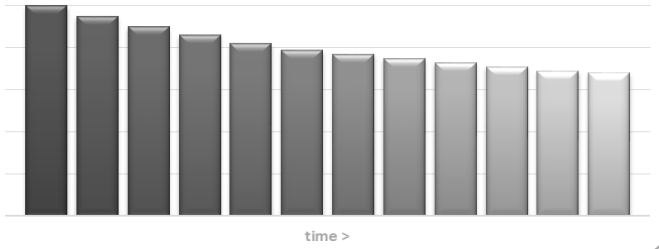
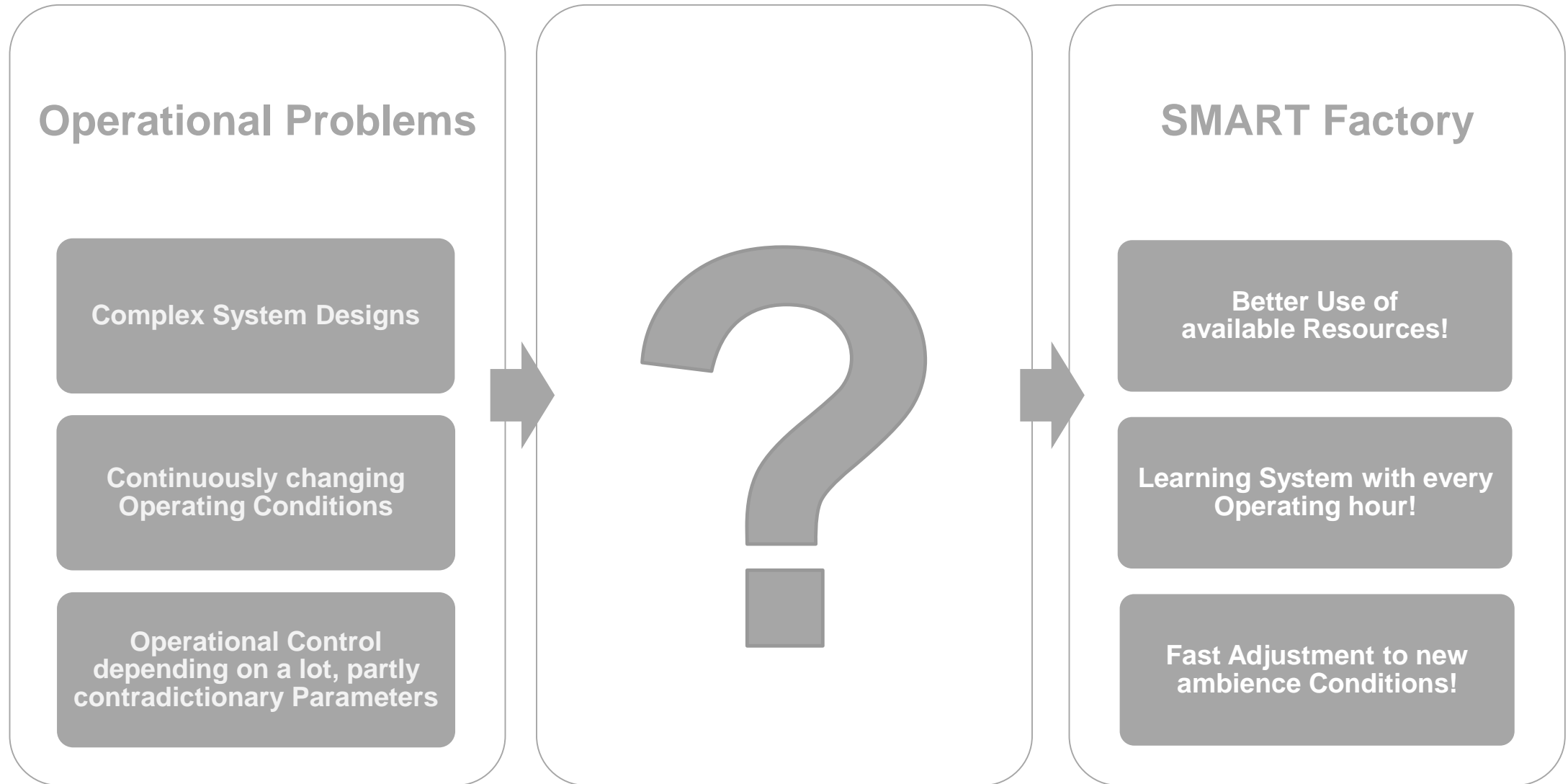


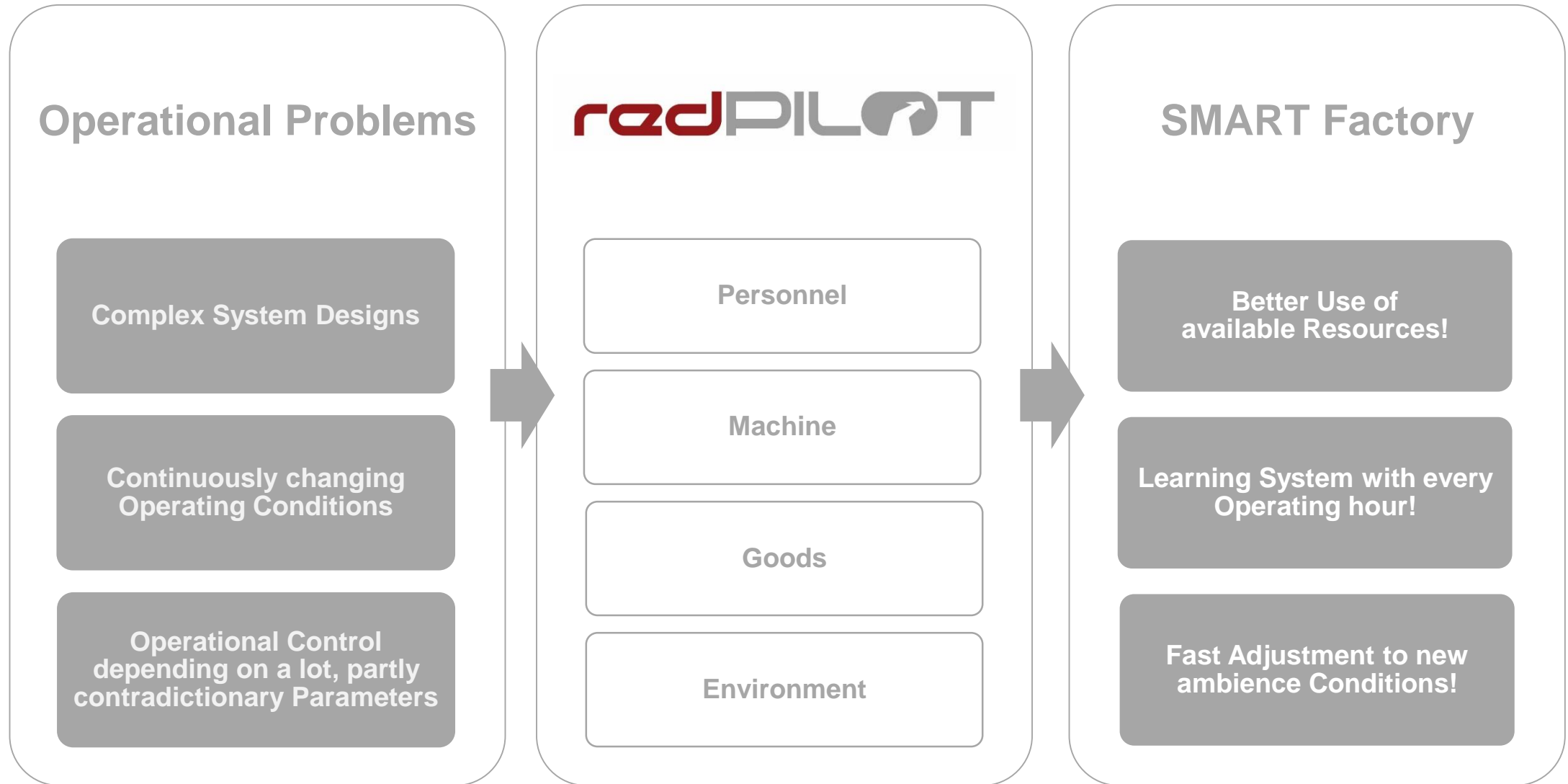
redPILOT

Costs per unit decline!



How to run a Logistics system at every Operating hour at the Optimum?





redPILOT Modules of the application

Module 1: Foresightful Operations Planning



Short, medium, and longterm Operations Scheduling with holistic optimum over all involved components and resources (Personnel, Machine, Goods, Environment)

Module 2: Online Optimisation of available Resources



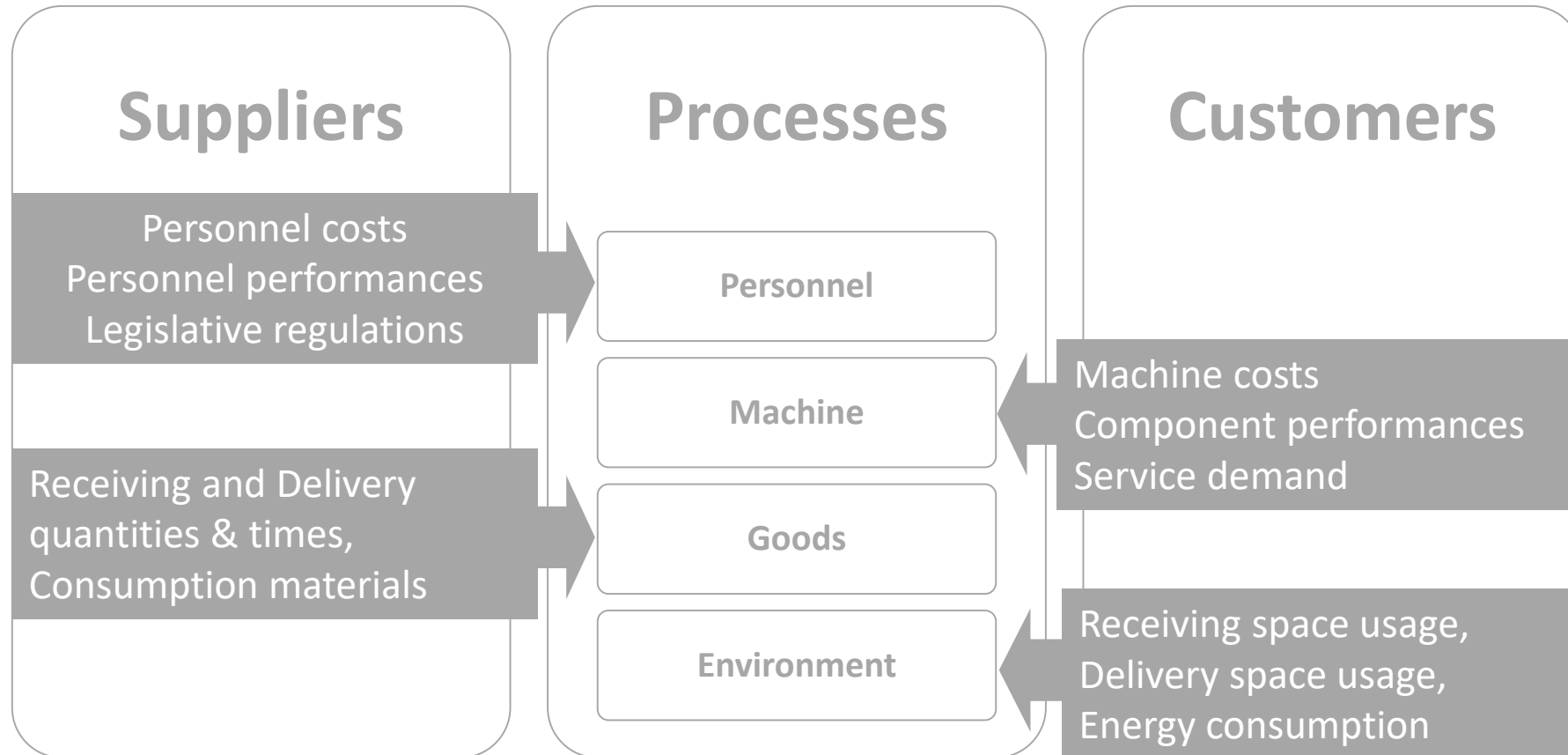
Especially at ongoing changes the detection and fast remedy of bottlenecks (resp. over capacities) is very demanding – system performance optimisation with BCS

Module 3: Continuous Improvement



With the help of active, system guided learning at every operating hour the experience will be transfered into Know-How – automated adjustment of system model

Holistic optimised **Operating Plan** will be calculated based on selected strategies (highest throughput, most economic resources usage, etc.) – derived from **system model** (+ configured conditions and references) using **costs** and **performances**.





Edeka Moers / Frischecenter / Allgemeine Kommissionierung FC - Schedule details

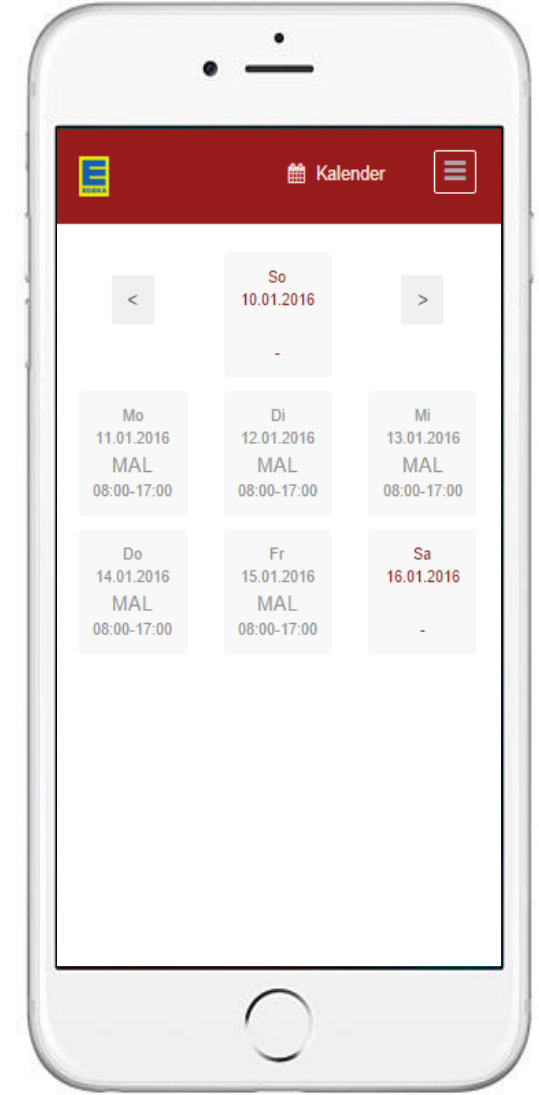
System: Edeka Moers / Frischecenter / Allgemeine Kommissior
 Year: 2018
 Week: 32
 Version: 1
 Rest prev week: 0

Shift group: Kom FC
 Reference week: Normal / /
 Growth: 1,0
 Relative factor: 0,25
 Unit: K
 Conversion: 1,0

View Save Publish Automatic allocation Clear allocation Print

Shift planning Demand distribution Resource allocation Performance distribution Change history

Sun 08/07/2016 K	Mon 08/08/2016 K	Tue 08/09/2016 K	Wed 08/10/2016 K	Thu 08/11/2016 K
0	16.250	15.250	16.750	
08:00 00:45 07:45 5.888K [35%] 1.000K/h 11/12 ▲ 7.188K (582K) ↑ 0,276€/K 1.988,38€ 13:17 14:30	08:00 00:45 07:45 5.338K [35%] 1.000K/h 11/12 ▲ 6.838K (912K) ↑ 0,290€/K 1.988,38€ 12:58 14:30	08:00 00:45 07:45 5.883K [35%] 1.000K/h 11/12 ▲ 7.383K (387K) ↑ 0,270€/K 1.988,38€ 13:27 14:30	08:00 00:45 07:45 5.883K [35%] 1.000K/h 11/12 ▲ 7.383K (387K) ↑ 0,270€/K 1.988,38€ 13:27 14:30	08:00 00:45 07:45 7.875K [35%] 1.000K/h 11/12 ▲ 9.371K (596K) ↑ 0,223€/K 1.988,38€ 13:51 14:30
13:00 00:45 07:45 10.583K [85%] 1.750K/h 16/16 ▲ 1.500K + 9.083K (4.500K) ↑ 0,311€/K 2.817,20€ 20:37 21:30	13:00 00:45 07:45 9.913K [85%] 1.500K/h 15/15 ▲ 1.500K + 8.413K (3.212K) ↑ 0,313€/K 2.638,62€ 21:24 21:30	13:00 00:45 07:45 10.888K [85%] 1.750K/h 17/16 ▲ 1.500K + 9.388K (4.175K) ↑ 0,319€/K 2.997,78€ 20:52 21:30	13:00 00:45 07:45 10.888K [85%] 1.750K/h 17/16 ▲ 1.500K + 9.388K (4.175K) ↑ 0,319€/K 2.997,78€ 20:52 21:30	13:00 00:45 07:45 14.625K [85%] 1.750K/h 21/16 ▲ 1.500K + 13.125K (5.950K) ↑ 0,250€/K 2.997,78€ 21:12 21:30
0K [100%] 00:00h 00:00h 0,00€ > 0,00€ 0,000€/K 00:00h / 0	16.251K [100%] 01:30h 15:30h 722,32€ > 5.525,90€ 0,340€/K 209:15h / 27	15.251K [100%] 01:30h 15:30h 722,32€ > 5.345,32€ 0,350€/K 201:30h / 28	16.751K [100%] 01:30h 15:30h 722,32€ > 6.708,48€ 0,341€/K 217:00h / 28	22.501K [100%] 01:30h 15:30h 722,32€ > 7.071,84€ 0,341€/K 240:00h / 28

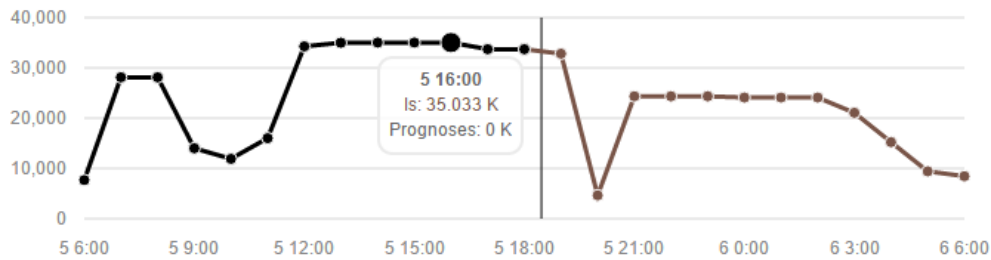




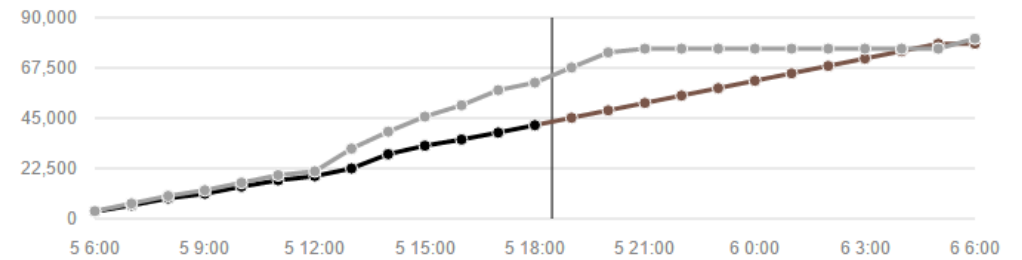
Frischecenter

System	Status	Zeit	Performance day until now	Performance day open	Shift performance until now	Shift performance open	Expected shift end time	Average shift throughput	Performance average last hour	Performance average last 15 min
Allgemeine Kommissionierung FC	☹️	18:28	7.077 K	13.099 K	3.059 K	9.241 K	+1D 06:16/21:15	806 K/h	697 K/h	912 K/h
LDL Abwicklung FC	😊	18:47	0 R	850 R	0 R	850 R	/23:45	0 R/h	0 R/h	0 R/h
Vorladung FC	😊	15:34	0 R	750 R	0 R	750 R	/19:00	0 R/h	0 R/h	0 R/h
WE Obst&Gemüse	😊	18:47	0 P	700 P	0 P	140 P	/02:15	0 P/h	0 P/h	0 P/h
Kommissionierung FC Werkvertrag	☹️	18:28	27.962 K	33.538 K	12.939 K	28.266 K	+1D 06:03/21:15	3.409 K/h	2.407 K/h	2.612 K/h

Auftragsbuffer



Produktionsleistung akkumuliert





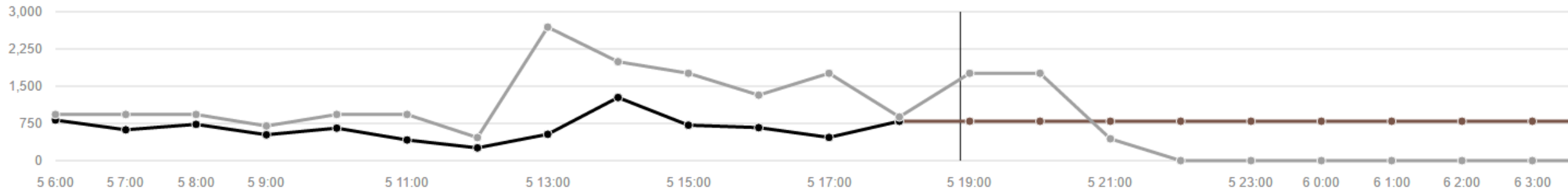
Edeka Moers / Frischecenter / Allgemeine Kommissionierung FC - Cockpit Details

Status	Zeit	Performance day until now	Performance day open	Shift performance until now	Shift performance open	Expected shift end time	Average shift throughput	Performance average last hour	Performance average last 15 min
	18:28	7.140 K	13.036 K	3.122 K	9.178 K	+1D 06:26/21:15	807 K/h	691 K/h	896 K/h

Process steps

Alias	Prozessschritte aktuelle Stunde	K/h	K/h	K/h	#	#	#	E/Ü
KOF	18:00-19:00	1.760	691	13.200	8	4	60	
WAF	18:00-19:00	240	0	240	2	0	2	
GLF	18:00-19:00	180	0	180	1	0	1	
REF	18:00-19:00	80	0	80	1	0	1	
AVF	18:00-19:00	40	59	72	5	5	9	

Production performance

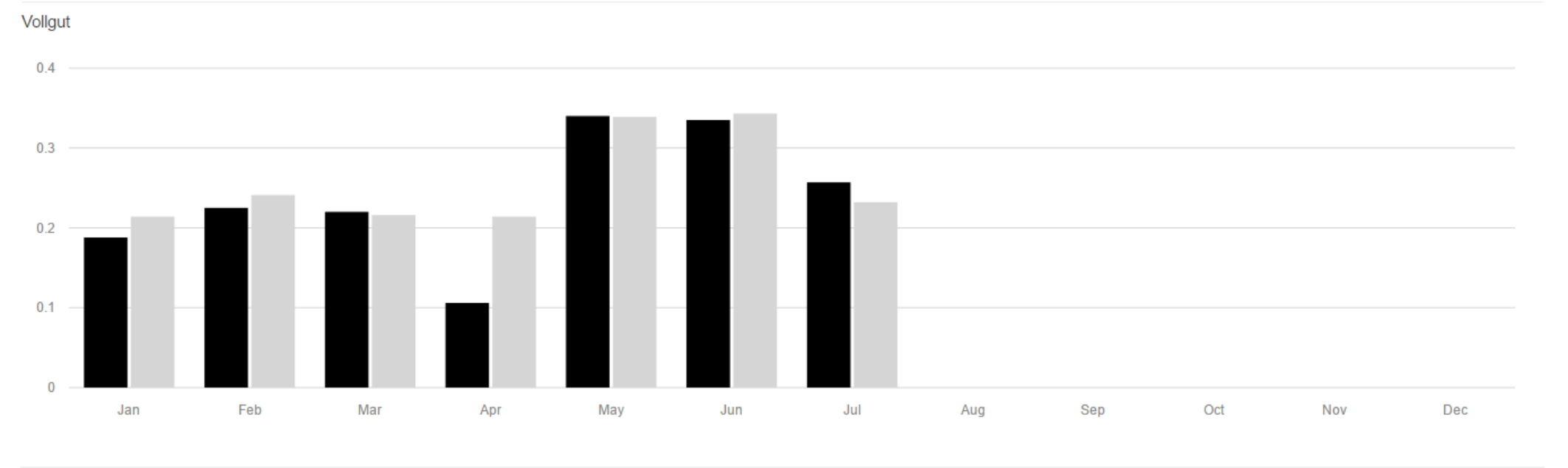


Vollgut

- Revenue
- Revenue
- Revenue

2016

Graphics Monthly values Accumulated



Cost center	€
116000	4.013
116100	8.288
116110	28.182
116120	7.689
116121	22.578
116140	27.304
116150	4.971
116310	1.980
Sum	105.000

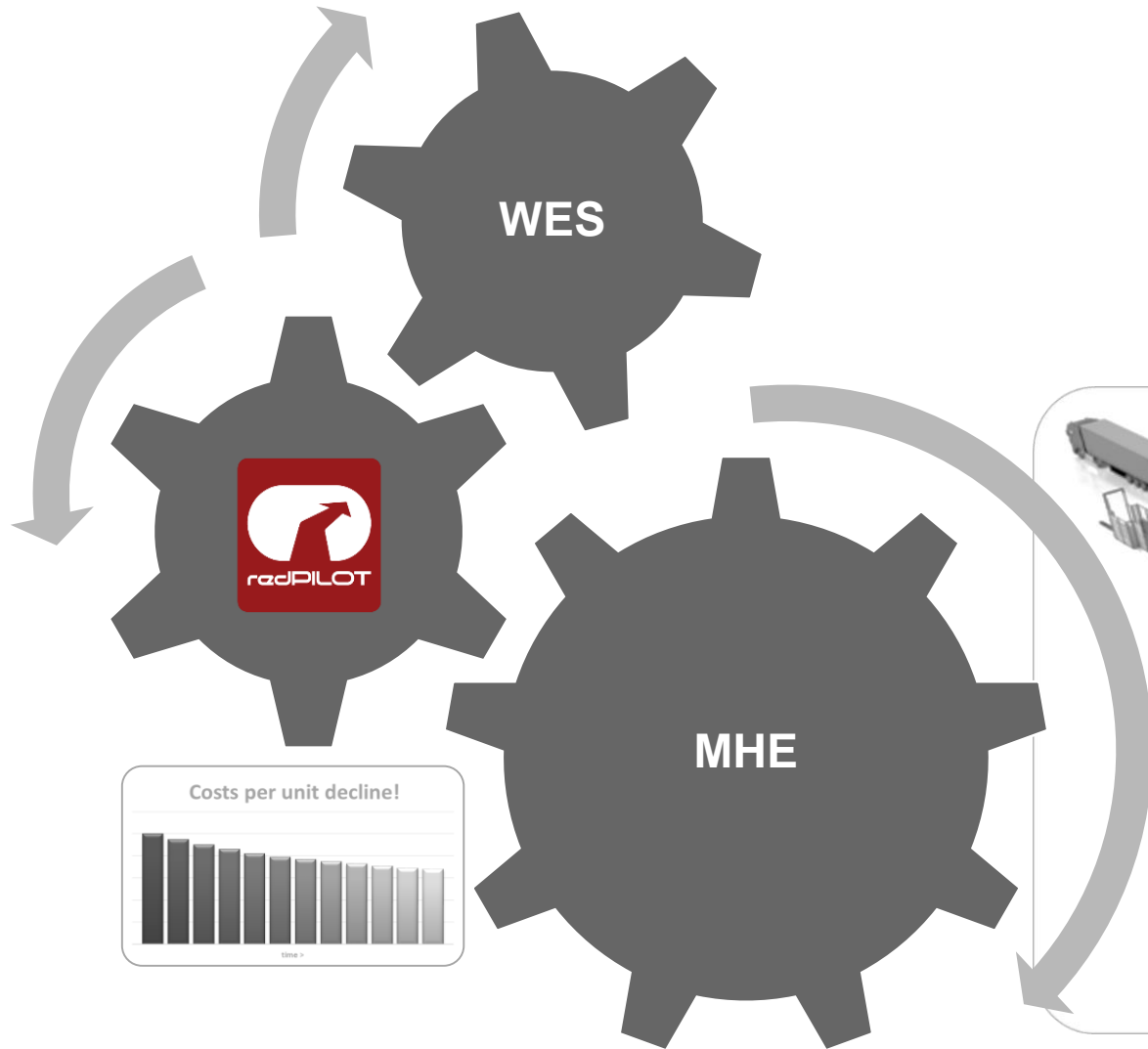




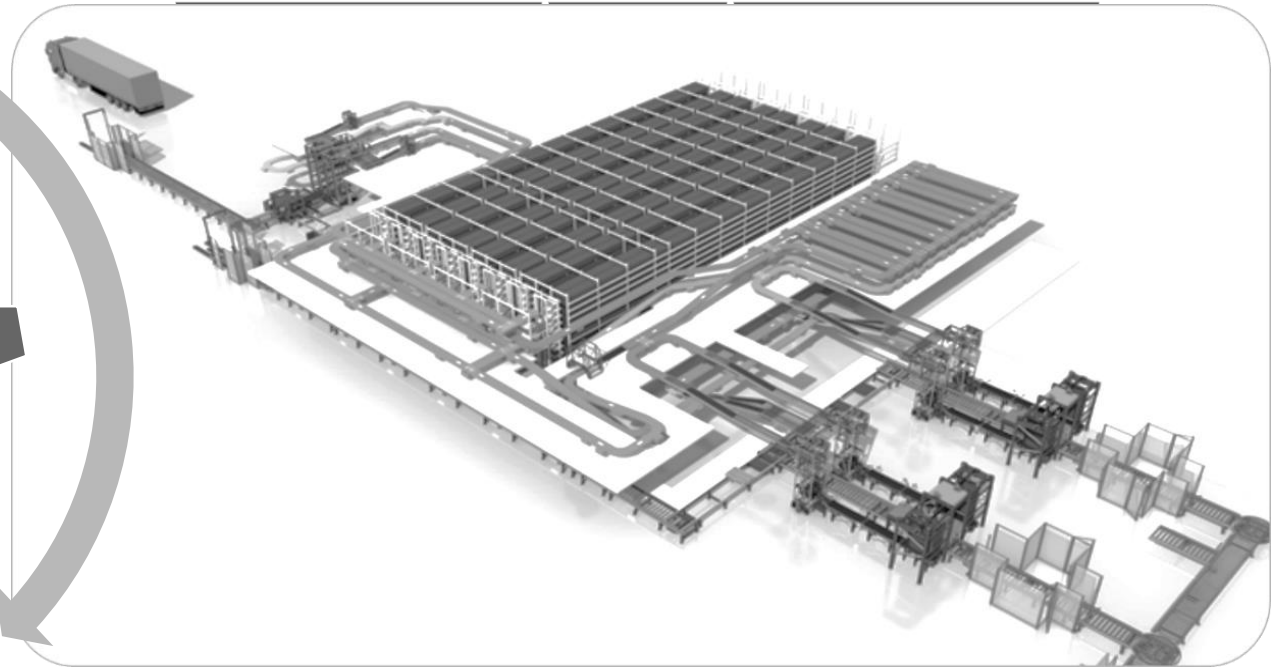
2016 1 - 2016 24 |
 Full week |
 All shift starts |
 Filter

Operation	System	Year	Week	Day	Shift start	Operators allocated	Operators required	Overplanned	Operator h allocated	Operator h required	Overplanned h	K allocated	K delta	K allocated / h allocated
Sum						4.161	3.362	799	32.052:45	21.357:03	10.695:42	4.925.975	1.812.234 ↓	154
Average								2,38			31:50			122
Vollgut	Kommissionierung	2016	24	7	05:00	21	12	9	173:15	93:46	55:29	20.628	18.972 ↑	119
Vollgut	Kommissionierung	2016	24	6	10:00	1	2	-1	07:00	04:11	02:49	502	1.178 ↑	71
Vollgut	Kommissionierung	2016	24	6	05:00	17	16	1	123:15	115:57	07:18	24.350	3.490 ↑	197
Vollgut	Kommissionierung	2016	24	5	22:00	1	1	0	07:15	01:19	05:56	316	1.424 ↑	43
Vollgut	Kommissionierung	2016	24	5	15:00	16	12	4	116:00	83:58	08:02	20.153	5.947 ↑	173
Vollgut	Kommissionierung	2016	24	5	05:00	18	13	5	130:30	90:14	16:16	19.989	9.591 ↑	153
Vollgut	Kommissionierung	2016	24	4	22:00	1	1	0	07:15	01:21	05:54	325	1.415 ↑	44
Vollgut	Kommissionierung	2016	24	4	15:00	15	13	2	108:45	88:34	20:11	21.255	3.105 ↑	195
Vollgut	Kommissionierung	2016	24	4	05:00	18	14	4	130:30	94:41	11:49	21.101	8.479 ↑	161
Vollgut	Kommissionierung	2016	24	3	22:00	1	1	0	07:15	01:21	05:54	322	1.418 ↑	44
Vollgut	Kommissionierung	2016	24	3	15:00	16	13	3	116:00	90:44	01:16	21.776	4.324 ↑	187
Vollgut	Kommissionierung	2016	24	3	05:00	17	14	3	123:15	97:00	02:15	21.618	6.222 ↑	175
Vollgut	Kommissionierung	2016	24	2	22:00	1	1	0	07:15	01:21	05:54	322	1.418 ↑	44
Vollgut	Kommissionierung	2016	24	2	15:00	16	12	4	132:00	98:59	09:01	21.776	7.924 ↑	164
Vollgut	Kommissionierung	2016	24	2	05:00	19	13	6	156:45	98:40	34:05	21.858	13.782 ↑	139





New Architecture		
Strategy & Planning	KiSoft One	Master Data
Stock Management		Stock Data
Warehouse Model		Warehouse Configuration
Material Flow		Material Flow Configuration
Machine Interface		Logical Mappings
Machine Control	PLC	Physical Mappings



Seamless integration into existing environment



Immediate assessable, commercial Benefits

Minimised Personnel and System efforts due to holistic Operations Scheduling of all resources

Increased Average Performance, because of online Bottleneck and Excess capacity detection

Transparent Competence Management leads to higher Operator performance and satisfaction

Data based Foundation for best-practice approaches

Don't regret costs afterwards, actively manage them beforehand



redPILOT