C4R

Capacity for Rail

Rail Freight Systems of the Future with Analysis of Market up-take, Madrid, 21/09/2017

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SEVENTH FRAMEWORK PROGRAMME

Market up-take of Future Rail Freight System – Online Survey

- Based on the findings in WP21, WP22, WP23 and WP24, the survey questionnaire was designed to gain an understanding of the expected industry market up-take levels of the proposed Capacity4Rail freight system designs.
- The survey consisted of 34 questions of 7 on respondents profile and 27 on the six sub-topics;
  - Freight; modal shift from road to rail;
  - EU-wide high-speed rail network;
  - Multimodal TEN-T core network;
  - Long-term comprehensive network;
  - Traffic-management systems in all modes;
  - Multimodal transport information.

- The survey was carried out using the online survey tool SurveyMonkey between 15.11.16 to 19.12.16

Respondent profile

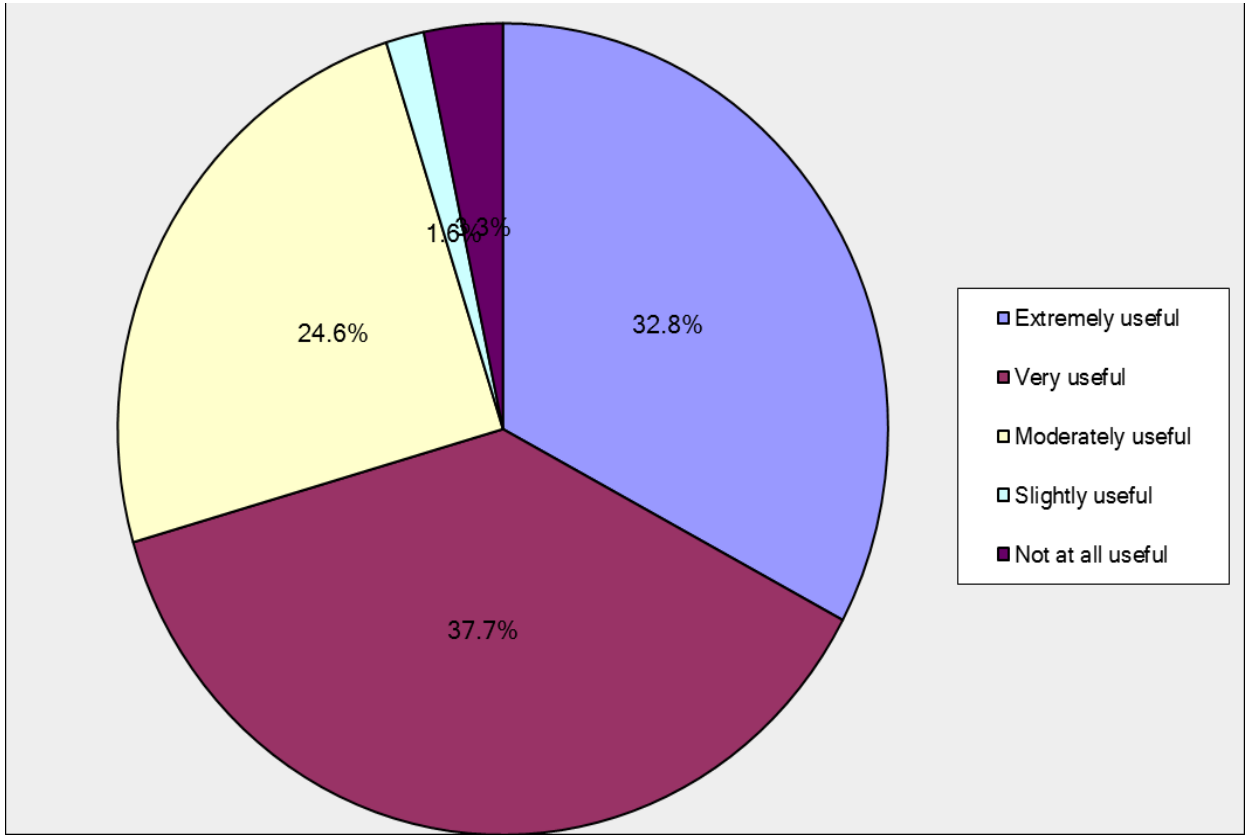
- A total of 61 respondents participated in the survey
- The survey was private and confidential and **no respondents could be identified individually.**

From the respondents;

- 86% were male;
- 13% CEO, 36% senior management, 22% middle management, 11% operational, 11% Administrative, 5% Other including fleet manager.
- 83% had been active in rail sector for over ten years.
- 20% Doctorate degree, 38% Postgraduate degree, and 23% Bachelor's degree.
- Respondents were located in; Austria, Croatia, Estonia, France, Germany, Iran, Italy, Serbia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland and UK

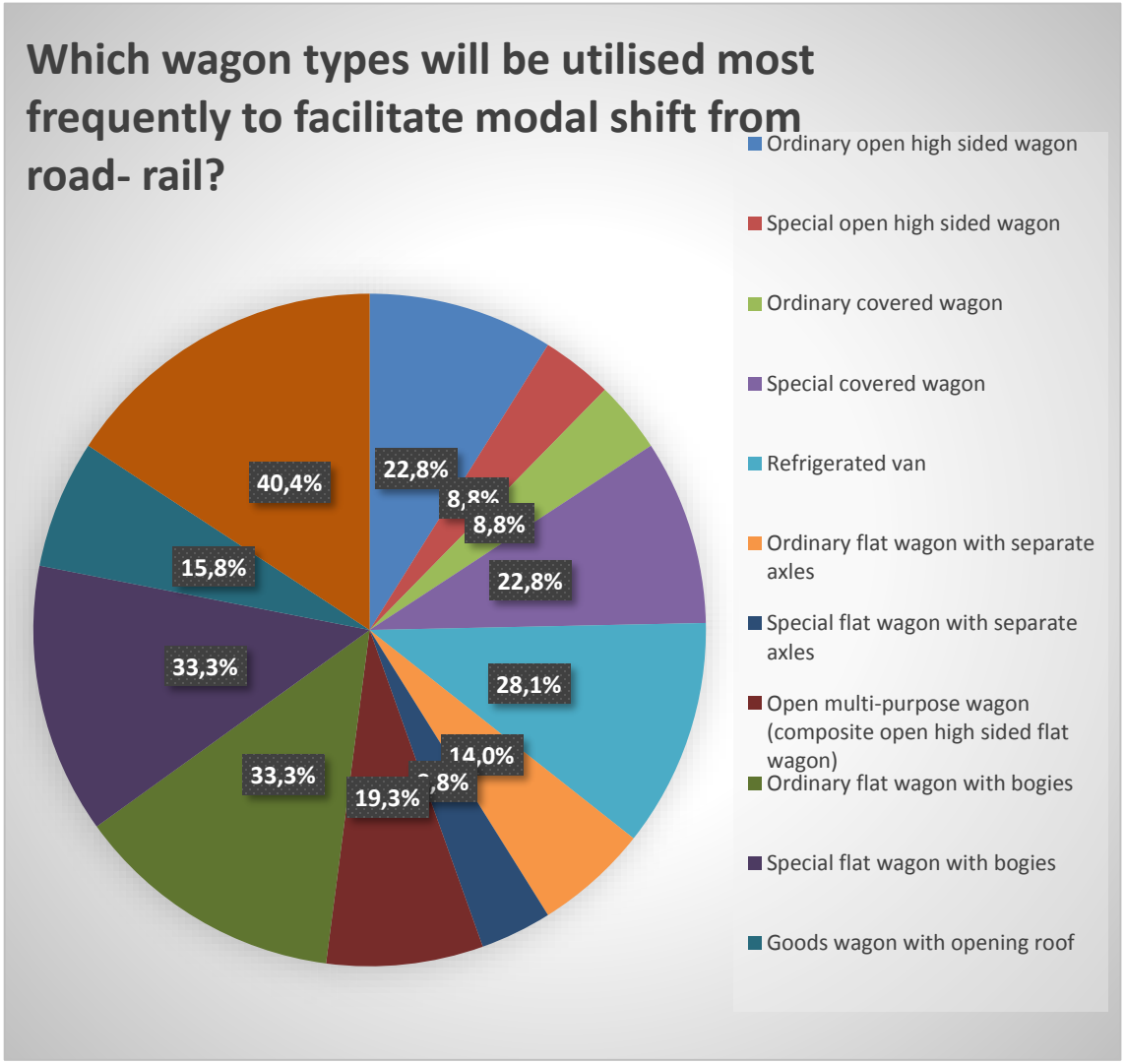
*For Modal Shift from Road to Rail – **Increased gauge clearance***

How useful do you think an increase in rail gauge clearance will be in encouraging modal shift from road to rail and why?



- 70% of respondents viewed an increase in rail gauge clearance as ‘very’ or ‘extremely’ useful to encourage modal shift from road to rail.
- Only 5% of respondents viewed an increase in gauge clearance as only ‘slightly’ useful or ‘not at all’ useful.

*For Modal Shift from Road- Rail – **Most frequently utilised wagon type***



Three wagon types were chosen as 'most frequently utilised';

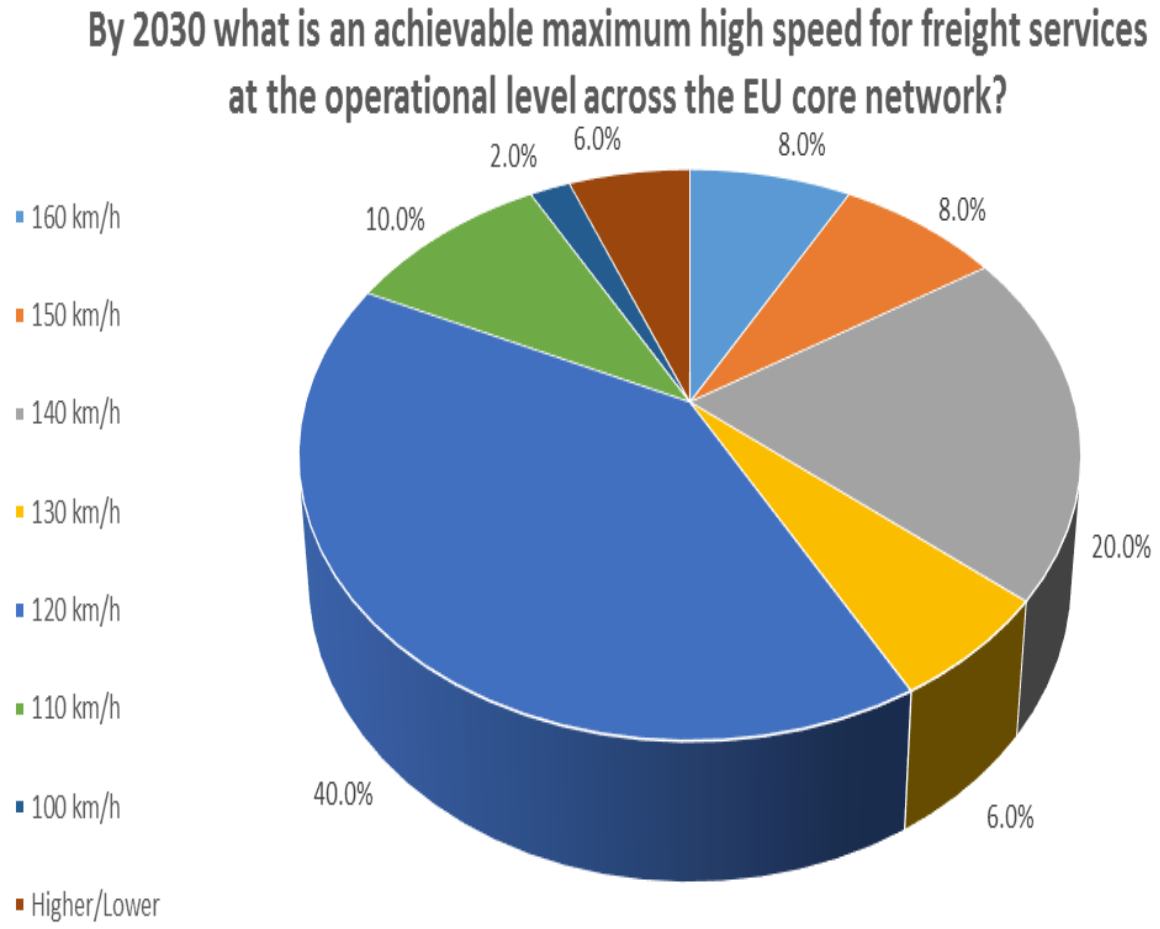
- Special flat wagon with bogies
- Ordinary flat wagon with bogies
- Tank wagon

*Innovations - **Potential Freight Vehicle Improvements***

Innovations or Improvements	Ranking for Most Urgent '1'		Ranking for '2'		Ranking for '3'		Ranking for '4'		Ranking for '5'		Least Urgent '6'	
	TR	P	TR	P	TR	P	TR	P	TR	P	TR	P
EP Brakes to allow faster brake applications & support longer trains	7	2	2	6	5	5	6	3	7	3	8	2
Automatic couplers with an electrical connection	6	4	8	3	6	3	6	3	10	2	1	6
End of train device to reduce the duration of safety checks prior to departure	4	6	8	3	5	4	8	2	4	4	4	4
Lighter wagons with lower tare and higher payload	10	1	9	2	10	1	9	1	1	6	5	3
Track friendly running gear to achieve higher axle loads and higher speeds as well as causing less track deterioration and wheel damage	7	3	7	4	10	1	3	4	11	1	2	5
To install detectors for predictive maintenance	6	5	11	1	8	2	6	3	3	5	12	1

Innovations or Improvements	Lighter wagons	Maintenance Detectors	Track friendly running gear	Automatic couplers	End of train device	EP Brakes
Total points	179	159	149	139	120	112
Overall Ranking	1	2	3	4	5	6

*EU wide **High Speed** Rail - **Upper Limit** for **Freight Services***



- **40% believe** that **120km/h** is the most achievable **high speed** for **freight services**.
- **ONLY 20% respondents** were optimistic **140km/h** as attainable.

Top Innovations for Road-Rail and Rail to Sea Terminal Operations

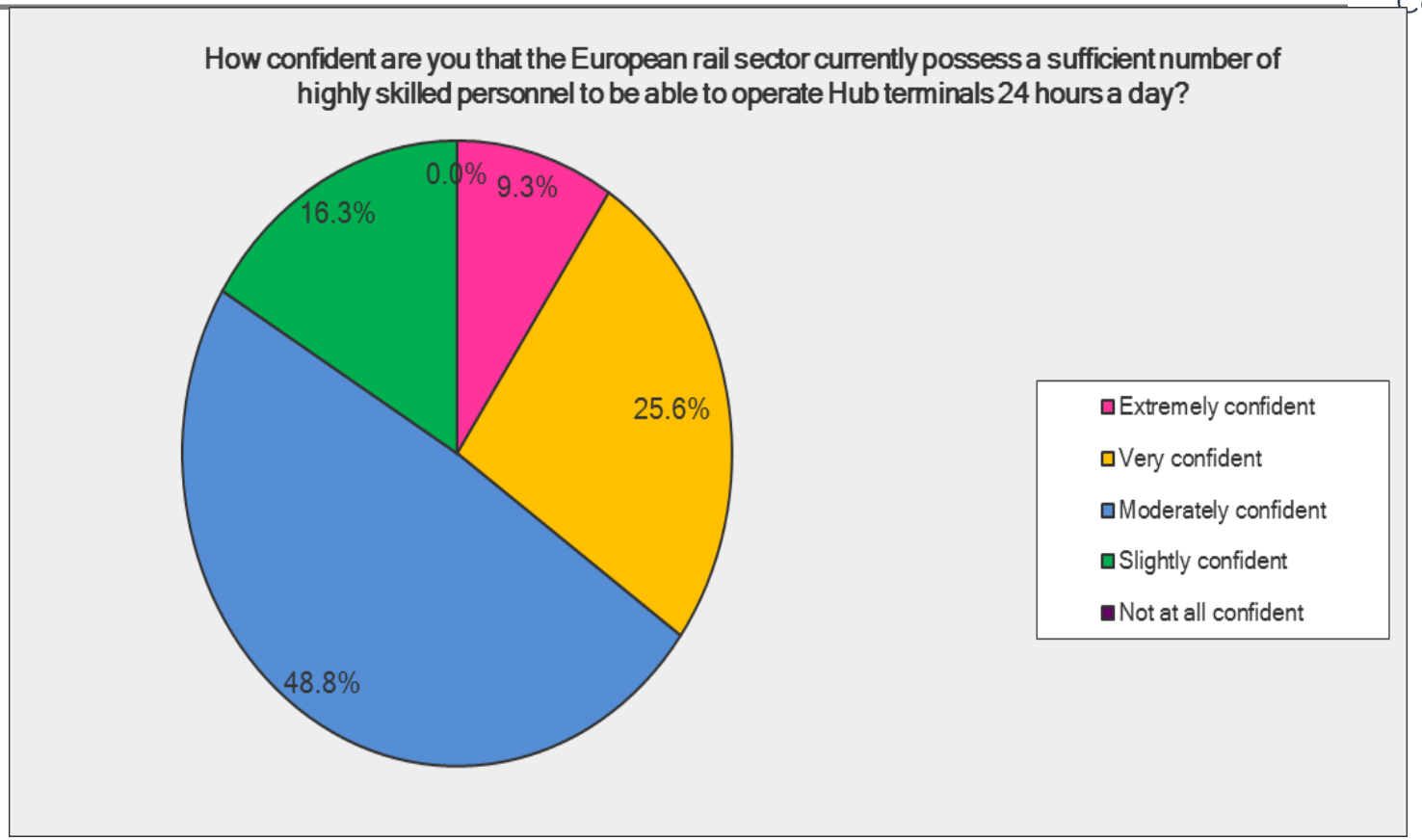
Innovations or Improvement	Automatic ITU and vehicle control and data exchange	Longer Trains	24 hour working time	Dual mode- Electric Diesel Locomotive	Faster & Fully direct handling	Automated gate	Automatic systems for horizontal parallel handling	Automated fast transtainer	Horizontal and parallel handling	Intermodal complex spreader	Other
Total points	273	253	232	231	211	169	154	148	139	91	7
Overall Ranking	1	2	3	4	5	6	7	8	9	10	11

Top Innovations for Rail-Rail Terminal operations

Improvement	Automatic coupling & decoupling	Automated vehicle identification	Longer operative track length	24 hour working time	Dual mode, electric diesel locomotive	Automatic brakes on wagons	Driverless Locomotives	Self propelled wagons
Total points	195	177	169	162	148	115	101	97
Overall Ranking	1	2	3	4	5	6	7	8

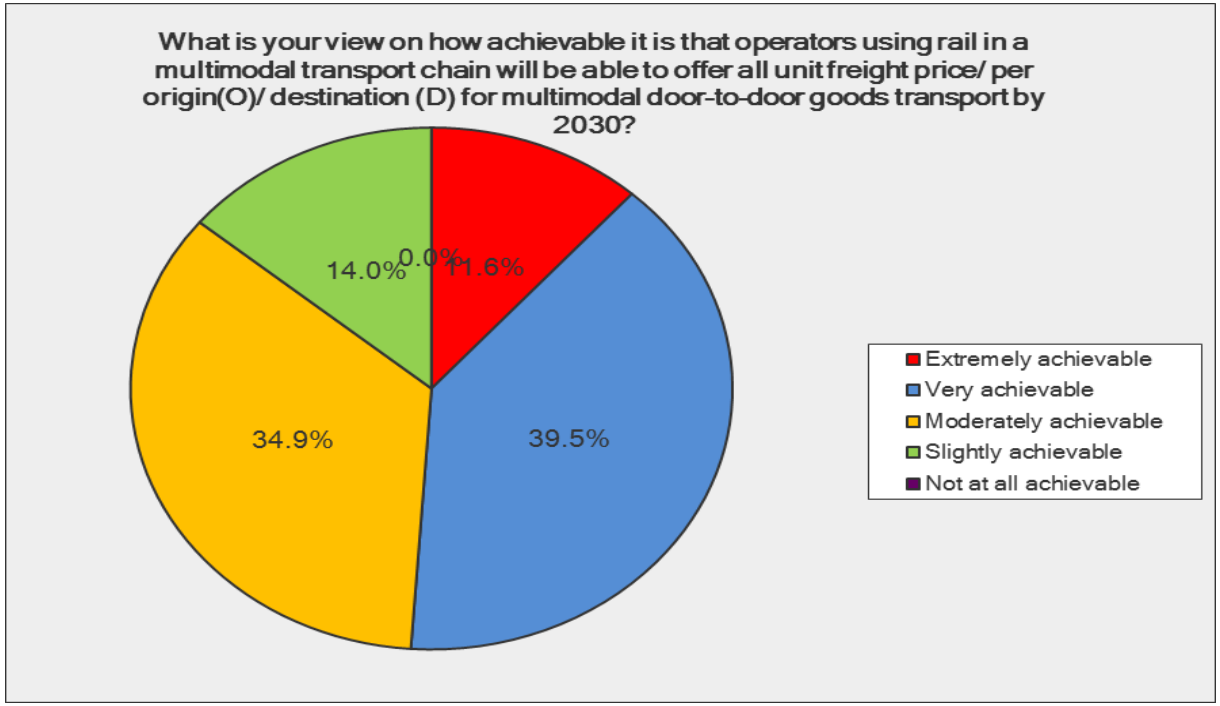
- '*Automatic coupling and decoupling*' and '*Automated vehicle identification*' are rated as the most urgently required improvements.
- It is interesting to note that '24 hour working time' and 'Driverless locomotives' received ranking of 4th and 7th in terms of importance.

SKILLS Availability for 24 Hour Terminal Operations



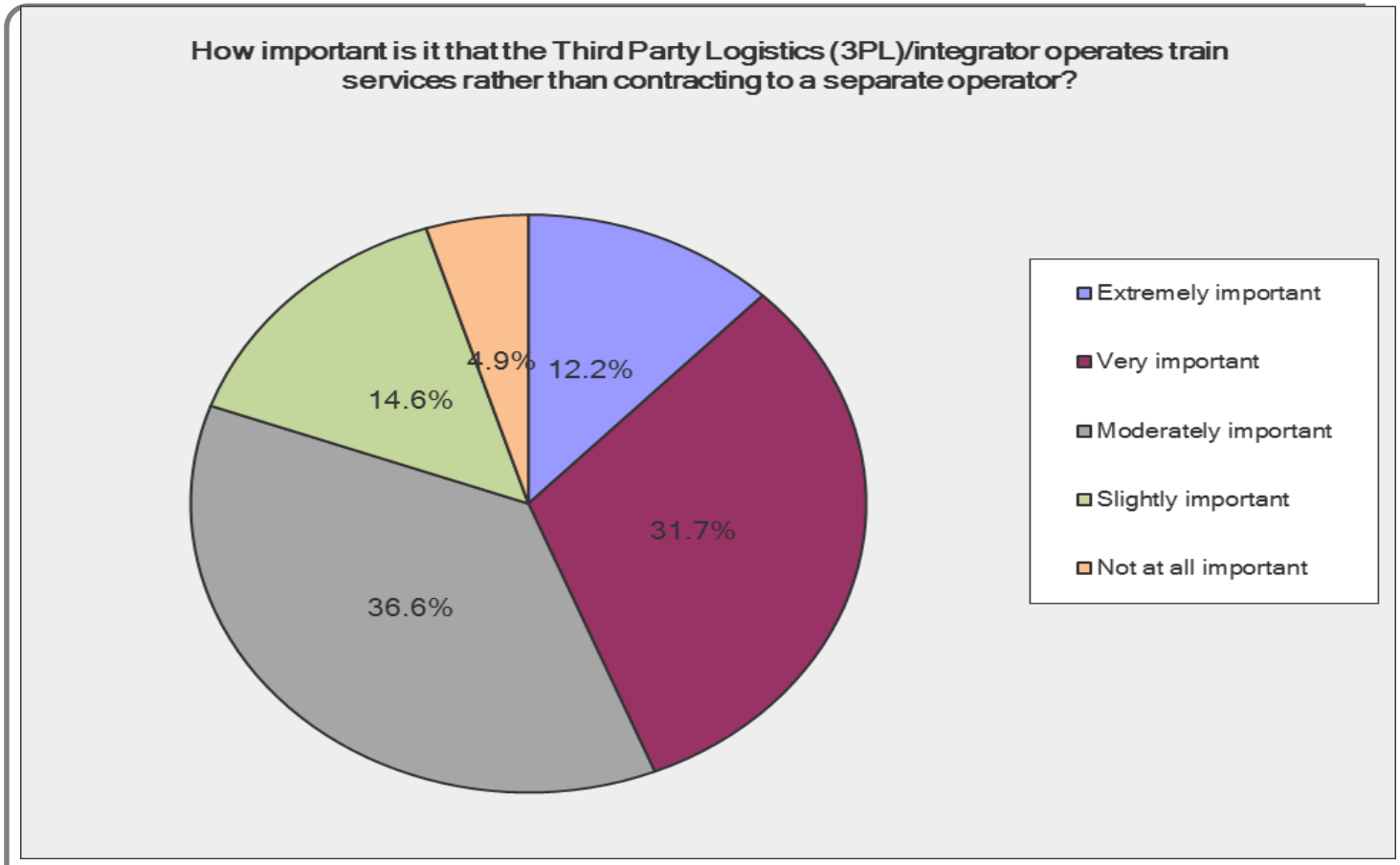
- The industry stakeholders are largely positive about the level of skilled personnel available for terminal operation.
- This implies that the 24-hour operation of hub terminals should not be delayed due to the notion of skills shortage.

Single Price for O-D Multimodal Rail Freight Service



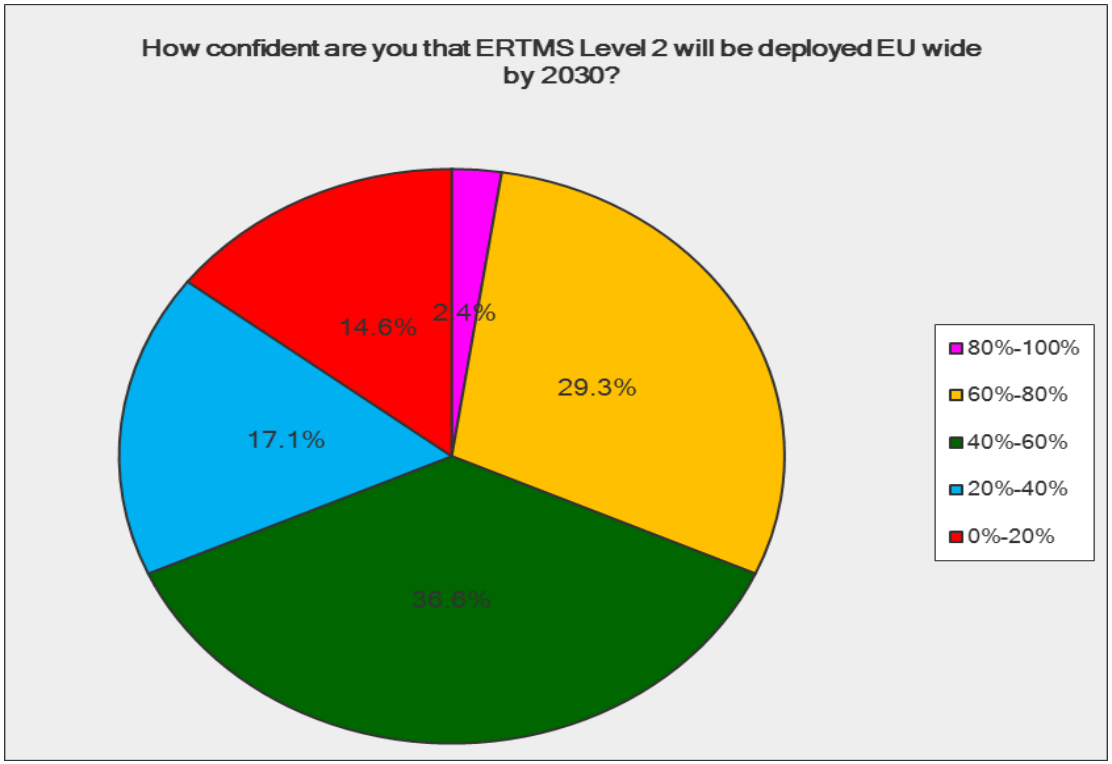
- **84% of participants** find the prospect of producing a unit **freight price for O-D** multimodal freight service 'moderately to very' achievable by 2030.
- 50% of respondents believe that it could be 'very' feasible.

Use of 3PLs for Rail Freight Service for Multimodal Chain



- 40% of respondents viewed this as either ‘very’ or ‘extremely’ important; and
- 36% identified it as moderately important.

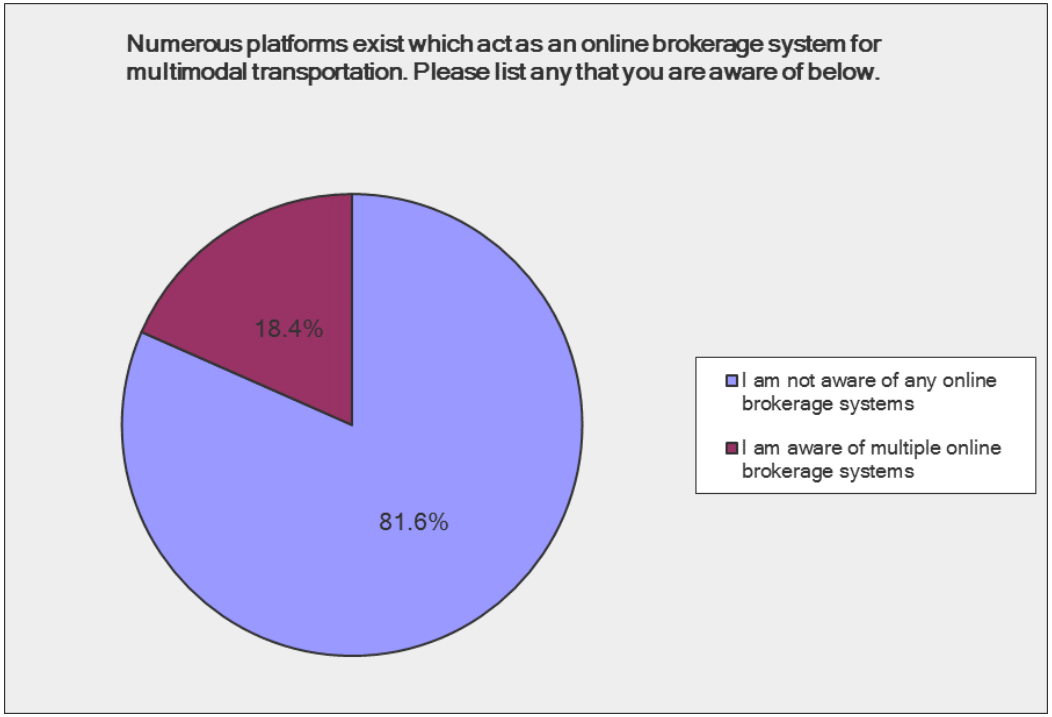
ERTMS Level 2 & 3 Deployment by 2030



- **Over 30%** of respondents believed that there was less than a **50% possibility** that ERTMS level 2 would be operational EU wide by 2030.
- **Only 2%** of participants had an **80-100% confidence** level in EU wide Level 2 ERTMS deployment by 2030.

- No participants voted for a 80-100% confidence level on the deployment of ERTMS Level 3.
- About 44% of participants expressed a 0-20% confidence level on the deployment of ERTMS Level 3.

Use of Online Brokerage for multimodal rail freight service

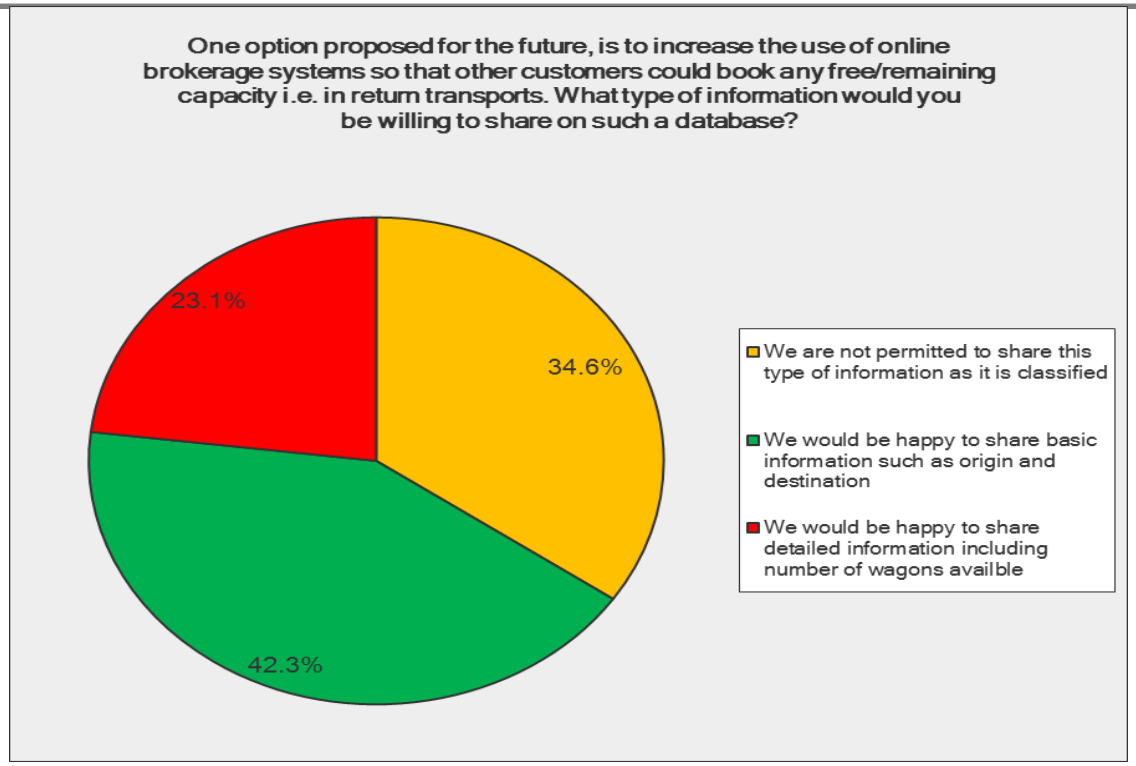


- Over **80% of participants** were **unaware** of any online brokerage services.
- Some indicated following brokerage systems;
  - Freight Arranger
  - Freightliner offers brokerage to its customers in the UK on all intermodal services

For participants who do not use an online brokerage system the question was posed, "If you have not used an online booking platform please explain why not and whether you plan to do so in the future" responses included;

- *(Online) Tool not necessary;*
- *No need for our business;*
- *We run block trains for one customer;*

Information database for online brokerage for multimodal rail freight service



- **42%** of respondents **expressed interests** to share such information as origin and destination.
- 35% of participants **do *not*** want to share this type of information.

Industry Feedbacks:

- *Brokerage system only works if there are operators who are prepared to take risk on filling trains.*
- *In most cases, the rail haulier will be looking for train fill from contracted customers.*
- *Doubtful potential for online brokerage system.*

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Thank you for your kind attention

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