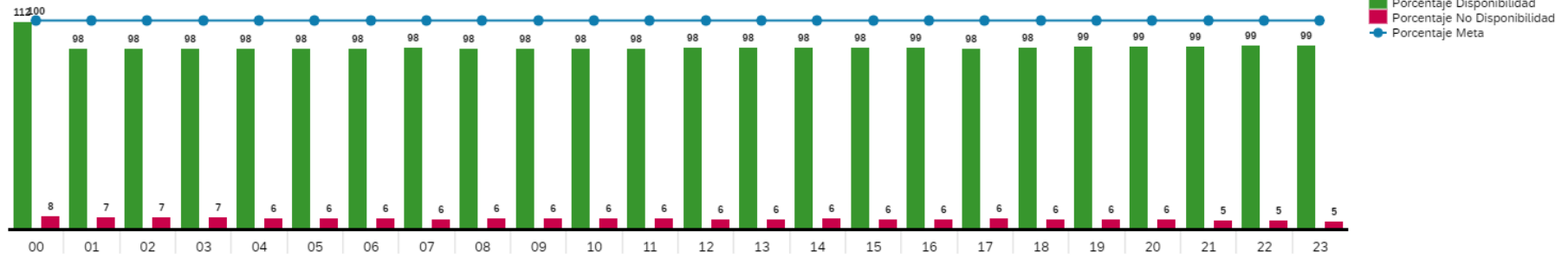
- Contrato
- All
- CFR
- SPOT
- SUBASTA
- Show Inactive Values
- Unidad
- All
- Plataforma Especial
- Plataforma
- Gondola
- Pipa
- Doble Eje
- Sencillo

Truck type

Dashboard Pre Asignación

	Real																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Asignación Manual	51	51	51	51	51	51	51	51	51	51	51	51	52	52	52	54	58	58	59	60	59	59	59	59	
Coordinada	87	77	75	74	72	71	67	65	61	67	80	70	106	115	84	115	106	135	121	162	154	151	179	164	
Descarga con Cliente	50	52	57	56	67	95	122	150	165	152	139	138	124	120	117	107	98	73	59	60	54	51	56	60	
Disponibile	72	72	74	79	83	87	99	109	113	120	124	124	106	102	20	33	55	104	110	45	51	67	59	65	
En Taller	36	36	36	36	34	34	34	31	32	33	32	31	30	30	30	28	28	31	29	26	24	23	22	21	
Planificada	-	-	-	-	-	-	-	-	17	23	20	38	23	14	98	55	59	22	28	41	54	50	27	35	
Proceso de Carga	4	7	4	2	2	2	1	2	4	-	3	1	5	10	25	15	13	10	6	23	11	10	15	13	
Sin Piloto	11	11	11	11	11	11	11	11	11	12	12	12	13	12	12	13	13	12	13	13	13	15	15	13	13
Transito de Retorno	69	68	68	65	65	62	55	58	56	73	94	113	126	135	148	145	145	124	125	109	99	81	81	76	
Transito de Ruta	352	358	356	358	347	319	292	255	221	201	177	153	148	142	145	167	158	162	182	193	211	225	221	226	
Totals	732	732	732	732	732	732	732	732	732	732	732	732	732	732	732	732	732	732	732	732	732	732	732	732	

Daily fleet status



Daily Availability (real vs. target)

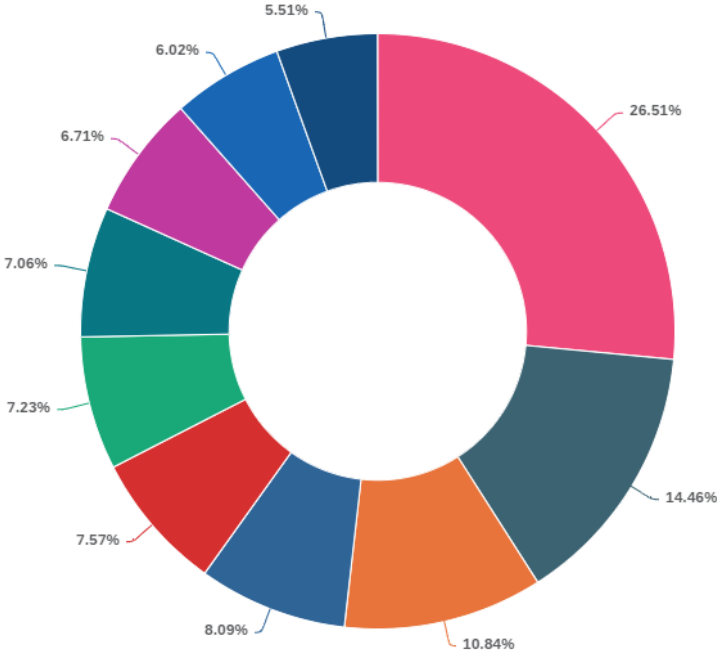
Fleet Assignment Dashboard

Dashboard Pre Asignación

Real per Proveedor Nombre for Actual

Top N (AUTO)

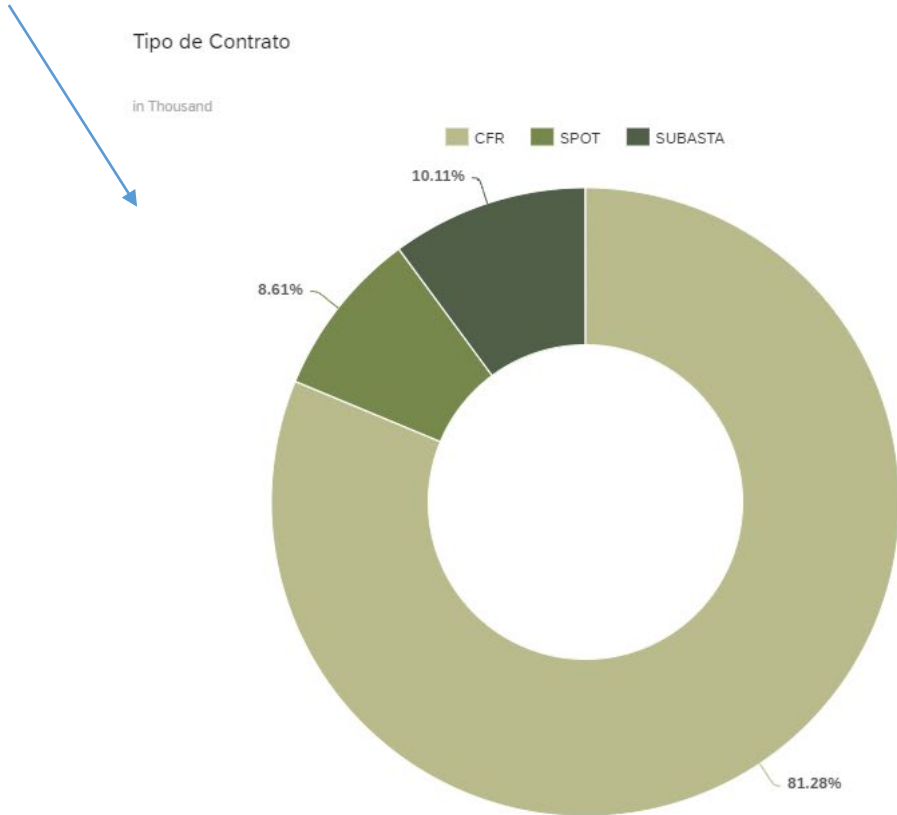
- GRUCOPSA
- TRUDA, S.A.
- CORPORACION TLC
- TRANSCOMPANY
- Transcifus, S.A.
- FRANCISCO REYES COLINDRES
- TRANSPORTES JORO, S.A.
- LINATRANS, S. A.
- TRANSPORTES A GRANEL GIRON (GRAGISA)
- Transportes Cuevas García, S.A



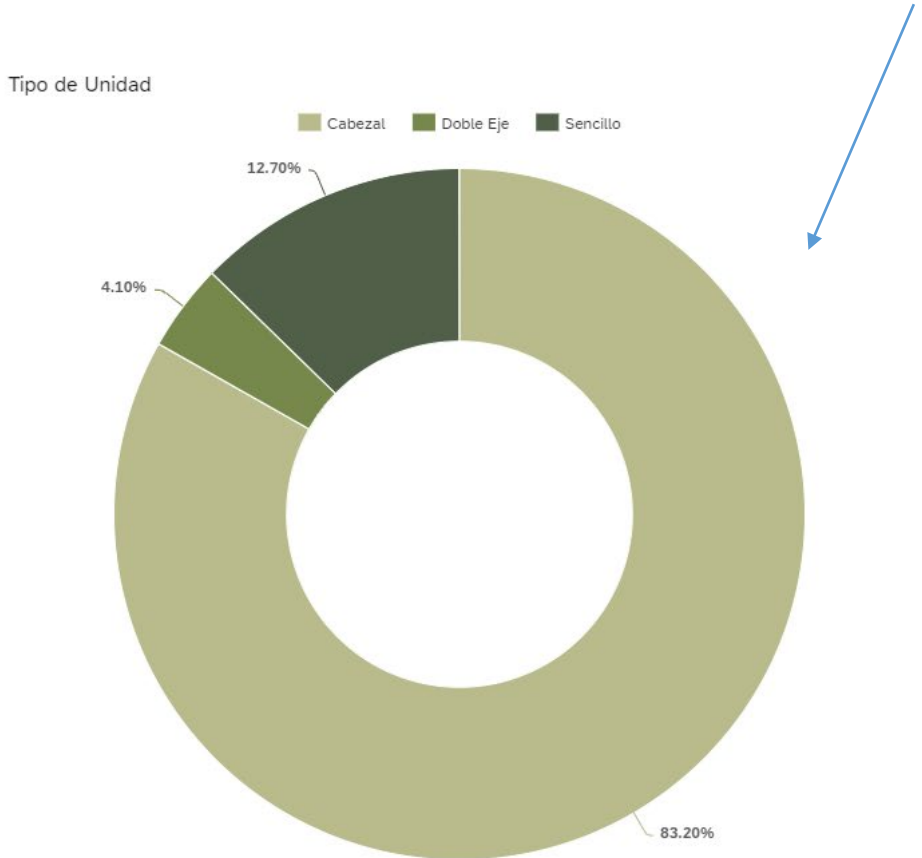
Assignment distribution by provider

Fleet Assignment Dashboard

Contract type distribution



Truck type distribution



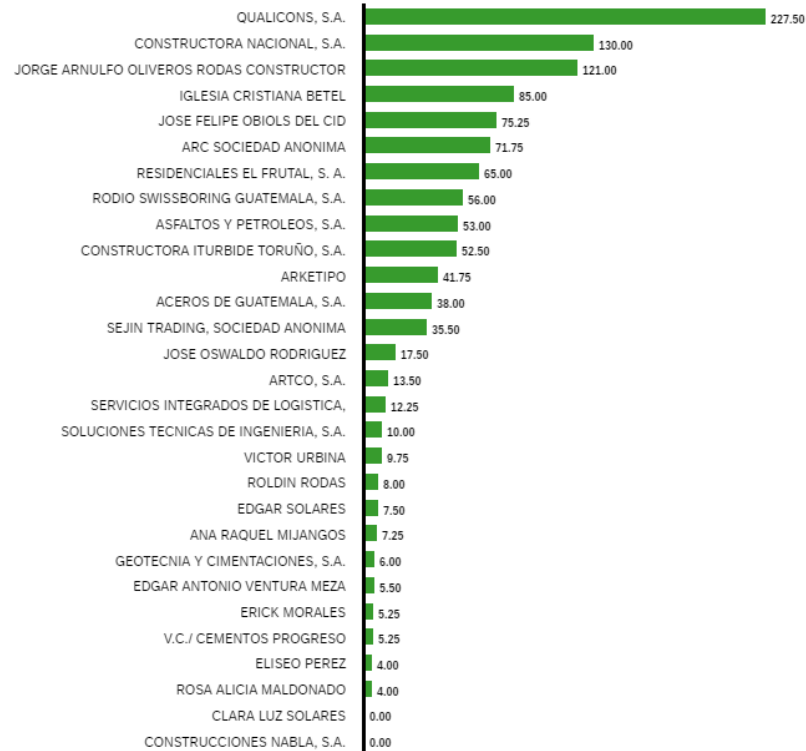
Ready Mix Operations Dashboard

Production by Client

Cliente

Bombeo por Cliente

1 Filter

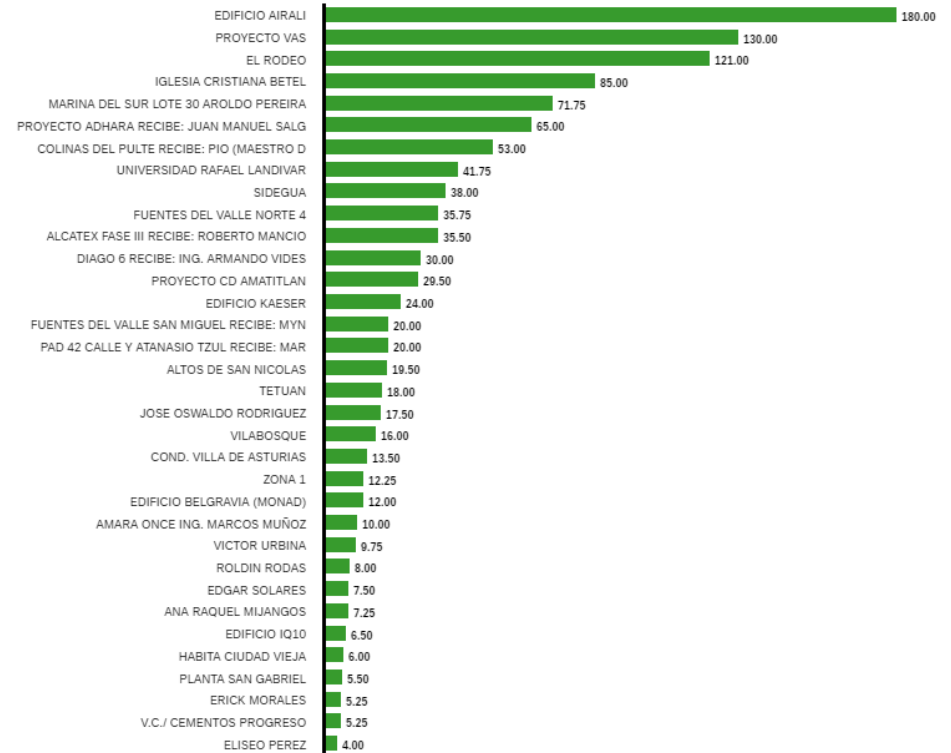


Bombeo por Proyecto

1 Filter

Proyecto

Production by Project



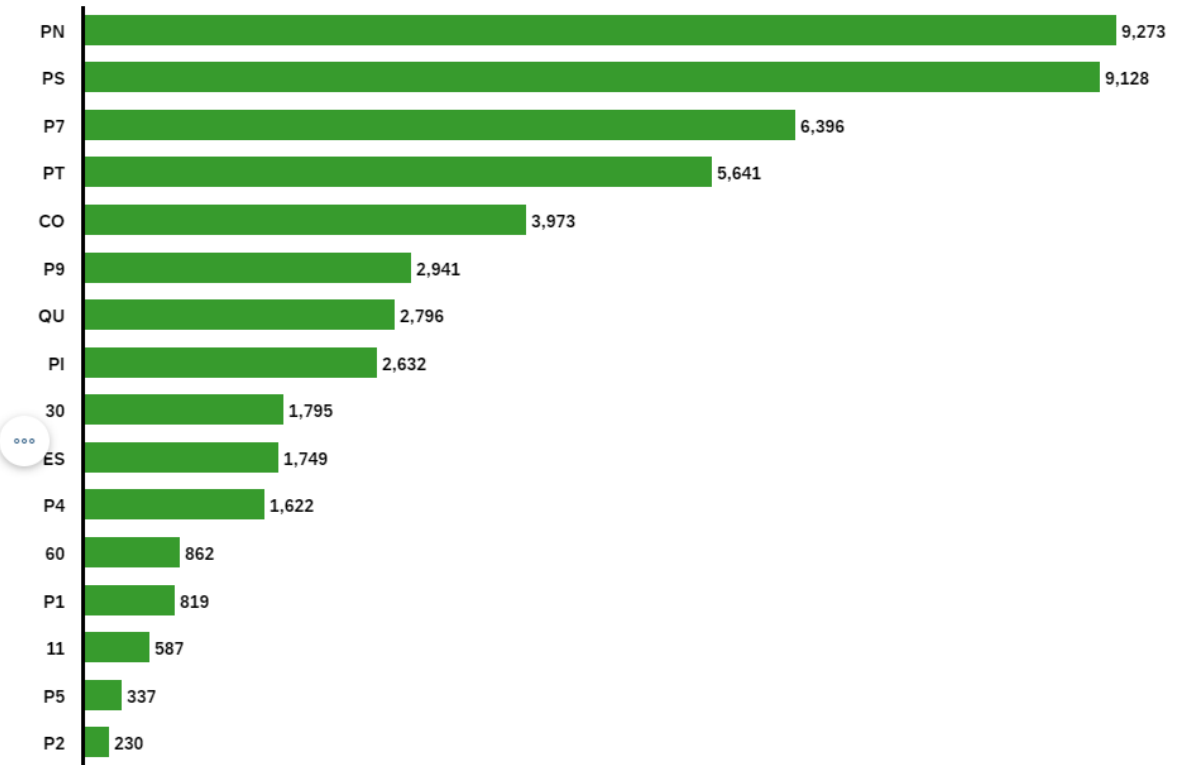
Ready Mix Operations Dashboard

Production by Plant

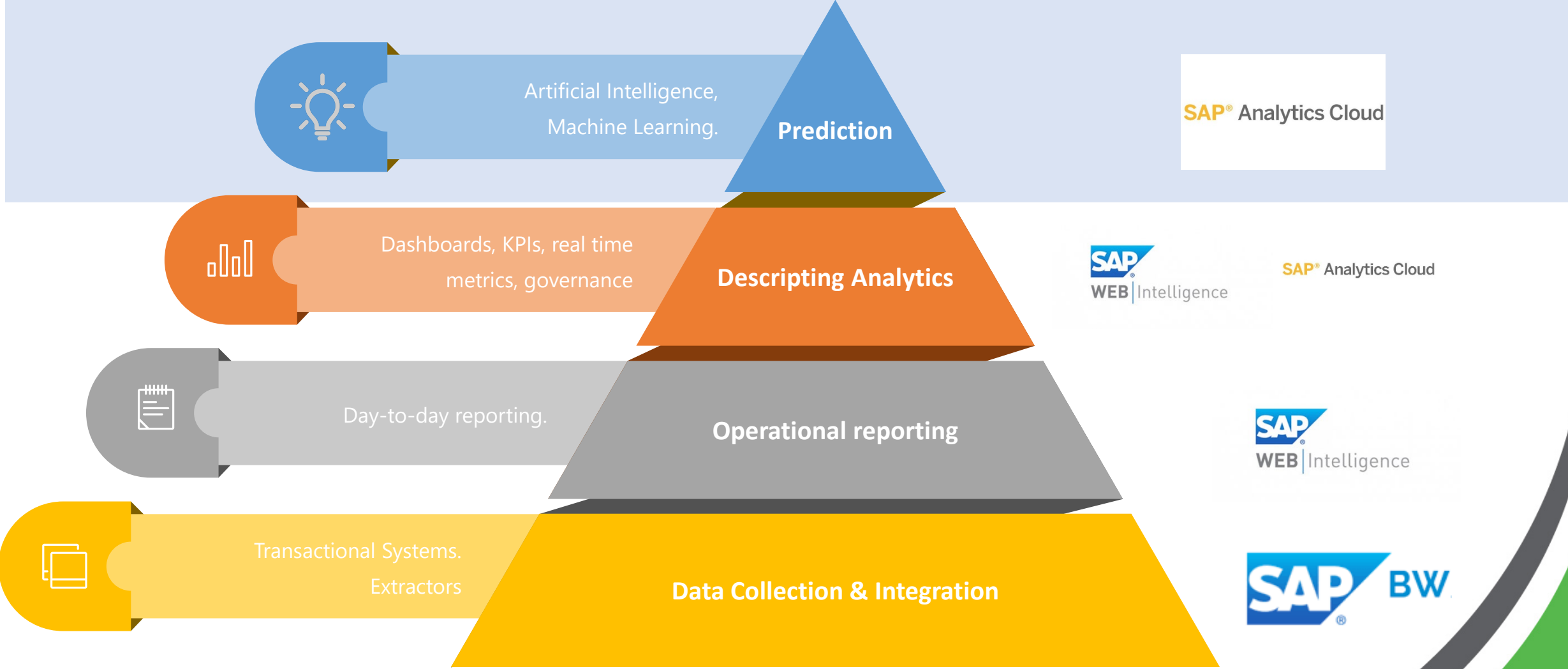


Dashboard de Operaciones

Total por planta



Cementos Progreso Analytics Path – What is Next?



Cementos Progreso Analytics Path – What is Next?

- Exploring Data Lake solutions
- Machine learning and advanced analytics
- Predictive analytics
 - Demand
 - Pricing
 - Profiling

Thank you!

