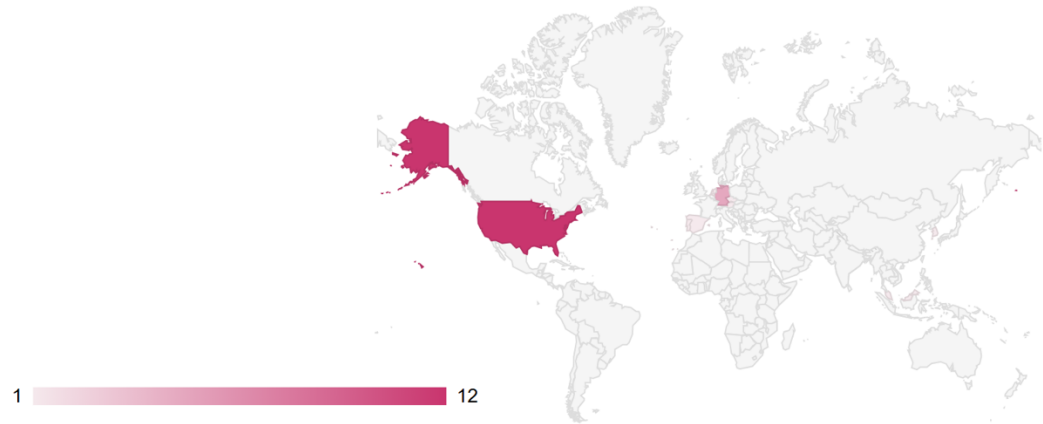











# 200mm Frontend FABs

Participants by Country

Total Countries  
9



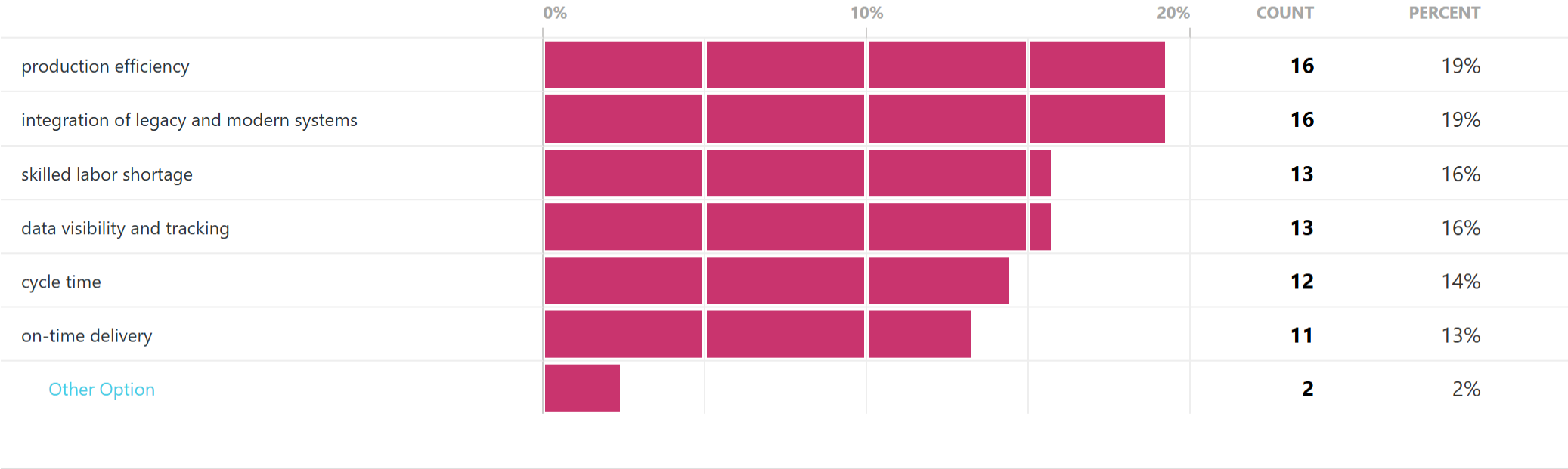
		COUNTRY	TOTAL	PERCENT	
		United States of America	12	50%	
		Germany	5	21%	
		Austria	1	4%	
		Czech Republic	1	4%	
		Spain	1	4%	
		Republic of Korea	1	4%	
		Malaysia	1	4%	
		Netherlands	1	4%	
		Portugal	1	4%	

02

What are the biggest challenges production faces in your FAB ? (select all that apply)  
(Mandatory)

Answers  
**24**  
100%

Skips  
**0**  
0%



03

How often does the topic of automation within your FAB comes up ? (1-not all all, 5-often)  
(Mandatory)

Answers

24

100%

Skips

0

0%

	1	2	3	4	5	AVERAGE
Rating	0	1	5	6	12	4.21

More Details

04

Would automation solutions benefit your business operations ? (1-disagree, 5- agree)  
(Mandatory)

Answers

24

100%

Skips

0

0%

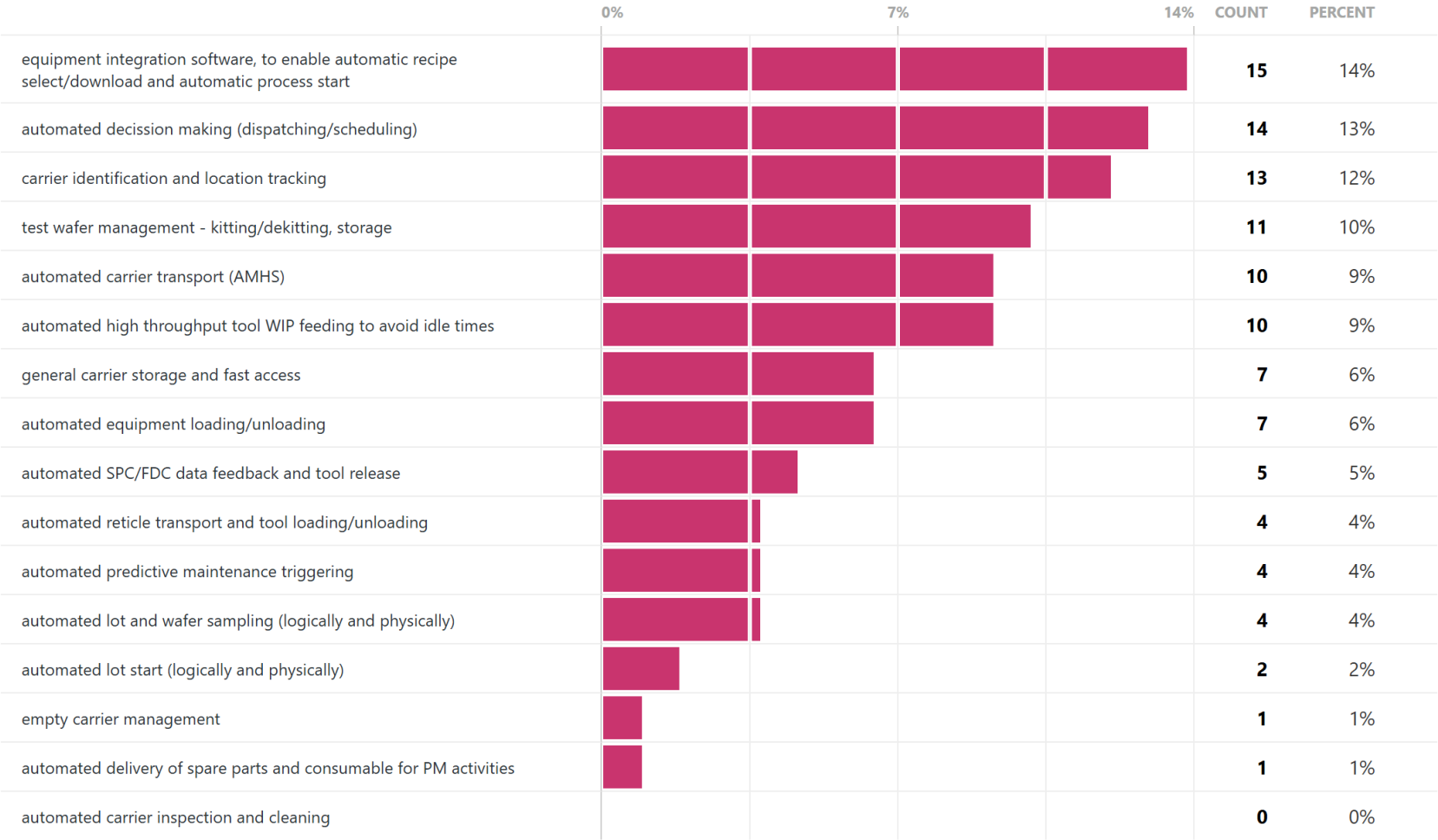
	1	2	3	4	5	AVERAGE
Rating	0	0	0	6	18	4.75

05

What forms of automation would be interesting to you ? (select the top 5 that apply)  
(Mandatory)

Answers  
24  
100%

Skips  
0  
0%



06

What is preventing your FAB to actively work and implement these solutions? (select all that apply) (Mandatory)

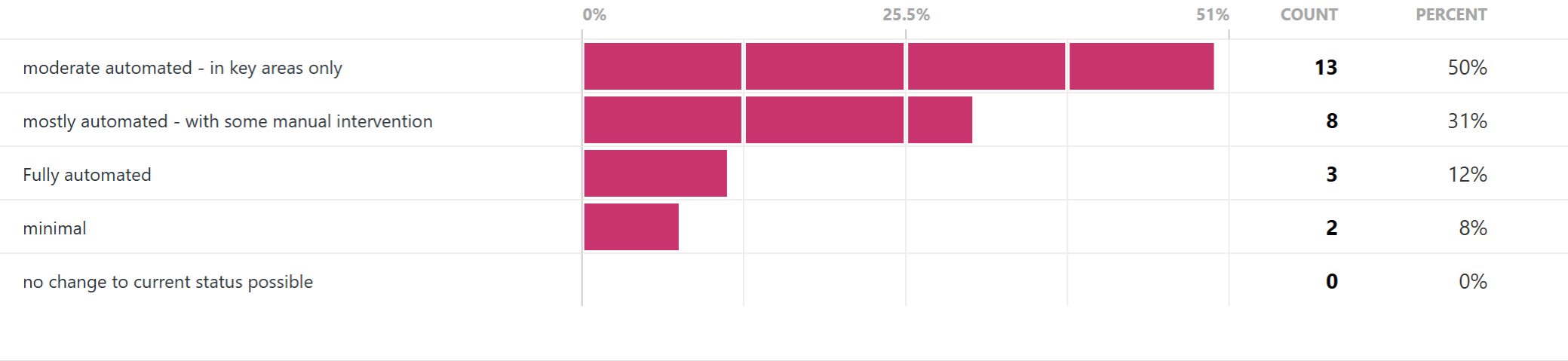
Answers  
**24**  
100%

Skips  
**0**  
0%

	0%	10%	20%	COUNT	PERCENT
difficult to calculate ROI and/or proof ROI	<div></div>	<div></div>	<div></div>	13	20%
no budget available for automation	<div></div>	<div></div>	<div></div>	9	14%
FAB layout historically grown, packed and will likely prevent automation solutions	<div></div>	<div></div>	<div></div>	8	12%
old MES/CIM infrastructure likely not to support automation	<div></div>	<div></div>	<div></div>	6	9%
no free industrial engineering / automation resources available to work on it	<div></div>	<div></div>	<div></div>	6	9%
too many R&D lots in the FAB "which cannot be automated"	<div></div>	<div></div>	<div></div>	6	9%
too many "not automatable" old process and metrology equipment	<div></div>	<div></div>	<div></div>	6	9%
uncertain, if there is an automation solution for my specific situation	<div></div>	<div></div>	<div></div>	4	6%
Other Option	<div></div>	<div></div>	<div></div>	4	6%
automation is currently not a priority	<div></div>	<div></div>	<div></div>	3	5%
not sure where to start with automation	<div></div>	<div></div>	<div></div>	1	2%

07 What level of automation is realistic for your FAB ? (Mandatory)

Answers 24 100%  
Skips 0 0%



08

Is your facility currently investing in automation solutions ? (Mandatory)

Answers

24

100%

Skips

0

0%

	0%	32.5%	65%	COUNT	PERCENT
yes, currently	<div></div>	<div></div>	<div></div>	16	64%
yes, within the next 12 months	<div></div>			3	12%
yes, within the next 24 months	<div></div>			2	8%
considering, but no specific plans yet	<div></div>			2	8%
not considering	<div></div>			1	4%
Other Option	<div></div>			1	4%



09

What is the most important aspect of installed automation equipment and their vendors in your fab ? (Mandatory)

Answers

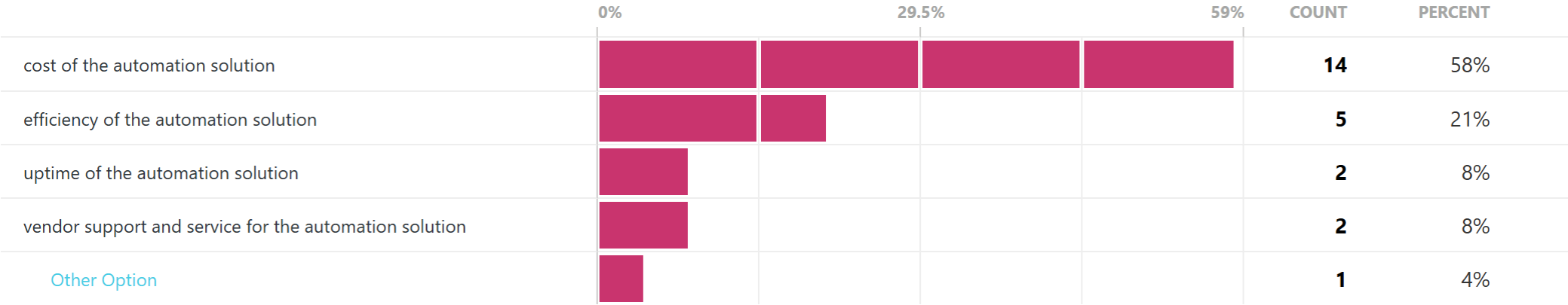
24

100%

Skips

0

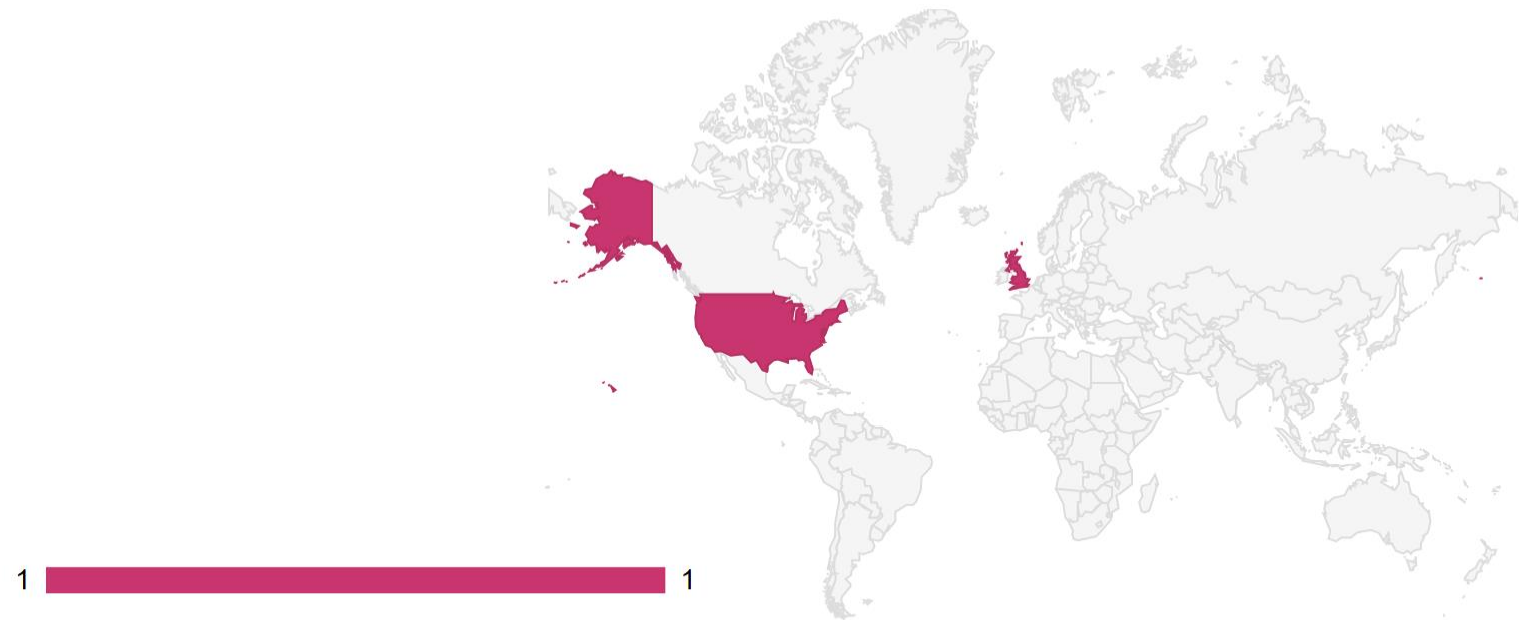
0%





# 150/100mm Frontend FABs

Participants by Country

Total Countries  
**2**



		COUNTRY	TOTAL	PERCENT	
		United Kingdom	1	50%	
		United States of America	1	50%	

02

What are the biggest challenges production faces in your FAB ? (select all that apply)  
(Mandatory)

Answers  
**2**  
100%

Skips  
**0**  
0%

	0%	13%	26%	COUNT	PERCENT
skilled labor shortage	<div></div>	<div></div>	<div></div>	1	25%
data visibility and tracking	<div></div>	<div></div>	<div></div>	1	25%
integration of legacy and modern systems	<div></div>	<div></div>	<div></div>	1	25%
cycle time	<div></div>	<div></div>	<div></div>	1	25%
production efficiency	<div></div>	<div></div>	<div></div>	0	0%
on-time delivery	<div></div>	<div></div>	<div></div>	0	0%

03

How often does the topic of automation within your FAB comes up ? (1-not all all, 5-often)  
(Mandatory)

Answers

2

100%

Skips

0

0%

	1	2	3	4	5	AVERAGE
Rating	0	0	1	1	0	3.5

More Details

04

Would automation solutions benefit your business operations ? (1-disagree, 5- agree)  
(Mandatory)

Answers

2

100%

Skips

0

0%

	1	2	3	4	5	AVERAGE
Rating	0	0	0	0	2	5

05

What forms of automation would be interesting to you ? (select the top 5 that apply)  
(Mandatory)

Answers  
2  
100%

Skips  
0  
0%

	0%	14.5%	29%	COUNT	PERCENT
equipment integration software, to enable automatic recipe select/download and automatic process start	<div></div>	<div></div>	<div></div>	2	29%
carrier identification and location tracking	<div></div>	<div></div>	<div></div>	2	29%
general carrier storage and fast access	<div></div>	<div></div>		1	14%
automated SPC/FDC data feedback and tool release	<div></div>	<div></div>		1	14%
automated carrier inspection and cleaning	<div></div>	<div></div>		1	14%
test wafer management - kitting/dekitting, storage				0	0%
empty carrier management				0	0%
automated carrier transport (AMHS)				0	0%
automated equipment loading/unloading				0	0%
automated decision making (dispatching/scheduling)				0	0%
automated high throughput tool WIP feeding to avoid idle times				0	0%
automated reticle transport and tool loading/unloading				0	0%
automated delivery of spare parts and consumable for PM activities				0	0%
automated predictive maintenance triggering				0	0%
automated lot start (logically and physically)				0	0%
automated lot and wafer sampling (logically and physically)				0	0%

06

What is preventing your FAB to actively work and implement these solutions? (select all that apply) (Mandatory)

Answers  
**2**  
100%

Skips  
**0**  
0%

	0%	33.5%	67%	COUNT	PERCENT
no budget available for automation				2	67%
too many "not automatable" old process and metrology equipoment				1	33%
difficult to calculate ROI and/or proof ROI				0	0%
uncertain, if there is an automation solution for my specific situation				0	0%
not sure where to start with automation				0	0%
old MES/CIM infrastructure likely not to support automation				0	0%
automation is currently not a priority				0	0%
no free industrial engineering / automation resources available to work on it				0	0%
too many R&D lots in the FAB "which cannot be automated"				0	0%
FAB layout historically grown, packed and will likely prevent automation solutions				0	0%

07

What level of automation is realistic for your FAB ? (Mandatory)

Answers

2

100%

Skips

0

0%

	0%	50%	100%	COUNT	PERCENT
moderate automated - in key areas only				2	100%
Fully automated				0	0%
mostly automated - with some manual intervention				0	0%
minimal				0	0%
no change to current status possible				0	0%



08

Is your facility currently investing in automation solutions ? (Mandatory)

Answers

2

100%

Skips

0

0%

	0%	25.5%	51%	COUNT	PERCENT
yes, within the next 24 months				1	50%
not considering				1	50%
yes, currently				0	0%
yes, within the next 12 months				0	0%
considering, but no specific plans yet				0	0%

09

What is the most important aspect of installed automation equipment and their vendors in your fab ? (Mandatory)

Answers  
2  
100%

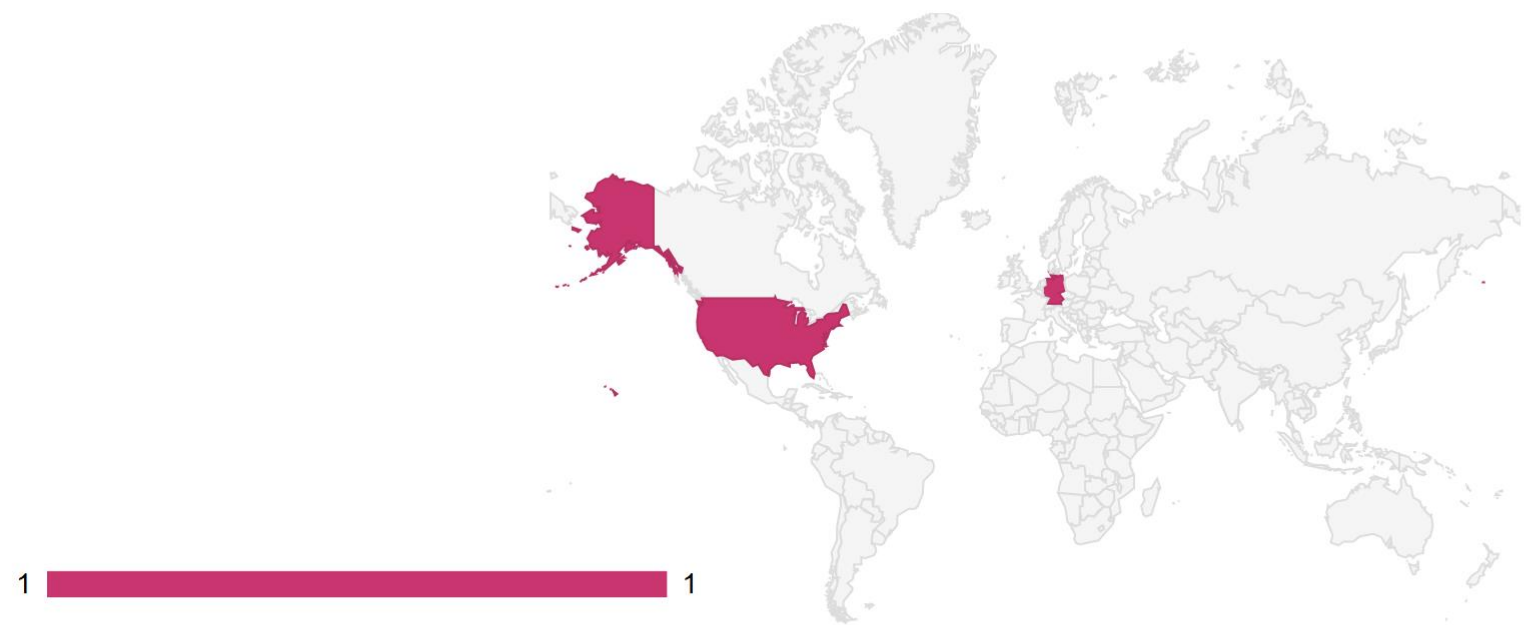
Skips  
0  
0%



	0%	50%	100%	COUNT	PERCENT
cost of the automation solution	<div></div>	<div></div>	<div></div>	2	100%
uptime of the automation solution	<div></div>	<div></div>	<div></div>	0	0%
efficiency of the automation solution	<div></div>	<div></div>	<div></div>	0	0%
vendor support and service for the automation solution	<div></div>	<div></div>	<div></div>	0	0%

# Assembly/Test/Backend

Participants by Country

Total Countries  
**2**



	COUNTRY	TOTAL	PERCENT
	Germany	1	50%
	United States of America	1	50%

02

What are the biggest challenges production faces in your FAB ? (select all that apply)  
(Mandatory)

Answers  
**2**  
100%

Skips  
**0**  
0%

	0%	10.5%	21%	COUNT	PERCENT
skilled labor shortage	<div></div>	<div></div>	<div></div>	2	20%
data visibility and tracking	<div></div>	<div></div>	<div></div>	2	20%
cycle time	<div></div>	<div></div>	<div></div>	2	20%
on-time delivery	<div></div>	<div></div>	<div></div>	2	20%
production efficiency	<div></div>	<div></div>		1	10%
integration of legacy and modern systems	<div></div>	<div></div>		1	10%

03

How often does the topic of automation within your FAB comes up ? (1-not all all, 5-often)  
(Mandatory)

Answers

2

100%

Skips

0

0%

	1	2	3	4	5	AVERAGE
Rating	0	0	1	0	1	4

More Details

04

Would automation solutions benefit your business operations ? (1-disagree, 5- agree)  
(Mandatory)

Answers

2

100%

Skips

0

0%

	1	2	3	4	5	AVERAGE
Rating	0	0	0	0	2	5

05

What forms of automation would be interesting to you ? (select the top 5 that apply)  
(Mandatory)

Answers  
**2**  
100%

Skips  
**0**  
0%

	0%	25.5%	51%	COUNT	PERCENT
automated decision making (dispatching/scheduling)	<div></div>	<div></div>	<div></div>	2	50%
carrier identification and location tracking	<div></div>	<div></div>		1	25%
automated lot and wafer sampling (logically and physically)	<div></div>	<div></div>		1	25%
equipment integration software, to enable automatic recipe select/download and automatic process start				0	0%
test wafer management - kitting/dekitting, storage				0	0%
general carrier storage and fast access				0	0%
empty carrier management				0	0%
automated carrier transport (AMHS)				0	0%
automated equipment loading/unloading				0	0%
automated SPC/FDC data feedback and tool release				0	0%
automated high throughput tool WIP feeding to avoid idle times				0	0%
automated carrier inspection and cleaning				0	0%
automated reticle transport and tool loading/unloading				0	0%
automated delivery of spare parts and consumable for PM activities				0	0%
automated predictive maintenance triggering				0	0%
automated lot start (logically and physically)				0	0%

06

What is preventing your FAB to actively work and implement these solutions? (select all that apply) (Mandatory)

Answers  
**2**  
100%

Skips  
**0**  
0%

	0%	7.5%	15%	COUNT	PERCENT
no budget available for automation				1	14%
old MES/CIM infrastructure likely not to support automation				1	14%
automation is currently not a priority				1	14%
no free industrial engineering / automation resources available to work on it				1	14%
too many R&D lots in the FAB "which cannot be automated"				1	14%
too many "not automatable" old process and metrology equipment				1	14%
FAB layout historically grown, packed and will likely prevent automation solutions				1	14%
difficult to calculate ROI and/or proof ROI				0	0%
uncertain, if there is an automation solution for my specific situation				0	0%
not sure where to start with automation				0	0%



07

What level of automation is realistic for your FAB ? (Mandatory)

Answers

2

100%

Skips

0

0%

	0%	25.5%	51%	COUNT	PERCENT
Fully automated				1	50%
moderate automated - in key areas only				1	50%
mostly automated - with some manual intervention				0	0%
minimal				0	0%
no change to current status possible				0	0%

08

Is your facility currently investing in automation solutions ? (Mandatory)

Answers

2

100%

Skips

0

0%

	0%	50%	100%	COUNT	PERCENT
yes, currently	<div></div>	<div></div>	<div></div>	2	100%
yes, within the next 12 months				0	0%
yes, within the next 24 months				0	0%
considering, but no specific plans yet				0	0%
not considering				0	0%

09

What is the most important aspect of installed automation equipment and their vendors in your fab ? (Mandatory)

Answers  
2  
100%

Skips  
0  
0%

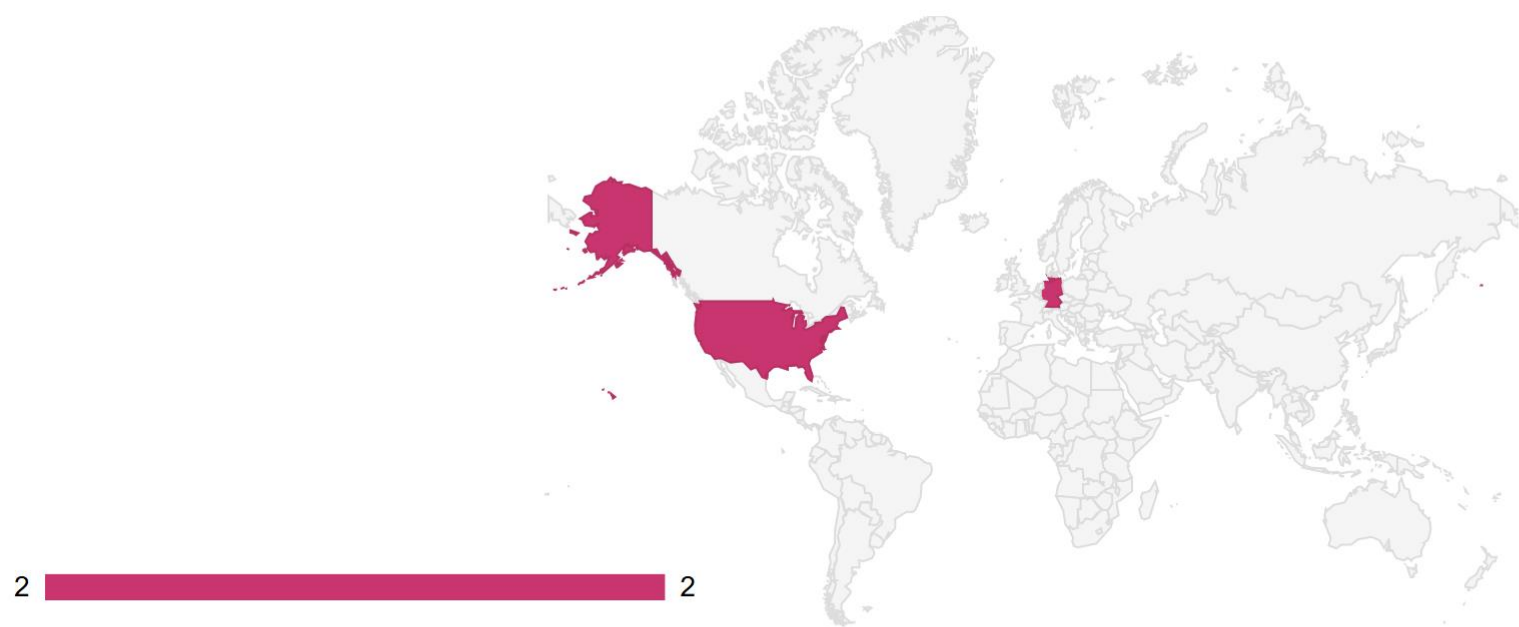
	0%	25.5%	51%	COUNT	PERCENT
efficiency of the automation solution	<div></div>	<div></div>	<div></div>	1	50%
vendor support and service for the automation solution	<div></div>	<div></div>	<div></div>	1	50%
uptime of the automation solution	<div></div>	<div></div>	<div></div>	0	0%
cost of the automation solution	<div></div>	<div></div>	<div></div>	0	0%



# Non-Semi FABs

Total Countries

2

Participants by Country



		COUNTRY	TOTAL	PERCENT	
		Germany	2	50%	
		United States of America	2	50%	

02

What are the biggest challenges production faces in your FAB ? (select all that apply)  
(Mandatory)

Answers  
**4**  
100%

Skips  
**0**  
0%

	0%	11%	22%	COUNT	PERCENT
production efficiency	<div></div>	<div></div>	<div></div>	3	21%
data visibility and tracking	<div></div>	<div></div>	<div></div>	3	21%
integration of legacy and modern systems	<div></div>	<div></div>	<div></div>	3	21%
skilled labor shortage	<div></div>	<div></div>	<div></div>	2	14%
on-time delivery	<div></div>	<div></div>	<div></div>	2	14%
cycle time	<div></div>	<div></div>		1	7%

03

How often does the topic of automation within your FAB comes up ? (1-not all all, 5-often)  
(Mandatory)

Answers

4

100%

Skips

0

0%

	1	2	3	4	5	AVERAGE
Rating	1	0	2	0	1	3

More Details

04

Would automation solutions benefit your business operations ? (1-disagree, 5- agree)  
(Mandatory)

Answers

4

100%

Skips

0

0%

	1	2	3	4	5	AVERAGE
Rating	0	0	1	2	1	4

05

What forms of automation would be interesting to you ? (select the top 5 that apply)  
(Mandatory)

Answers

4

100%

Skips

0

0%

	0%	8%	16%	COUNT	PERCENT
automated decision making (dispatching/scheduling)	<div></div>	<div></div>	<div></div>	3	15%
automated predictive maintenance triggering	<div></div>	<div></div>	<div></div>	3	15%
carrier identification and location tracking	<div></div>	<div></div>	<div></div>	2	10%
automated equipment loading/unloading	<div></div>	<div></div>	<div></div>	2	10%
automated SPC/FDC data feedback and tool release	<div></div>	<div></div>	<div></div>	2	10%
automated carrier inspection and cleaning	<div></div>	<div></div>	<div></div>	2	10%
automated delivery of spare parts and consumable for PM activities	<div></div>	<div></div>	<div></div>	2	10%
equipment integration software, to enable automatic recipe select/download and automatic process start	<div></div>	<div></div>		1	5%
test wafer management - kitting/dekitting, storage	<div></div>	<div></div>		1	5%
empty carrier management	<div></div>	<div></div>		1	5%
automated high throughput tool WIP feeding to avoid idle times	<div></div>	<div></div>		1	5%
general carrier storage and fast access				0	0%
automated carrier transport (AMHS)				0	0%
automated reticle transport and tool loading/unloading				0	0%
automated lot start (logically and physically)				0	0%
automated lot and wafer sampling (logically and physically)				0	0%



06

What is preventing your FAB to actively work and implement these solutions? (select all that apply) (Mandatory)

Answers  
4  
100%

Skips  
0  
0%

	0%	10.5%	21%	COUNT	PERCENT
no budget available for automation	<div></div>	<div></div>	<div></div>	3	20%
difficult to calculate ROI and/or proof ROI	<div></div>	<div></div>	<div></div>	3	20%
no free industrial engineering / automation resources available to work on it	<div></div>	<div></div>	<div></div>	3	20%
FAB layout historically grown, packed and will likely prevent automation solutions	<div></div>	<div></div>	<div></div>	2	13%
uncertain, if there is an automation solution for my specific situation	<div></div>	<div></div>	<div></div>	1	7%
too many R&D lots in the FAB "which cannot be automated"	<div></div>	<div></div>	<div></div>	1	7%
too many "not automatable" old process and metrology equipoment	<div></div>	<div></div>	<div></div>	1	7%
Other Option	<div></div>	<div></div>	<div></div>	1	7%
not sure where to start with automation	<div></div>	<div></div>	<div></div>	0	0%
old MES/CIM infrastructure likely not to support automation	<div></div>	<div></div>	<div></div>	0	0%
automation is currently not a priority	<div></div>	<div></div>	<div></div>	0	0%

07

What level of automation is realistic for your FAB ? (Mandatory)

Answers

4

100%

Skips

0

0%

	0%	25.5%	51%	COUNT	PERCENT
mostly automated - with some manual intervention				2	50%
moderate automated - in key areas only				1	25%
minimal				1	25%
Fully automated				0	0%
no change to current status possible				0	0%

08 Is your facility currently investing in automation solutions ? (Mandatory)

Answers  
4  
100%

Skips  
0  
0%

	0%	25.5%	51%	COUNT	PERCENT
considering, but no specific plans yet				2	50%
not considering				2	50%
yes, currently				0	0%
yes, within the next 12 months				0	0%
yes, within the next 24 months				0	0%

09

What is the most important aspect of installed automation equipment and their vendors in your fab ? (Mandatory)

Answers

4

100%

Skips

0

0%

	0%	25.5%	51%	COUNT	PERCENT
efficiency of the automation solution	<div></div>	<div></div>	<div></div>	2	50%
uptime of the automation solution	<div></div>	<div></div>		1	25%
vendor support and service for the automation solution	<div></div>	<div></div>		1	25%
cost of the automation solution				0	0%