PURDUE UNIVERSITY

Center for Food and Agricultural Business
COLLEGE OF AGRICULTURE

Data on Data: How the Food and Agribusiness Value Chain is Evolving

Survey Results - Fall, 2019

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Survey Description and Objective

- In spring 2019, the Center for Food and Agricultural Business at Purdue University conducted a research study surveying five levels of the value chain, including: ***(1) Ag Input Manufacturers, (2) Ag Retailers, (3) Farmers, (4) First Handlers/Food Processors, (5) Food Manufacturers and (6) Food Retailers.***

- The survey focused on how collected data and information is used for decision-making across the agricultural and food business value chain. The main purpose of this study is to understand and document how the agricultural and food business value chain is evolving on data collection and analytics. This study will also help to find the gaps within and between different levels of food value chain in terms of data usage for decision-making.

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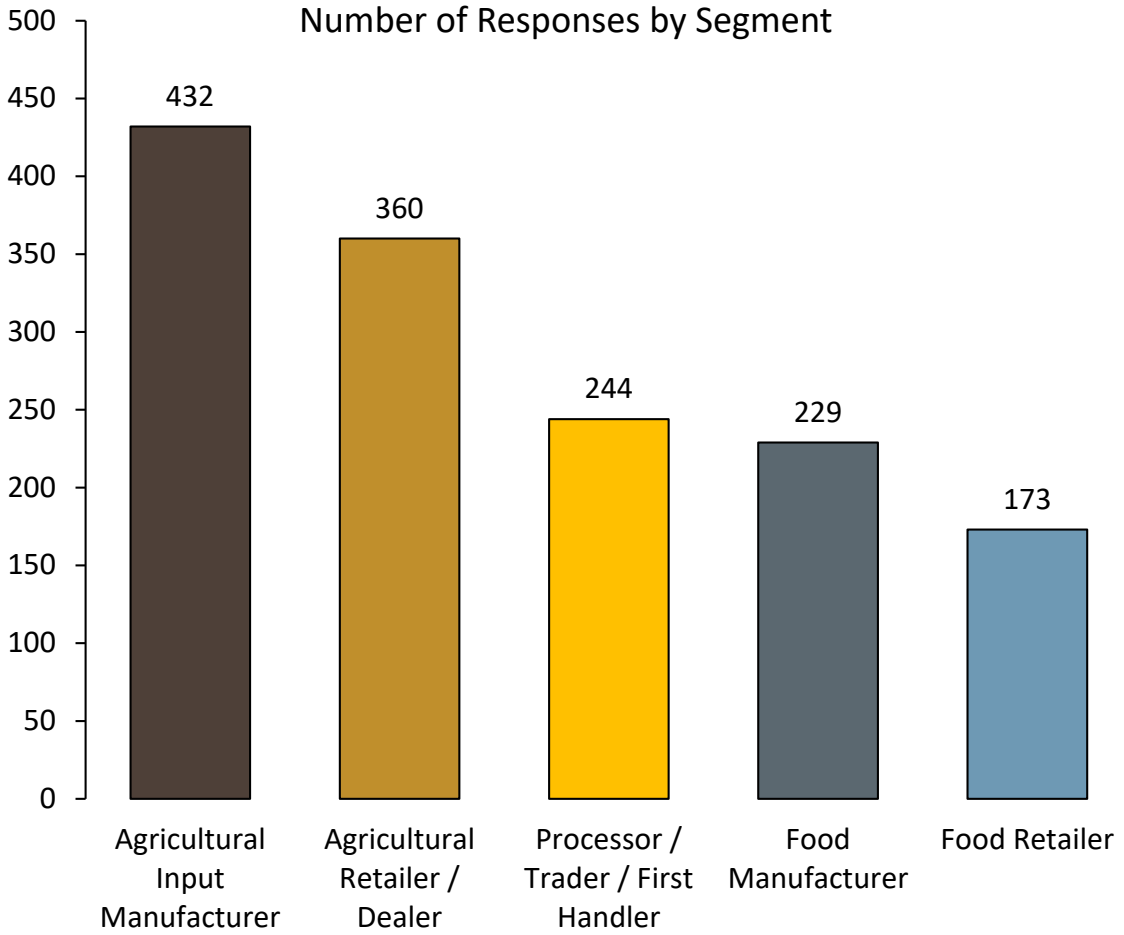
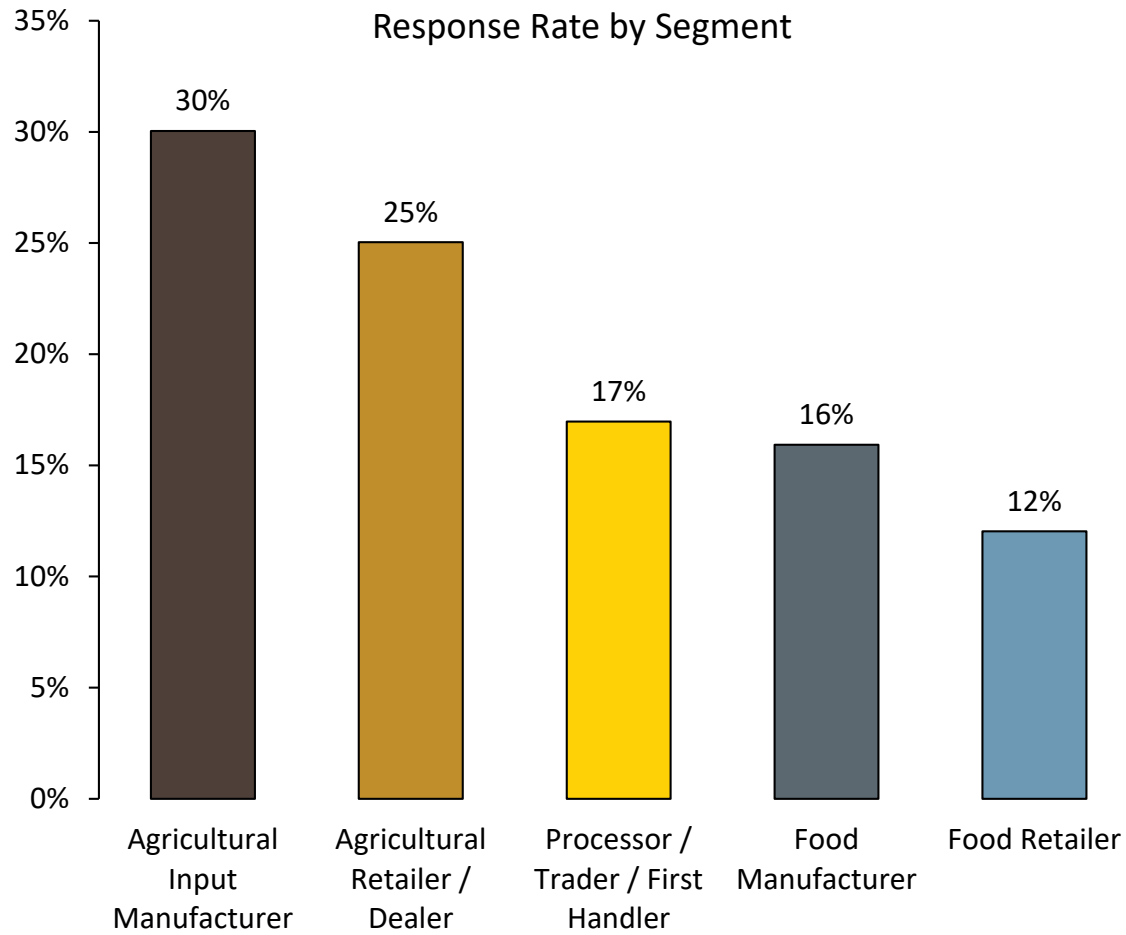
1. Aggregated Survey Results

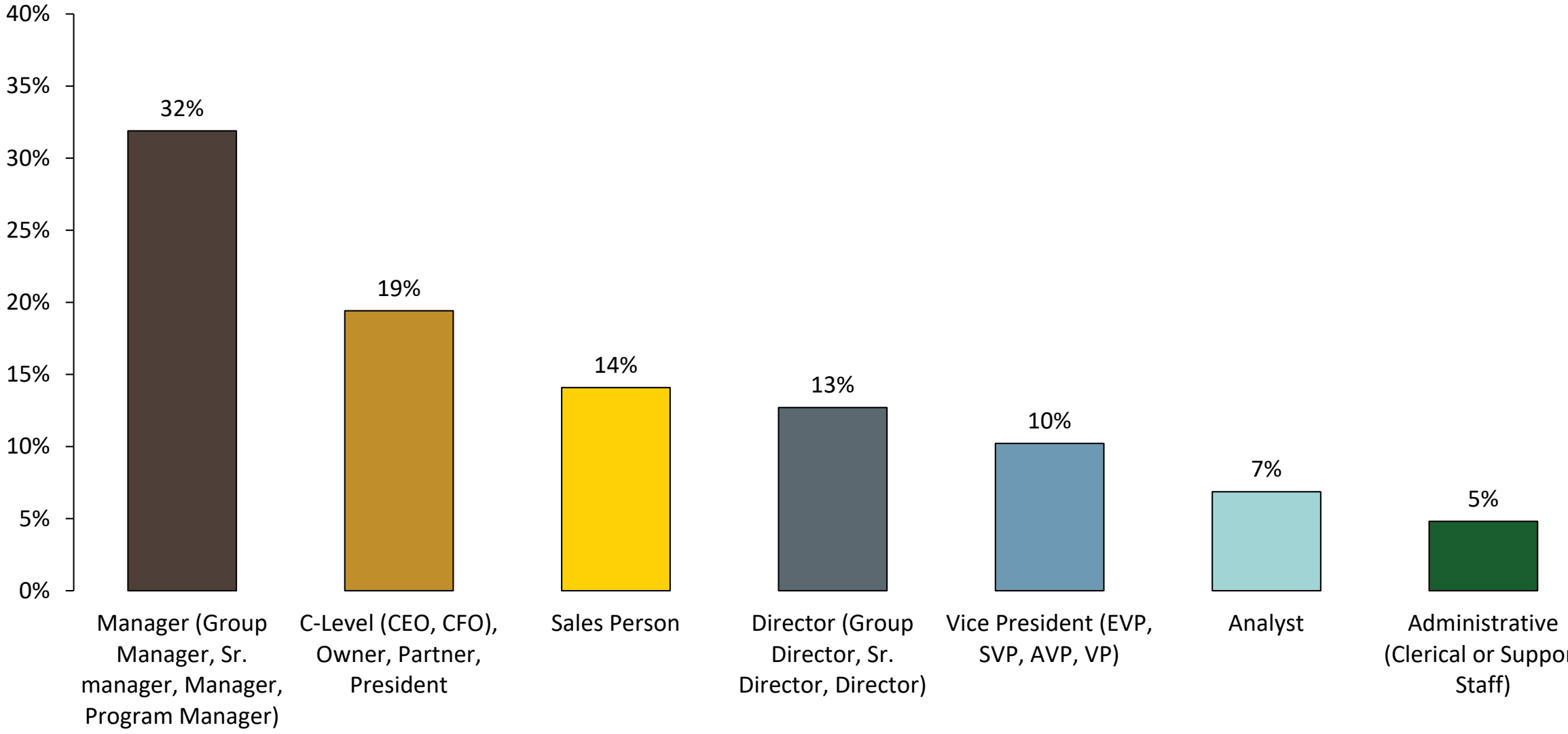
Demographics

Responses by Segment

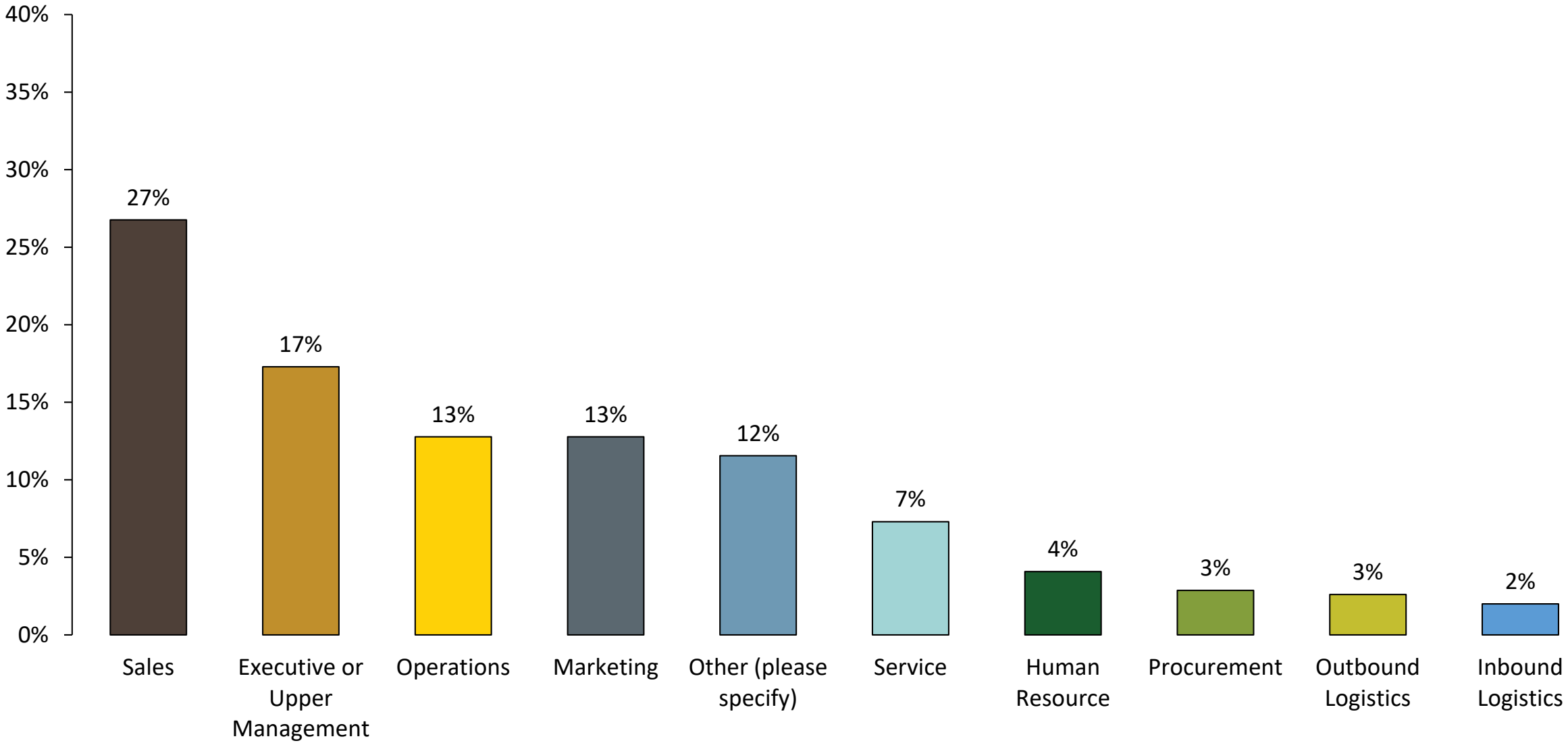




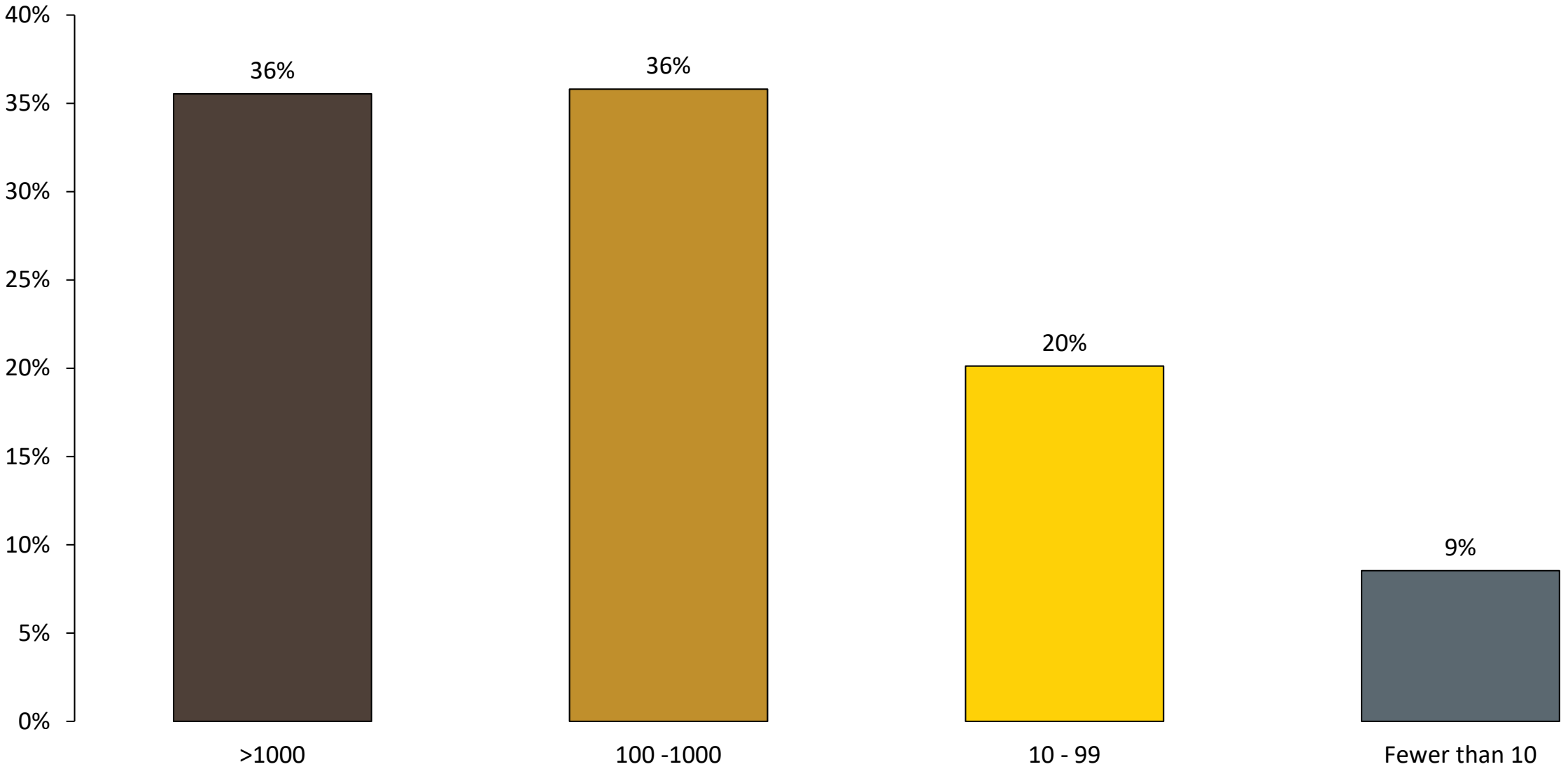
Responses by Job Position



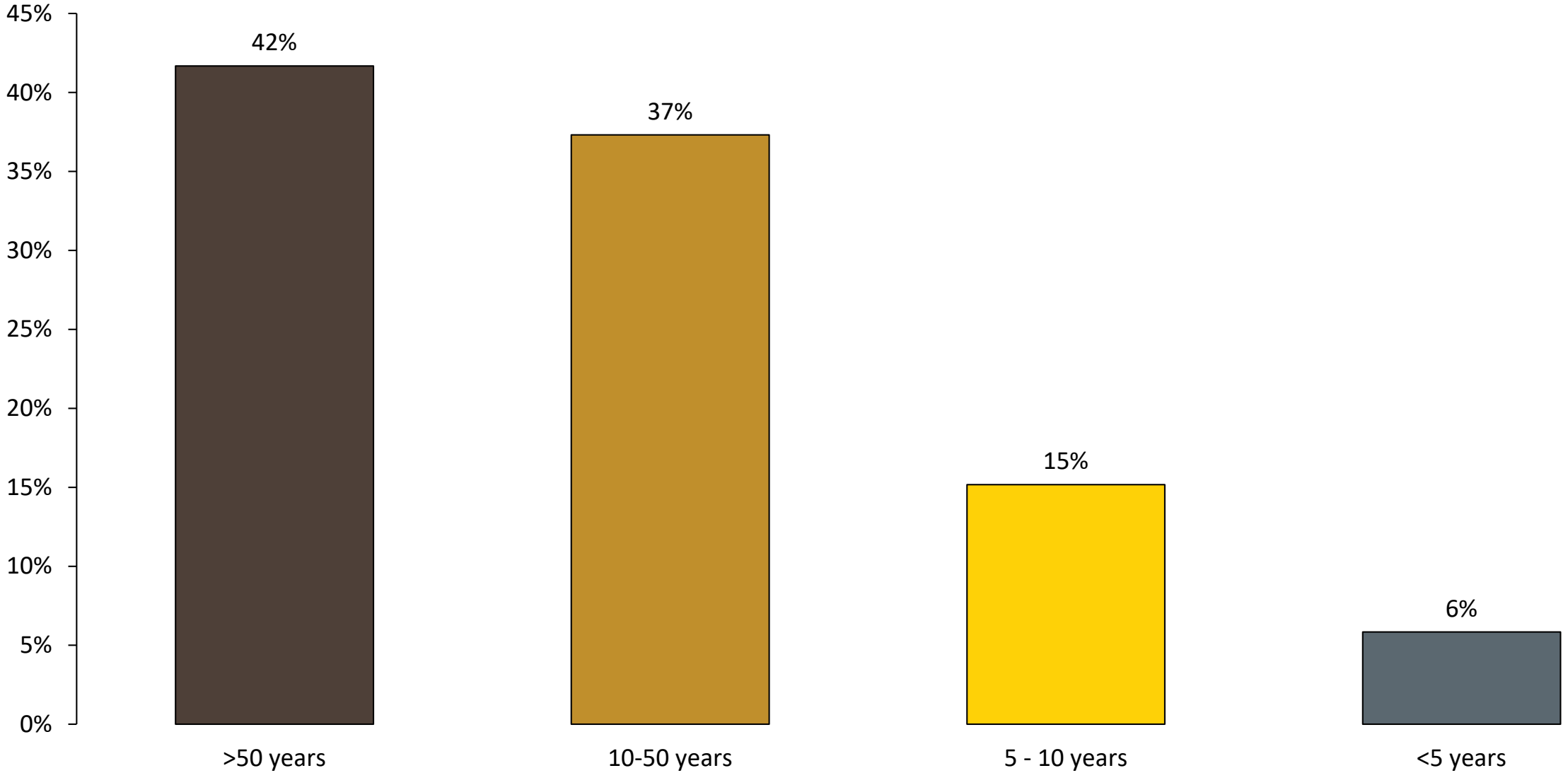
Responses by Business Function



Responses by Company Size (Number of Employees)



Responses by Years of Company in the industry



The Extent Data is Collected Data Use/Analytics

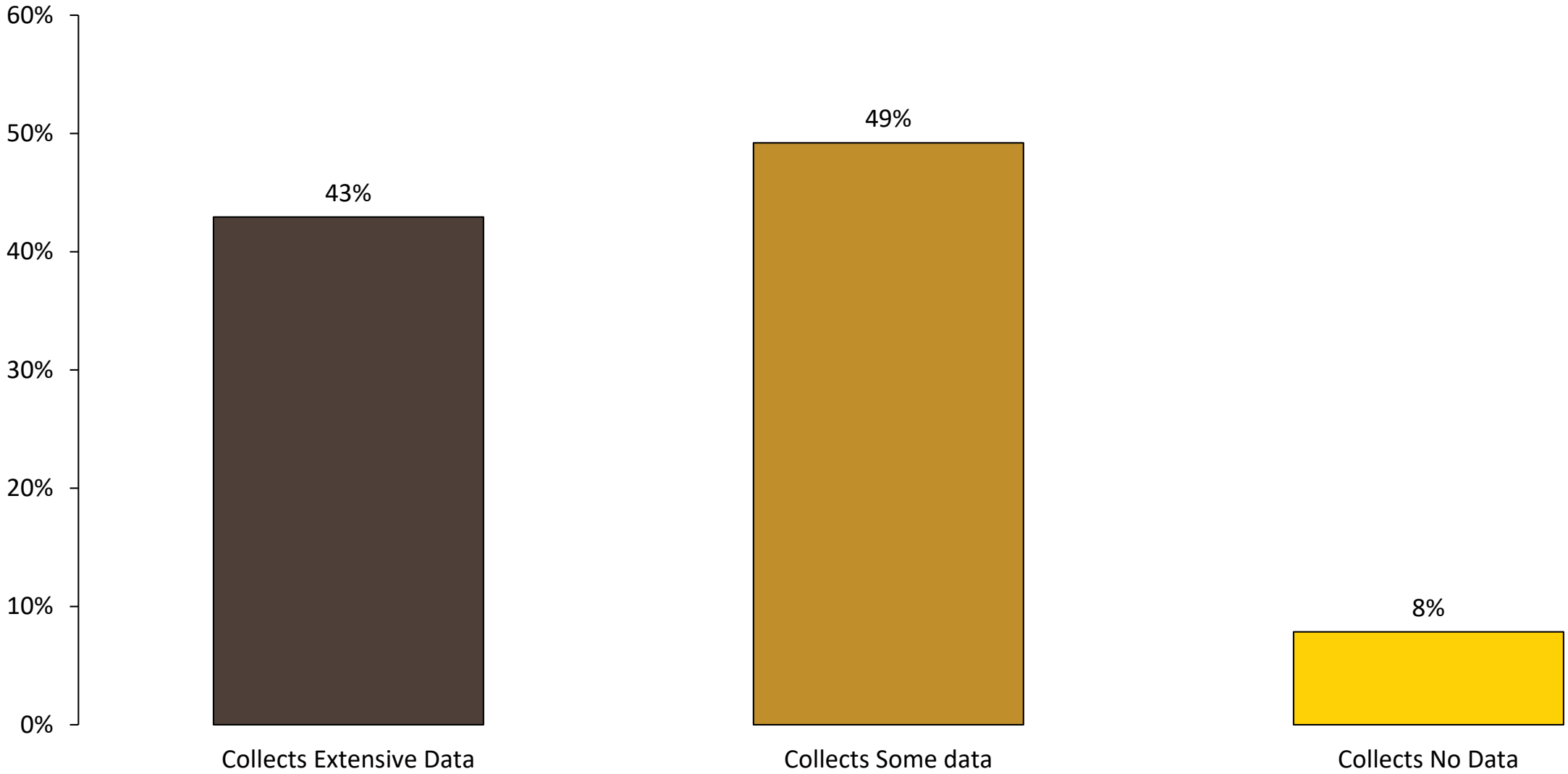
To what extent does your organization **collect data** that is useful?

- ○ Collects No Data
- ○ Collects Some data
- ○ Collects Extensive Data

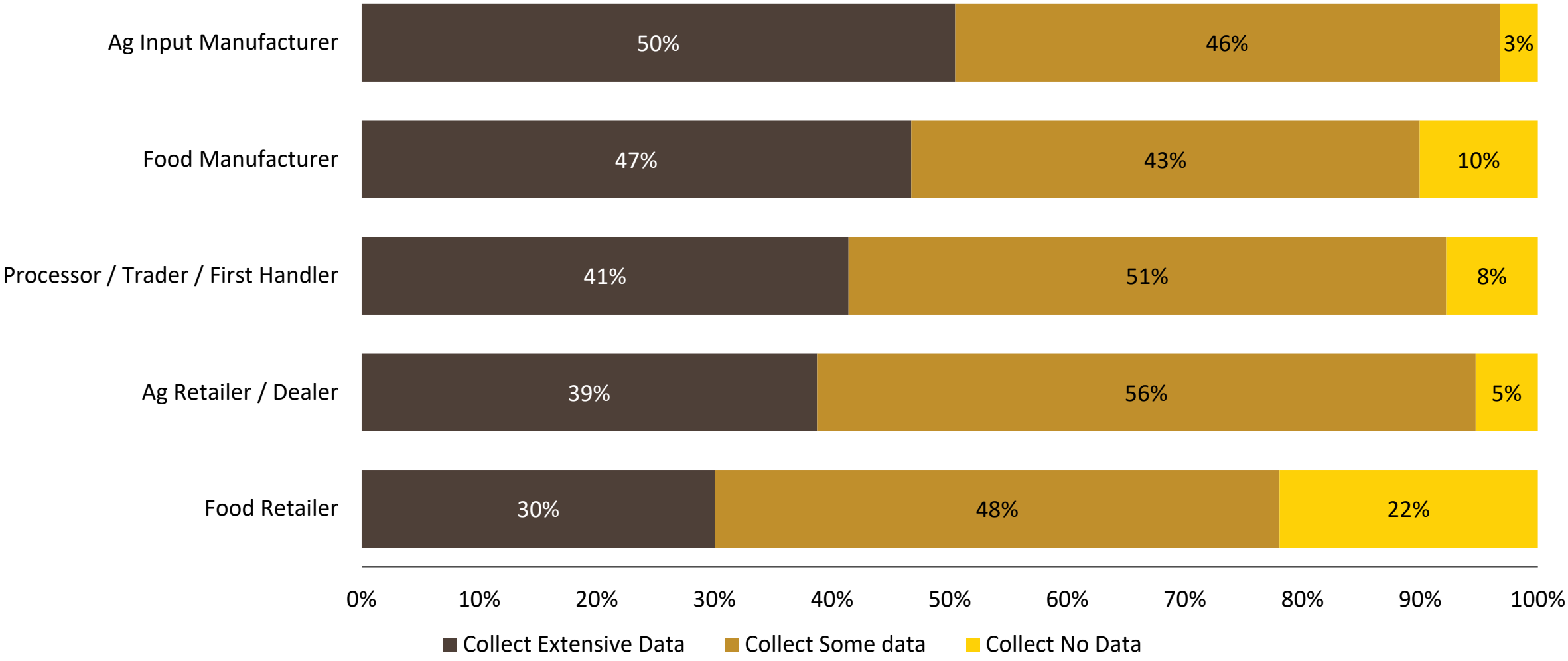
Approximately what percentage of overall decisions are made based on **data analytics** in your organization?

- ○ None - 0%
- ○ 1% to 25%
- ○ 26% to 50%
- ○ 51% to 75%
- ○ 76% to 100%

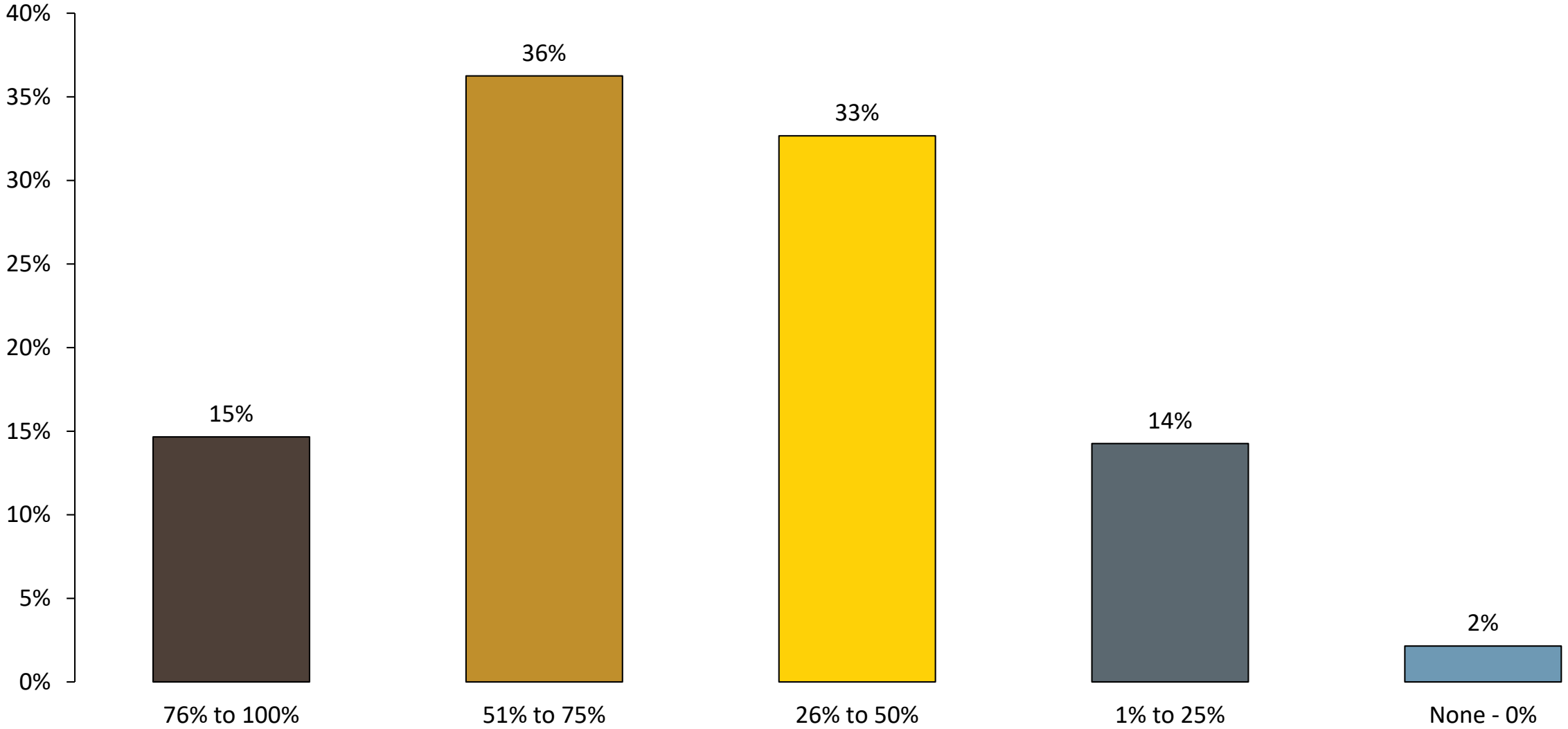
Data Collection



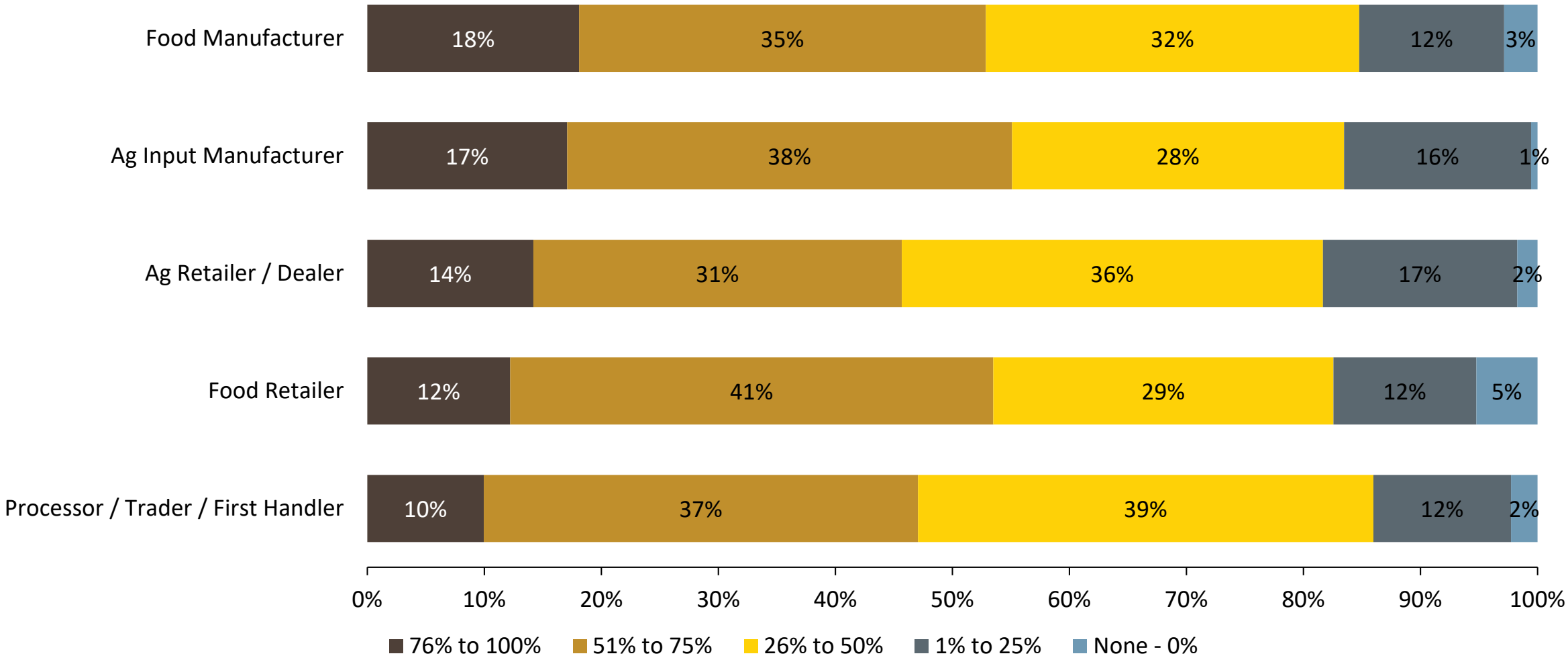
Data Collection by Level of the Value Chain



Overall Decisions Made Based on Data Analytics



Decisions Made Based on Data Analytics by Levels of Value Chain

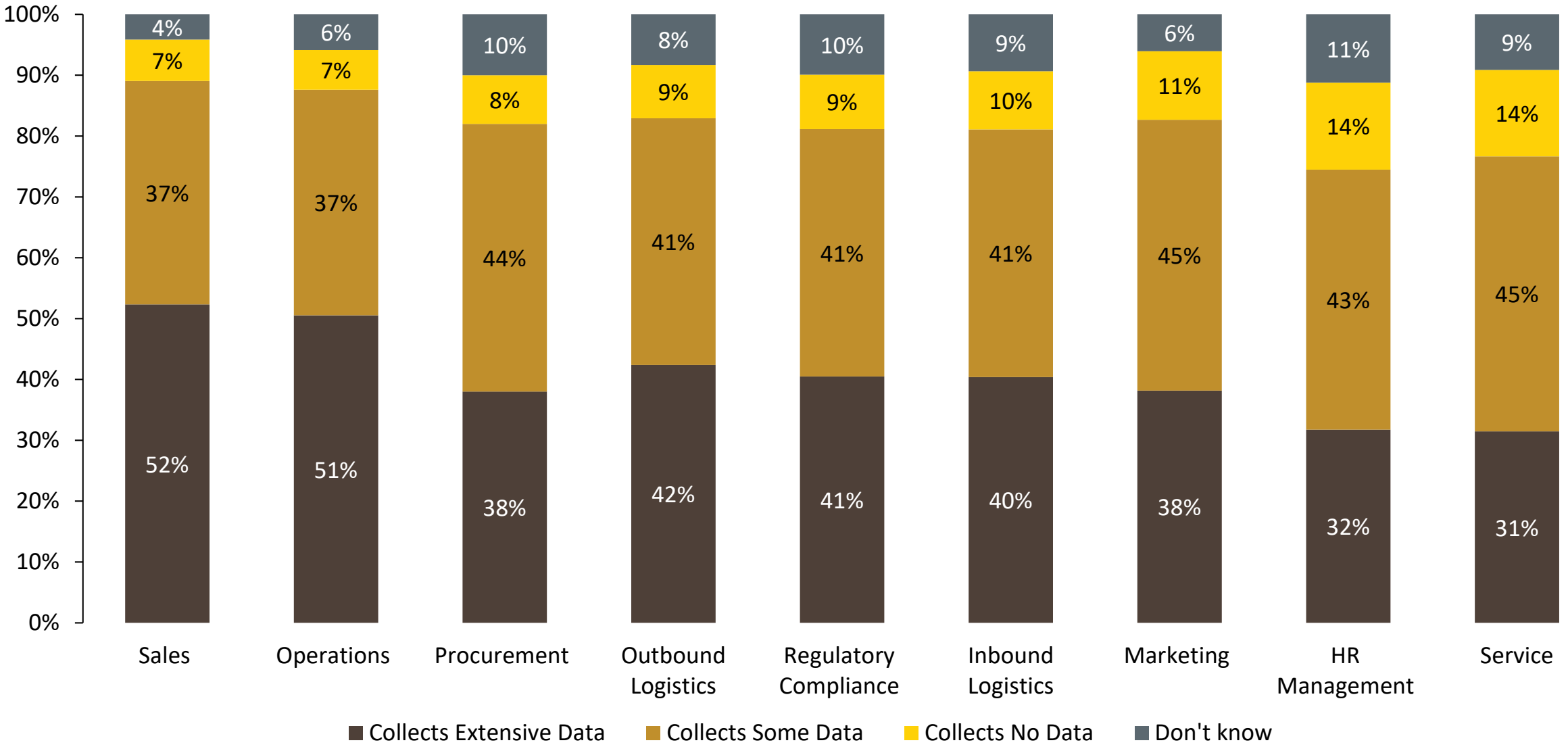


The Extent Data is Collected by Business Function

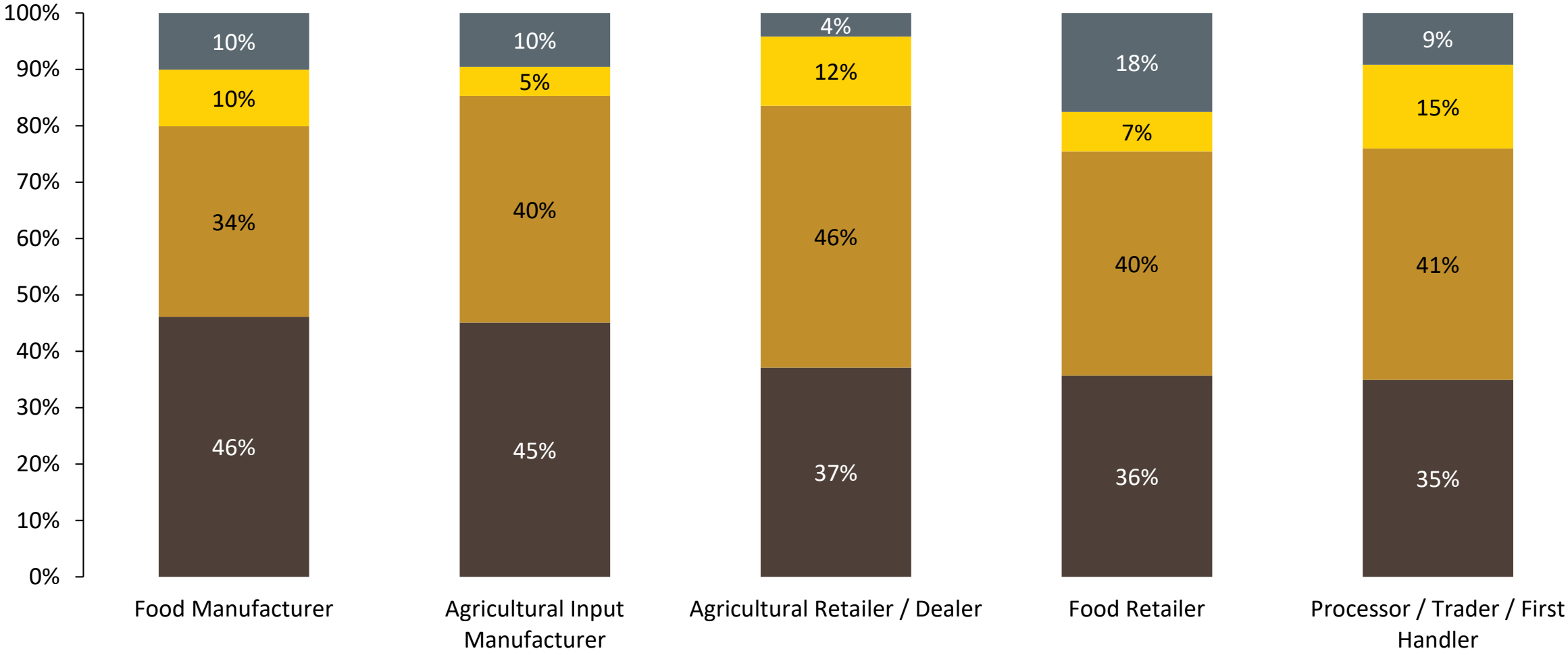
To what extent does your organization **collect data** for the following business functions?

	Don't know	Collects **No** Data	Collects **Some** Data	Collects **Extensive** Data
Inbound Logistics (*e.g. ordering/receiving, inventory replenishment*)	○	○	○	○
Operations (*e.g. production volumes, process details, quality control, efficiency measure*)	○	○	○	○
Outbound Logistics (*e.g. ordering/delivery*)	○	○	○	○
Marketing (*e.g. customer data/CRM, product development, product life-cycle, segmentation*)	○	○	○	○
Sales (*e.g. customer orders, referrals, transactional data*)	○	○	○	○
Service (*e.g. application, repair, tech support*)	○	○	○	○
HR Management (*e.g. goal setting and monitoring, compensation, payroll, benefits*)	○	○	○	○
Procurement (*e.g. input costs, SRM*)	○	○	○	○
Regulatory Compliance (*e.g. labor, environmental standard*)	○	○	○	○

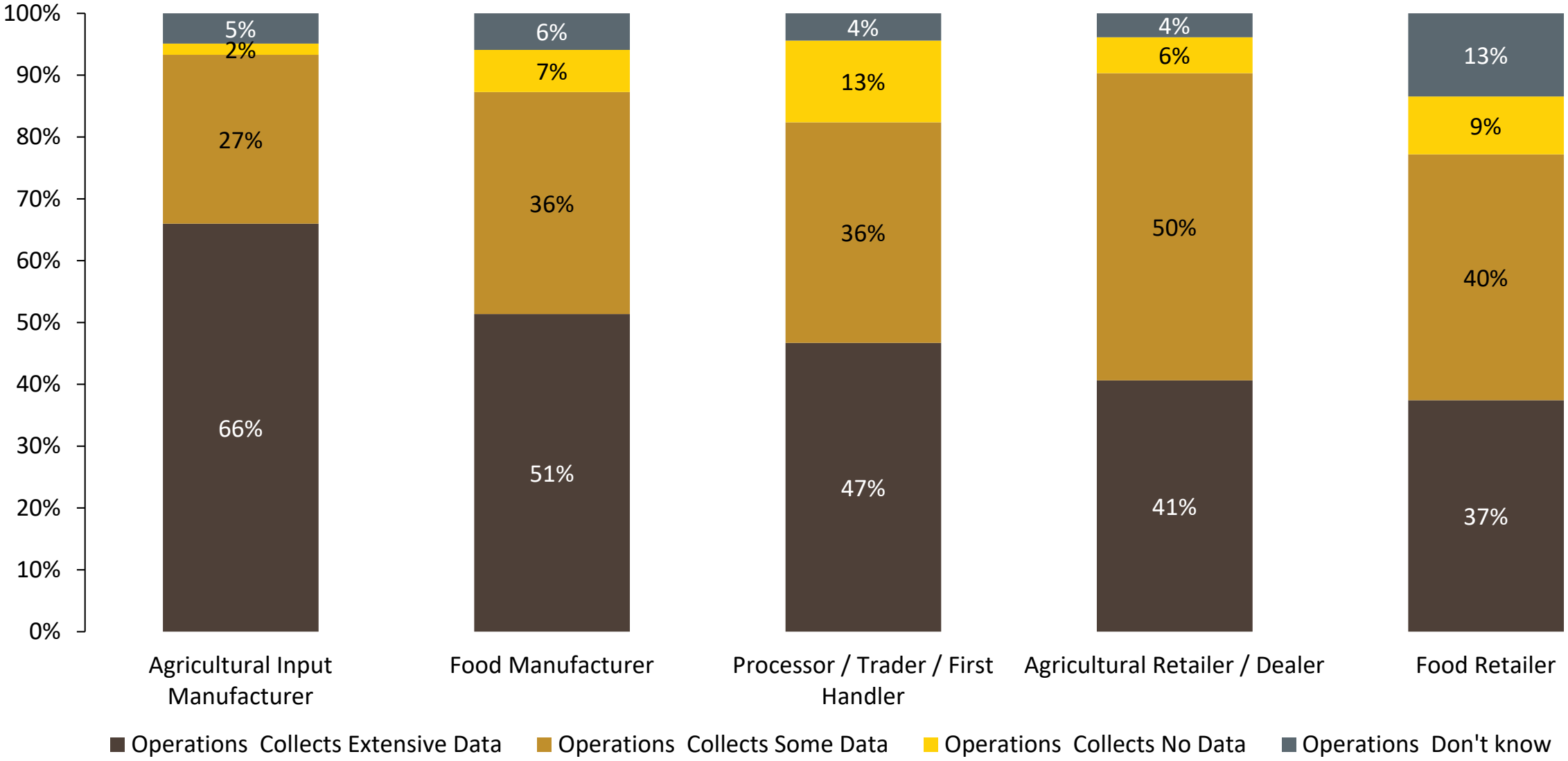
Data Collection by Business Function



Inbound Logistics



Operations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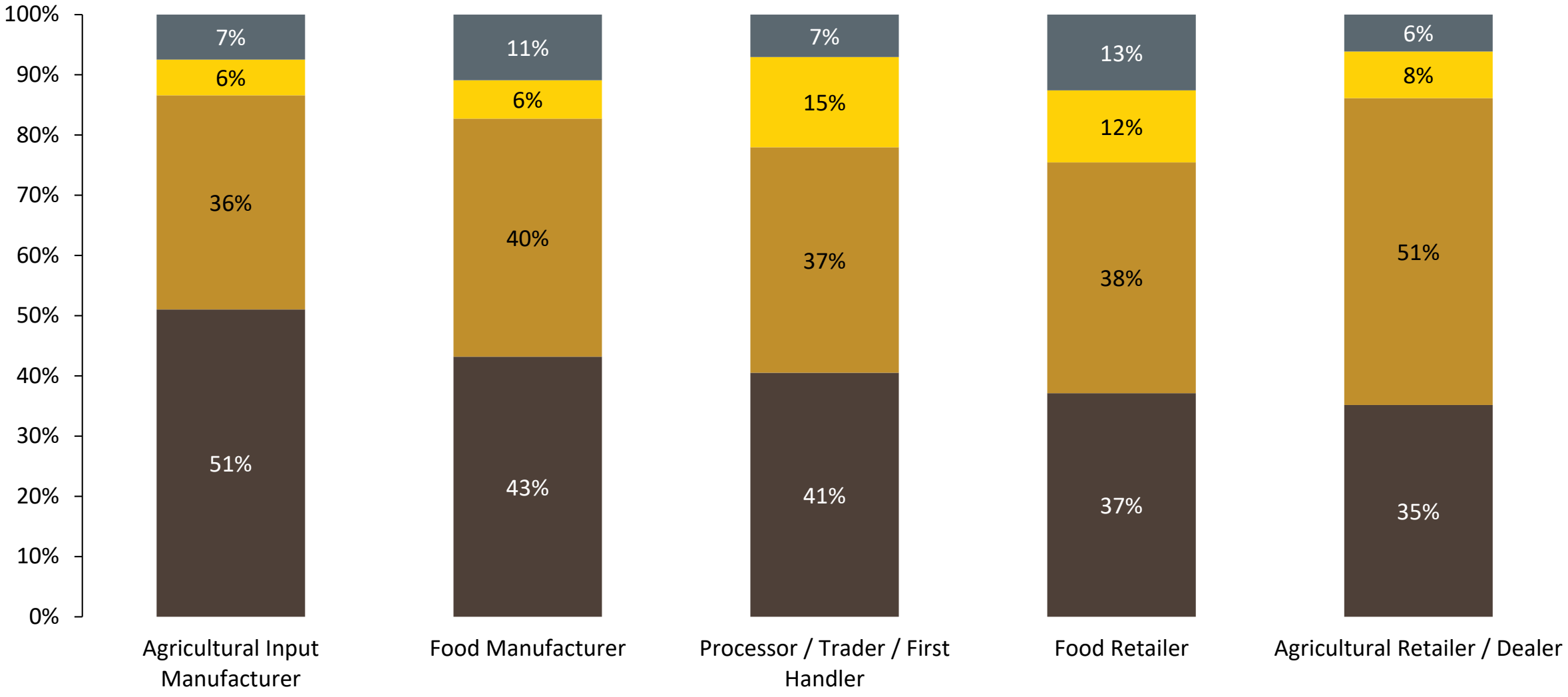
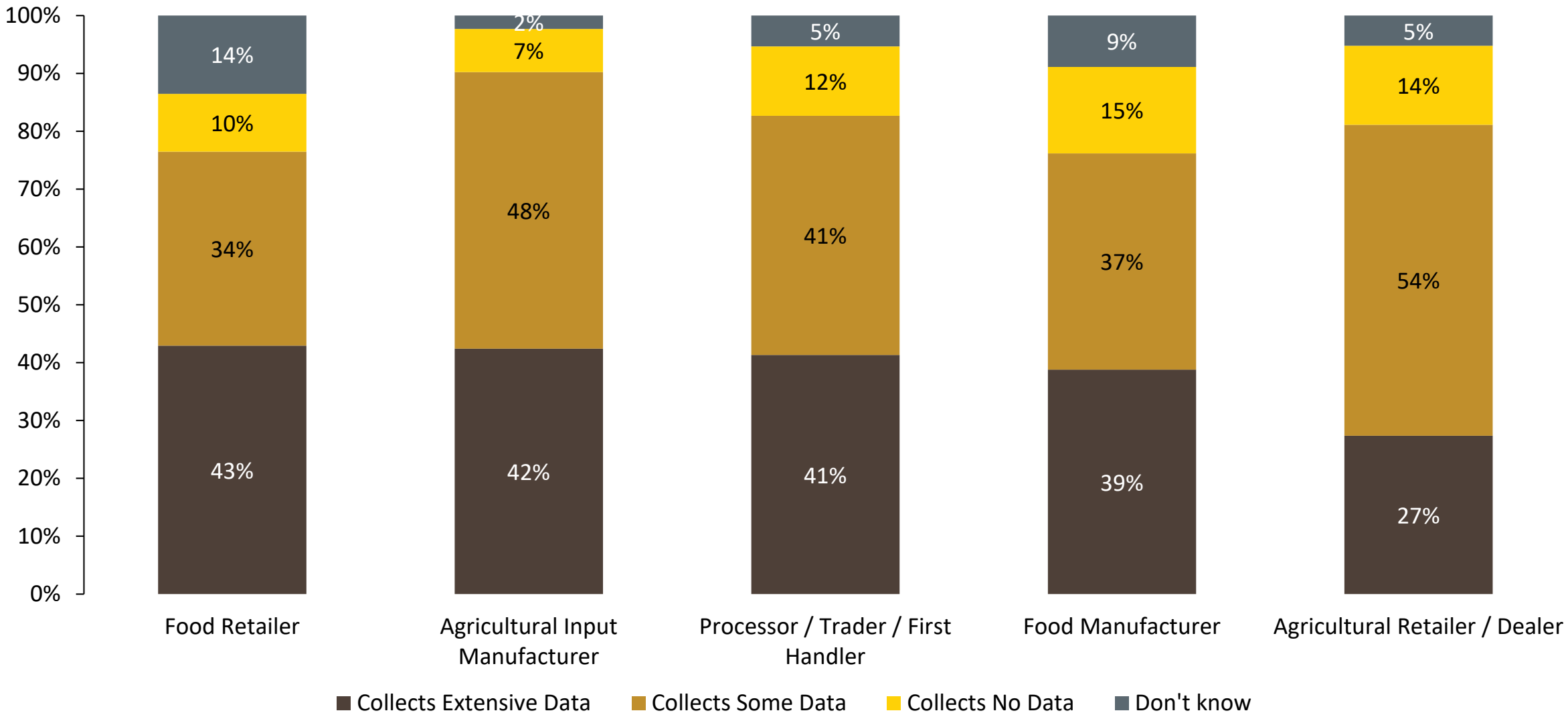
Agricultural Input Manufacturer
Food Manufacturer
Processor / Trader / First Handler
Agricultural Retailer / Dealer
Food Retailer
Operations Collects Extensive Data
Operations Collects Some Data
Operations Collects No Data
Operations Don't know

Outbound Logistics



Marketing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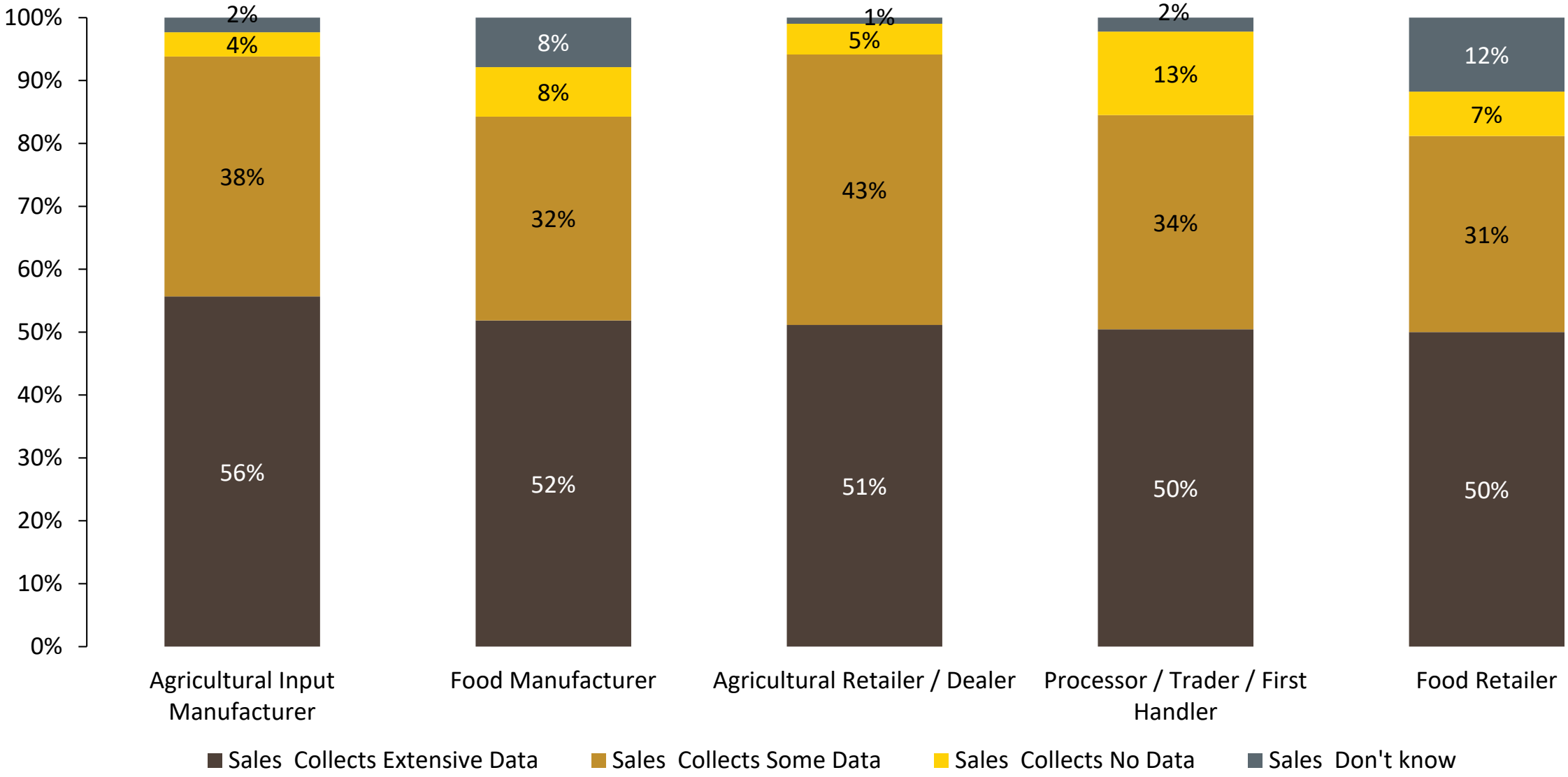
Food Retailer
Agricultural Input Manufacturer
Processor / Trader / First Handler
Food Manufacturer
Agricultural Retailer / Dealer
Collects Extensive Data
Collects Some Data
Collects No Data
Don't know

Sales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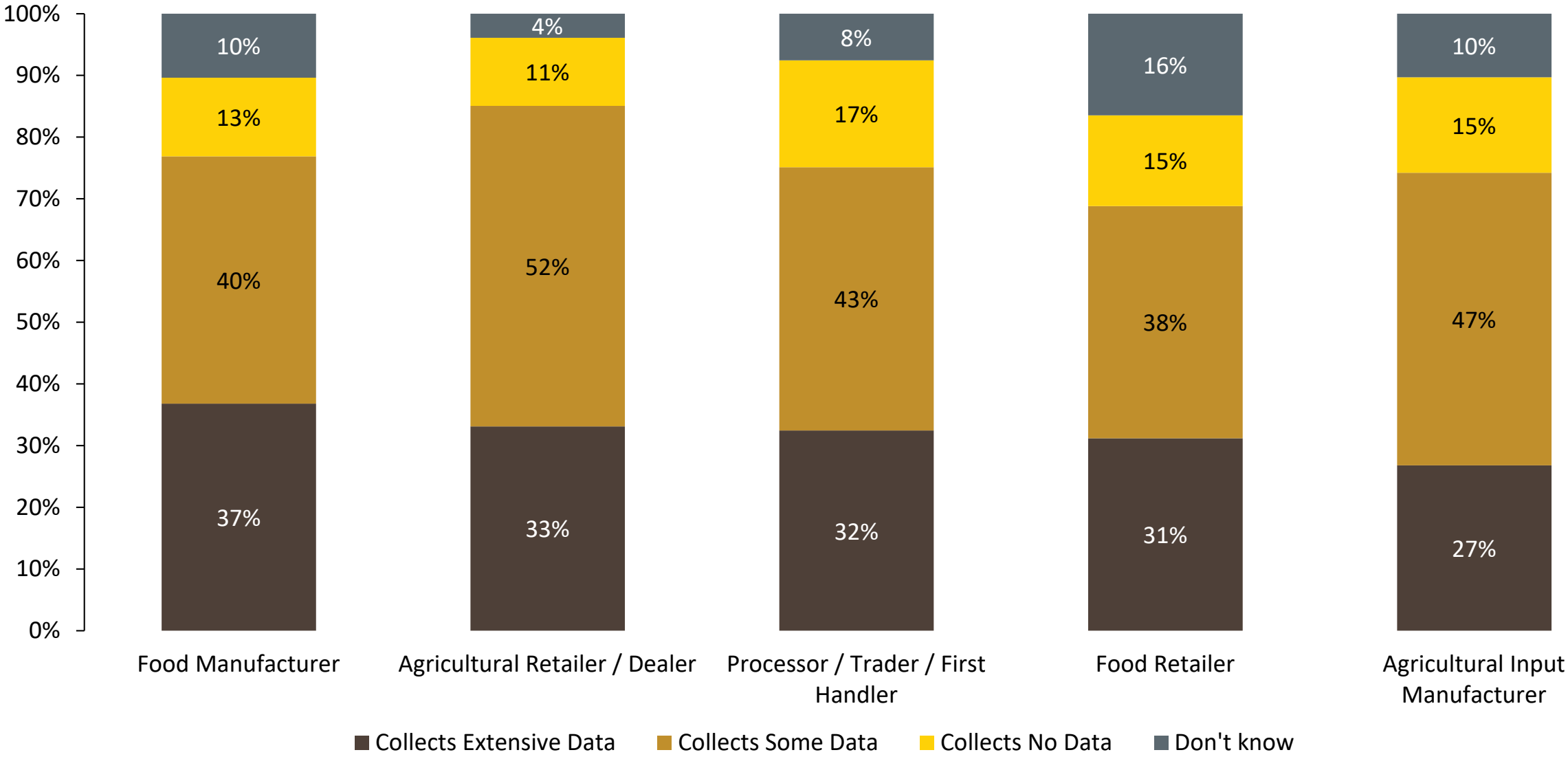
Agricultural Input Manufacturer
Food Manufacturer
Agricultural Retailer / Dealer
Processor / Trader / First Handler
Food Retailer
Sales Collects Extensive Data
Sales Collects Some Data
Sales Collects No Data
Sales Don't know

Services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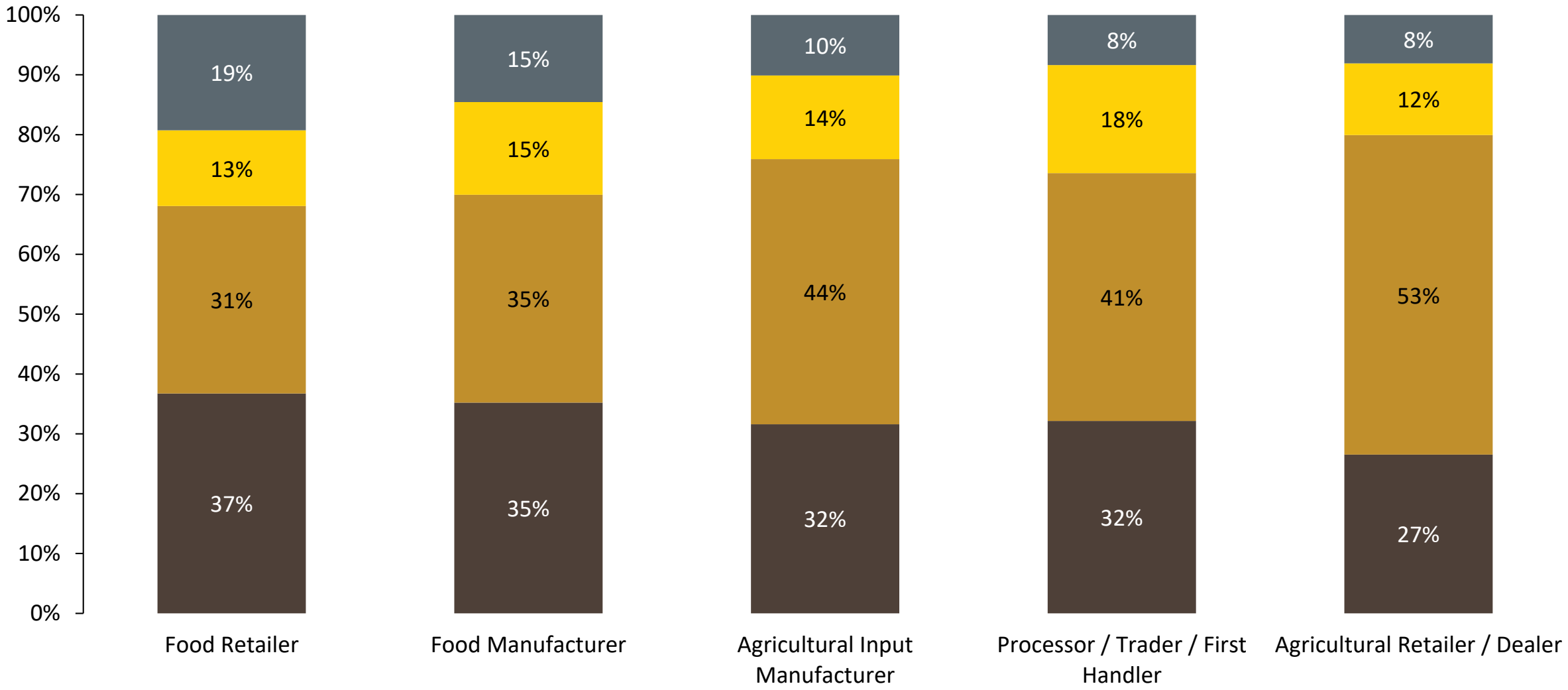
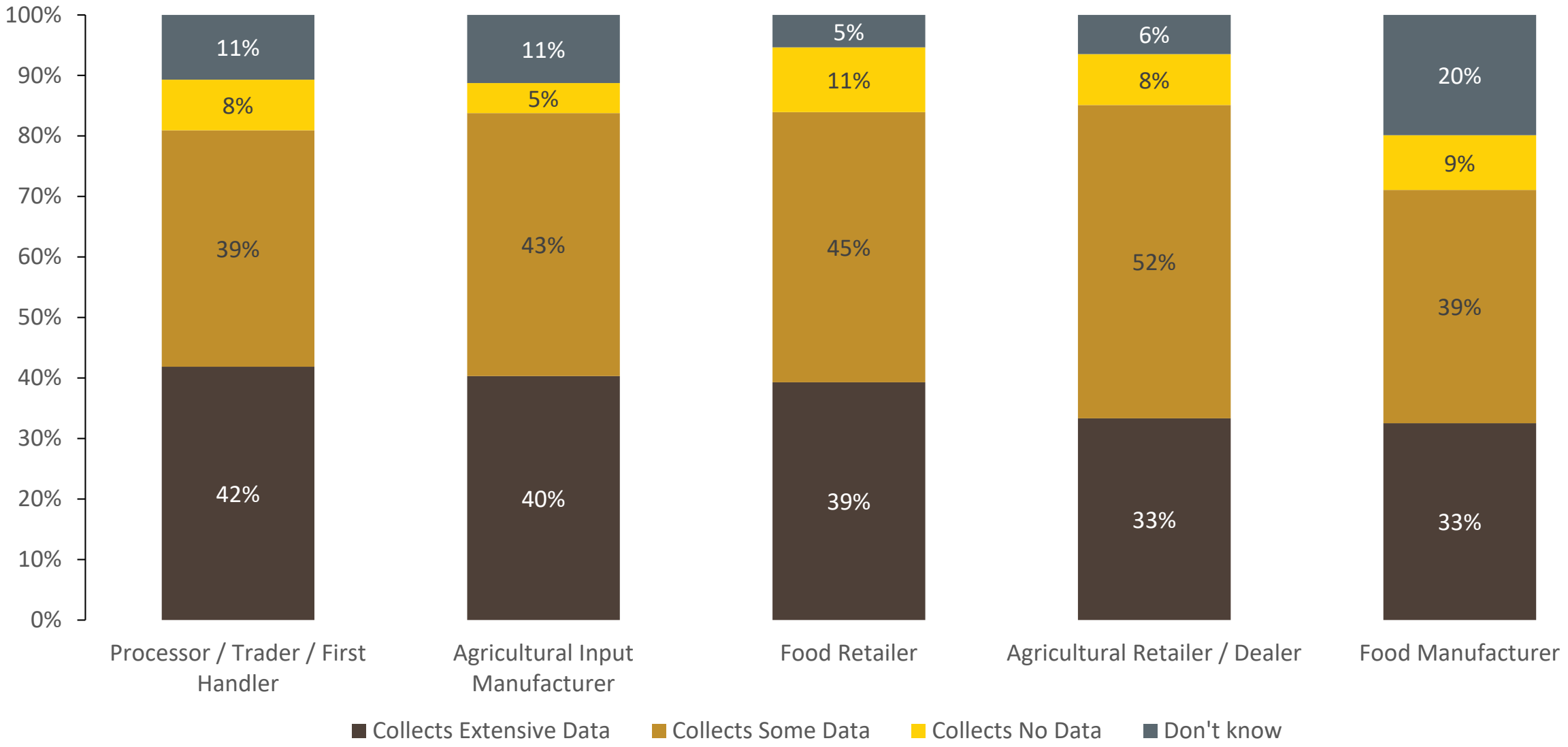
Food Manufacturer
Agricultural Retailer / Dealer
Processor / Trader / First Handler
Food Retailer
Agricultural Input Manufacturer
Collects Extensive Data
Collects Some Data
Collects No Data
Don't know

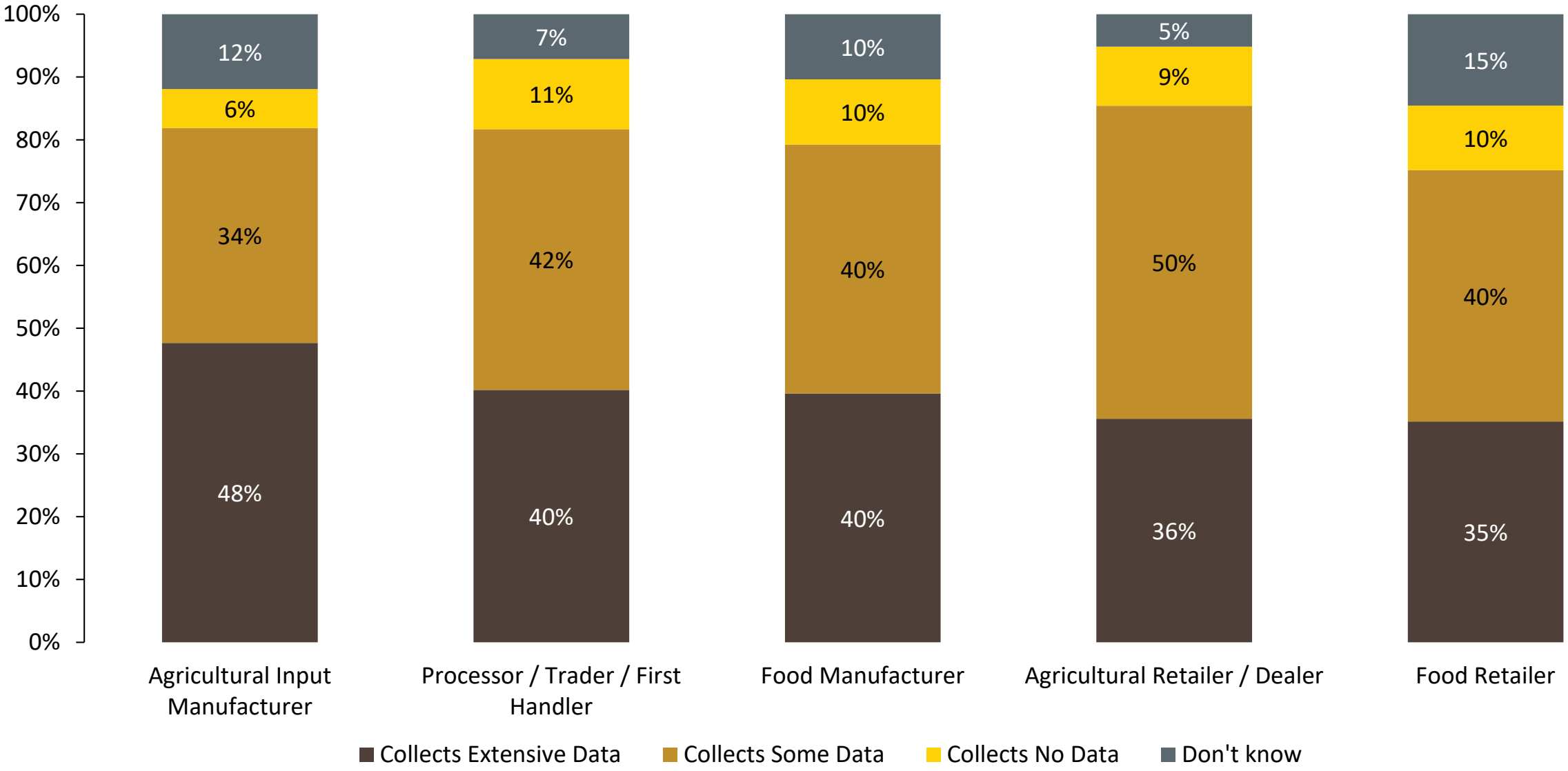
HR Management



Procurement



Regulatory Compliance

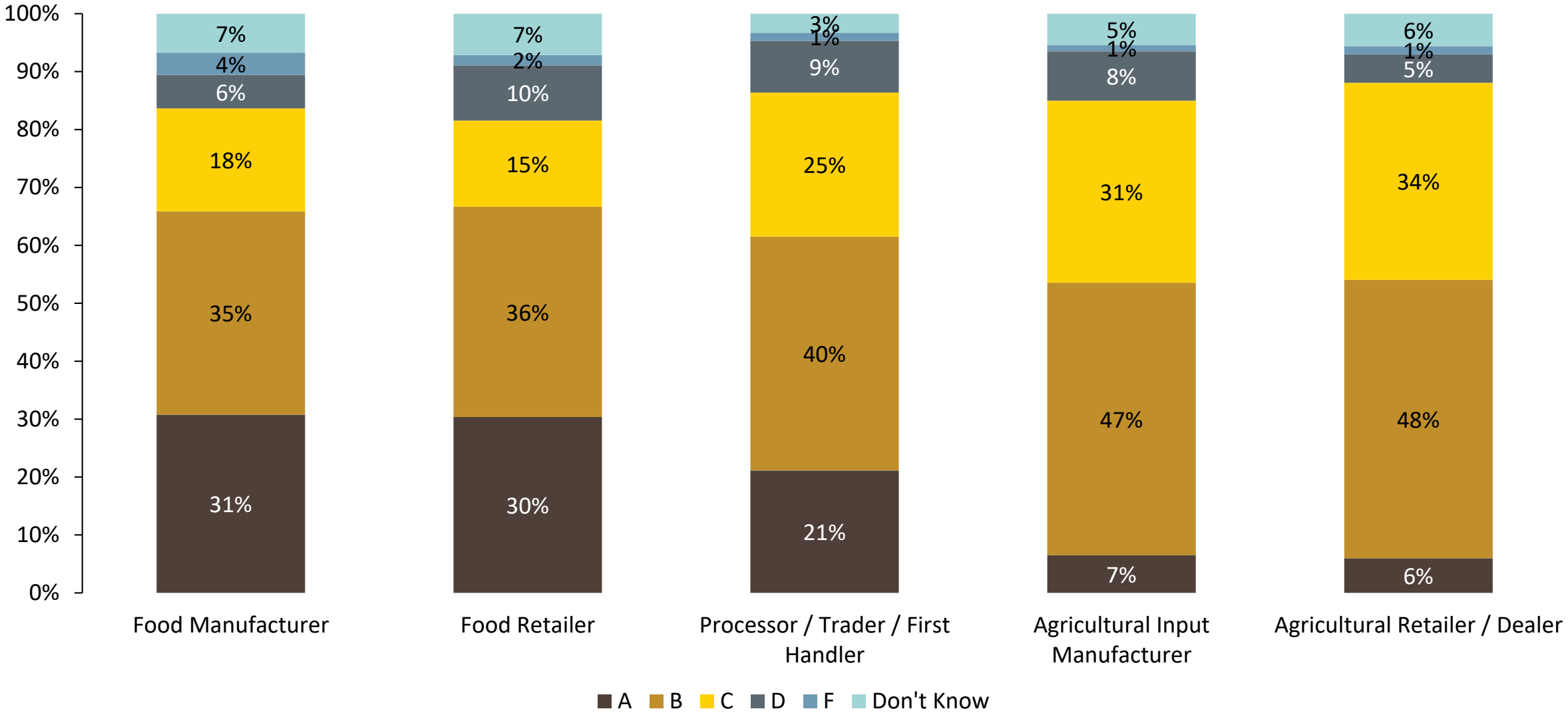


Organization Grade on Data Analytics

If you were to give your organization a "grade" based on using **data analytics** on decision making, what grade would you give for the following business functions?

	A	B	C	D	F	Don't Know
Inbound Logistics (*e.g. ordering/receiving, inventory replenishment*)	○	○	○	○	○	○
Operations (*e.g. production volumes, process details, quality control, efficiency measure*)	○	○	○	○	○	○
Outbound Logistics (*e.g. ordering/delivery*)	○	○	○	○	○	○
Marketing (*e.g. customer data/CRM, product development, product life-cycle, segmentation*)	○	○	○	○	○	○
Sales (*e.g. customer orders, referrals, transactional data*)	○	○	○	○	○	○
Service (*e.g. application, repair, tech support*)	○	○	○	○	○	○
HR Management (*e.g. goal setting and monitoring, compensation, payroll, benefits*)	○	○	○	○	○	○
Procurement (*e.g. input costs, SRM*)	○	○	○	○	○	○
Regulatory Compliance (*e.g. labor, environmental standard*)	○	○	○	○	○	○
Overall	○	○	○	○	○	○

Overall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1%
5%
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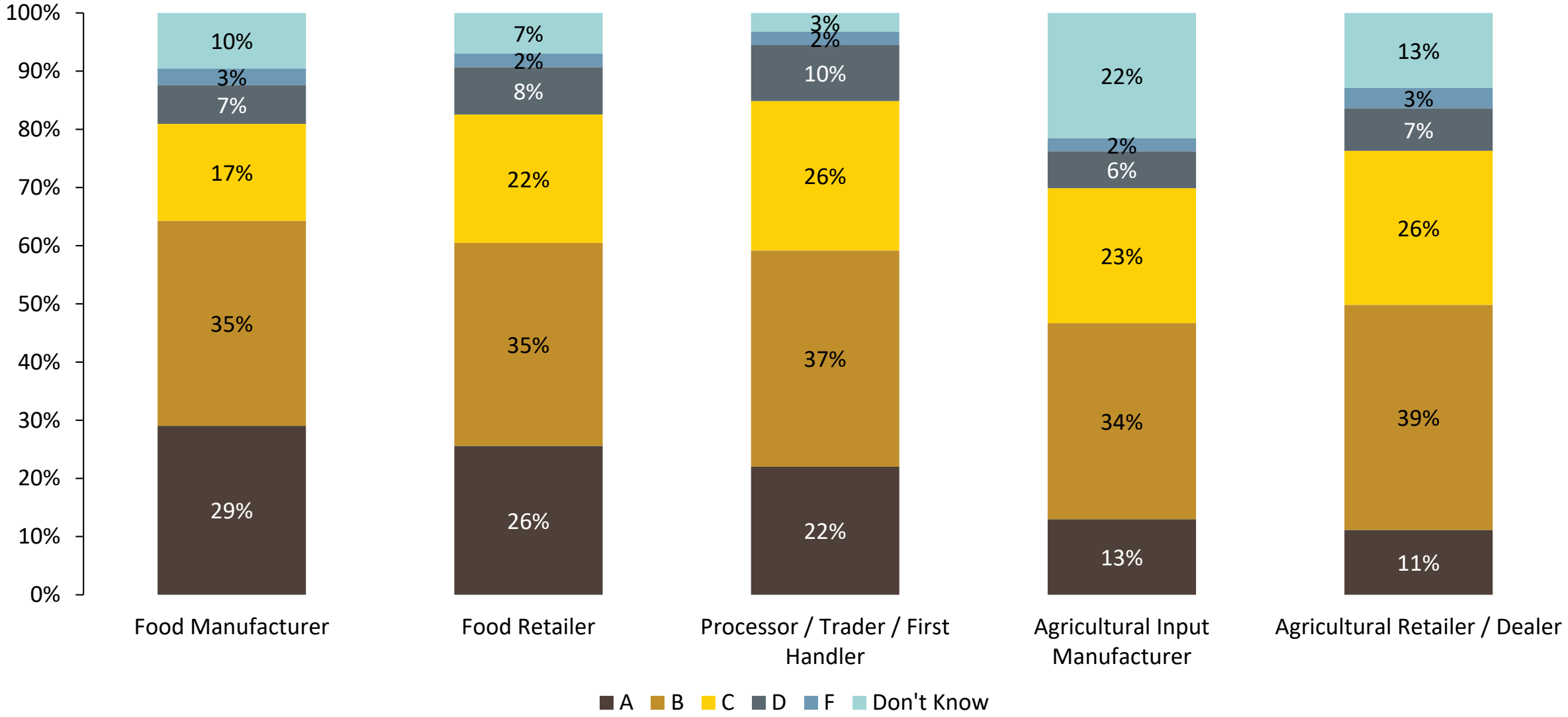
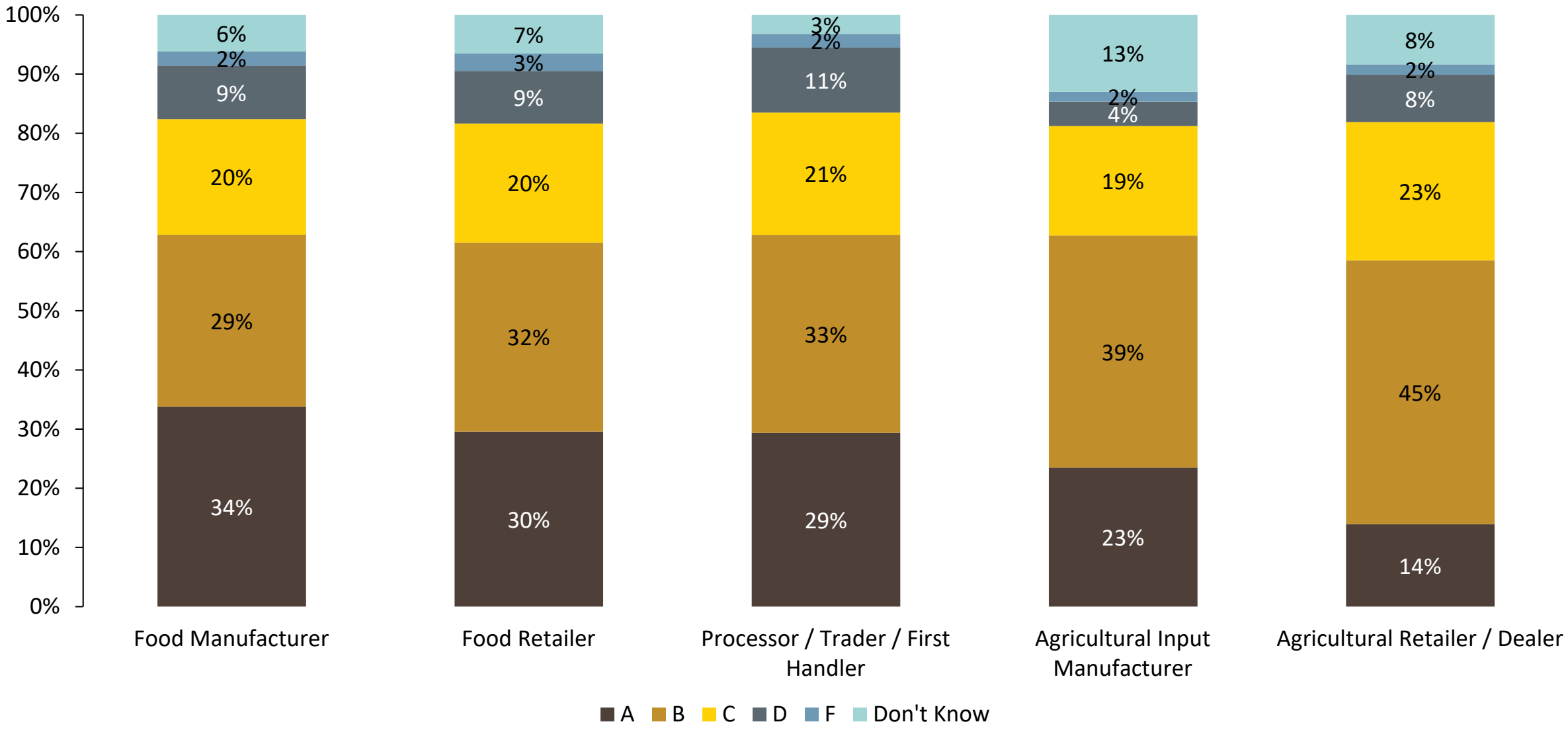
48%
6%
Food Manufacturer
Food Retailer
Processor / Trader / First Handler
Agricultural Input Manufacturer
Agricultural Retailer / Dealer
A
B
C
D
F
Don't Know

Inbound Logistics



Operations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Food Manufacturer
Food Retailer
Processor / Trader / First Handler
Agricultural Input Manufacturer
Agricultural Retailer / Dealer
A
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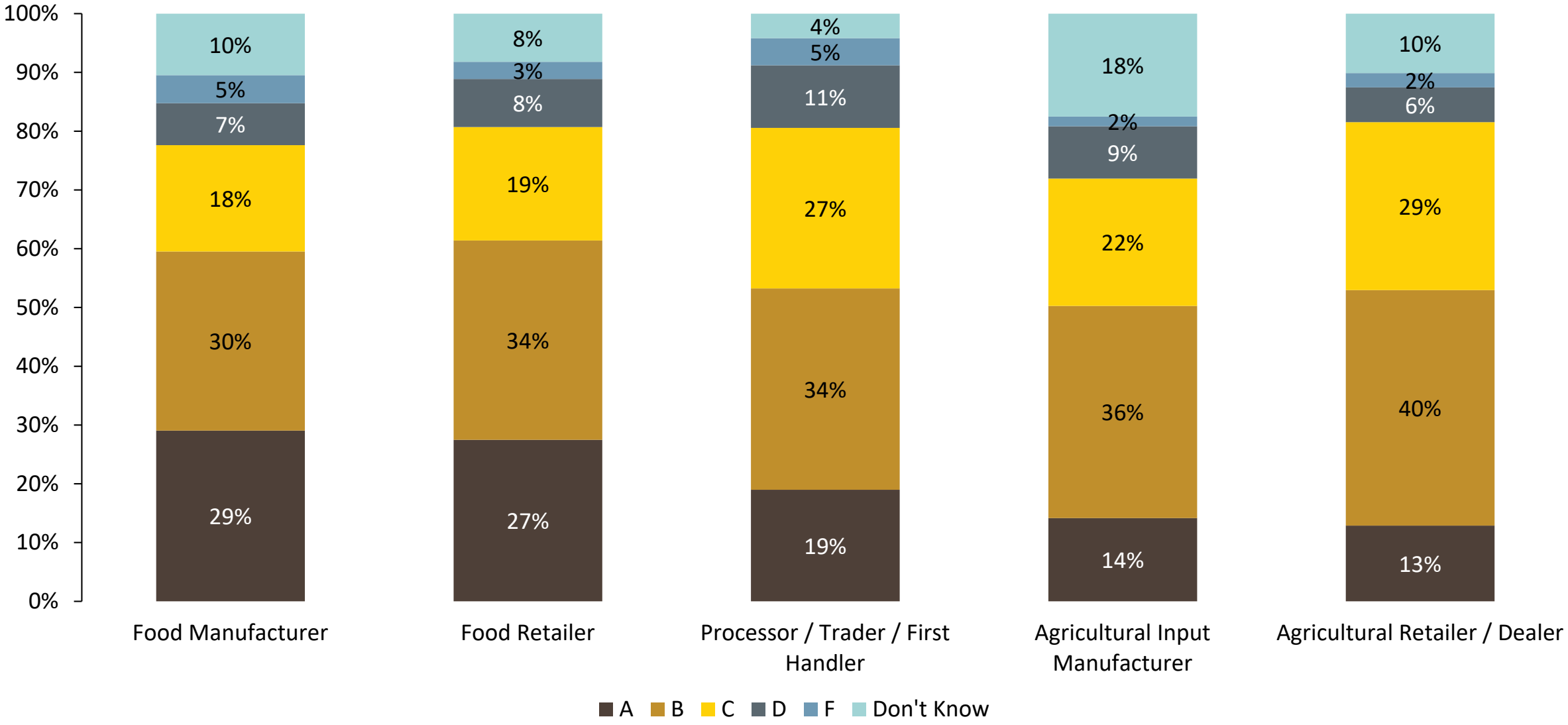
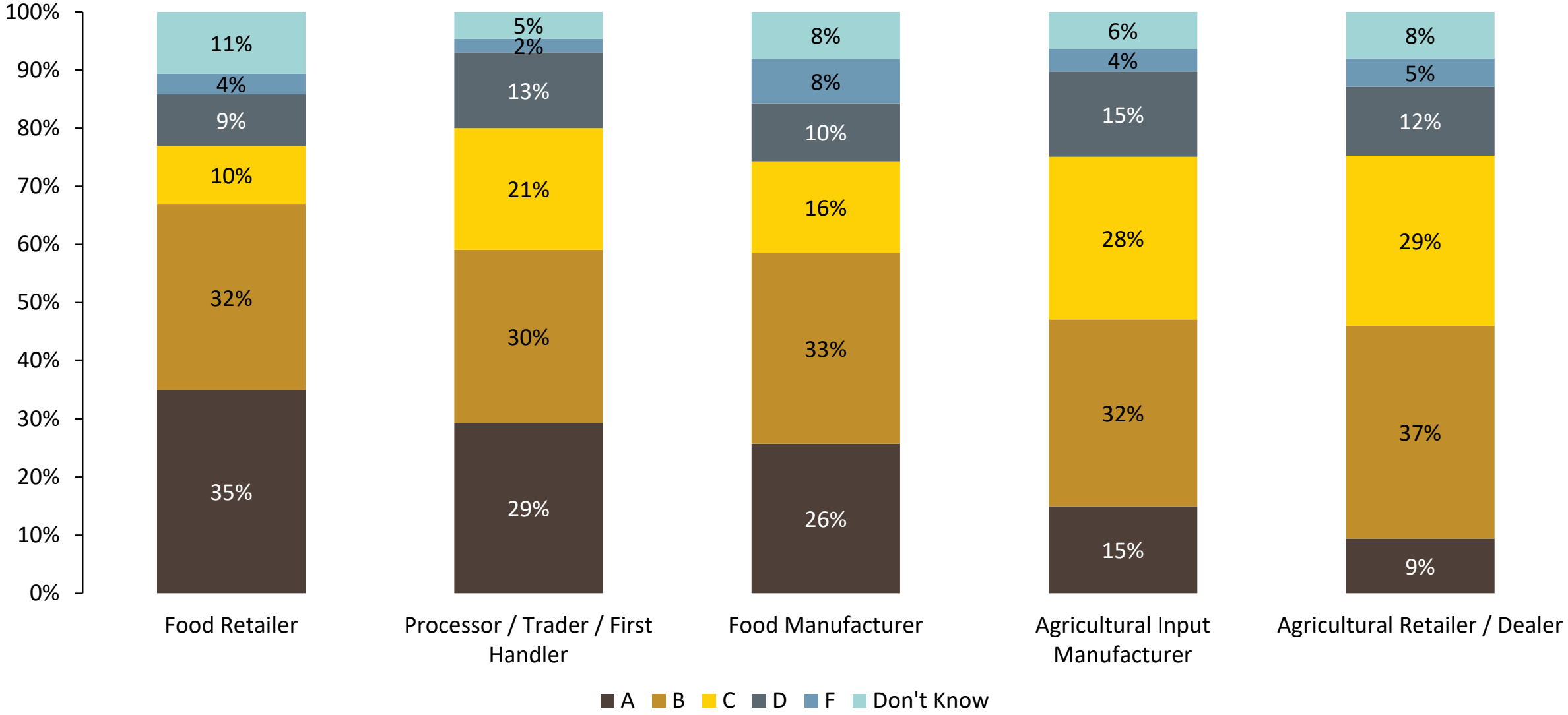
Outbound Logistics



Marketing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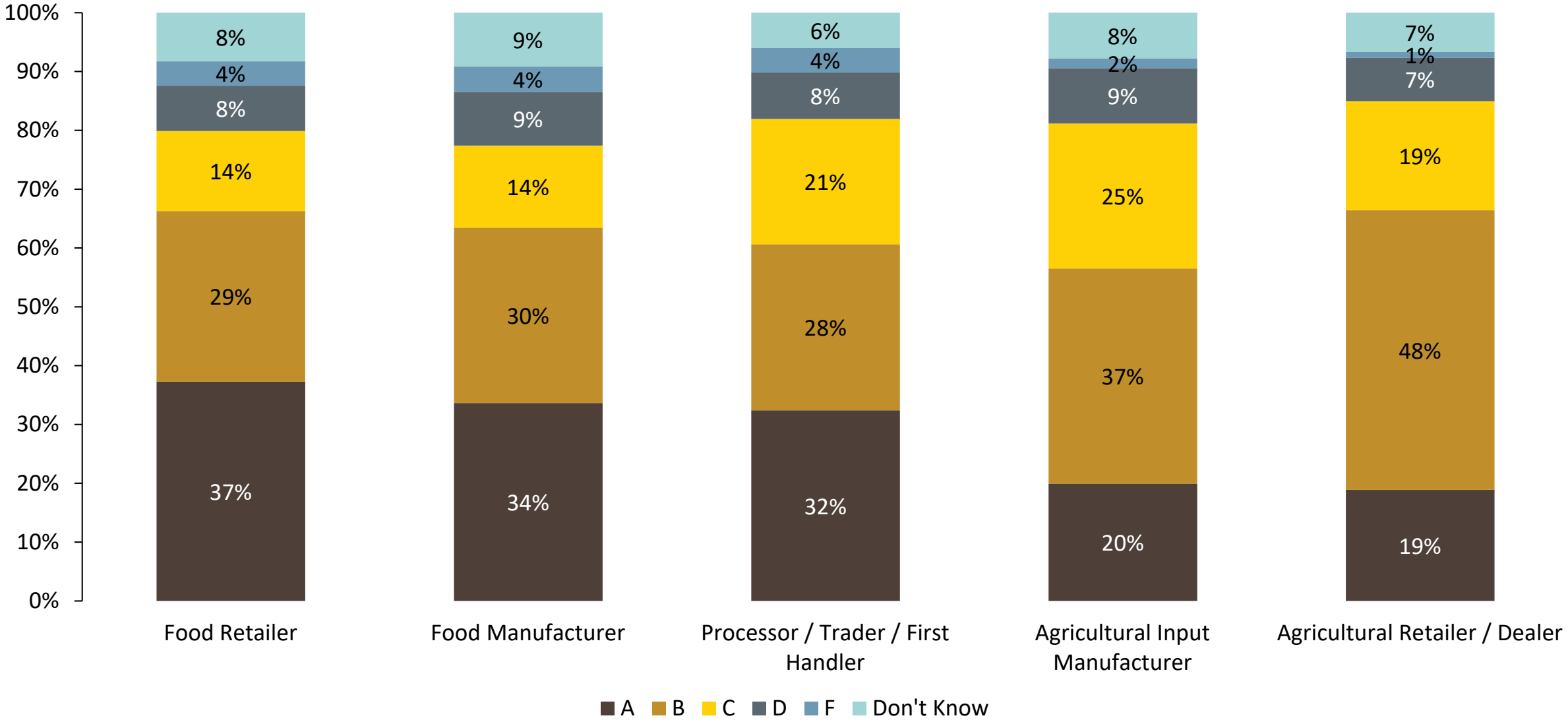
Food Retailer
Processor / Trader / First Handler
Food Manufacturer
Agricultural Input Manufacturer
Agricultural Retailer / Dealer
A
B
C
D
F
Don't Know

Sales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Food Retailer
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Processor / Trader / First Handler
Agricultural Input Manufacturer
Agricultural Retailer / Dealer
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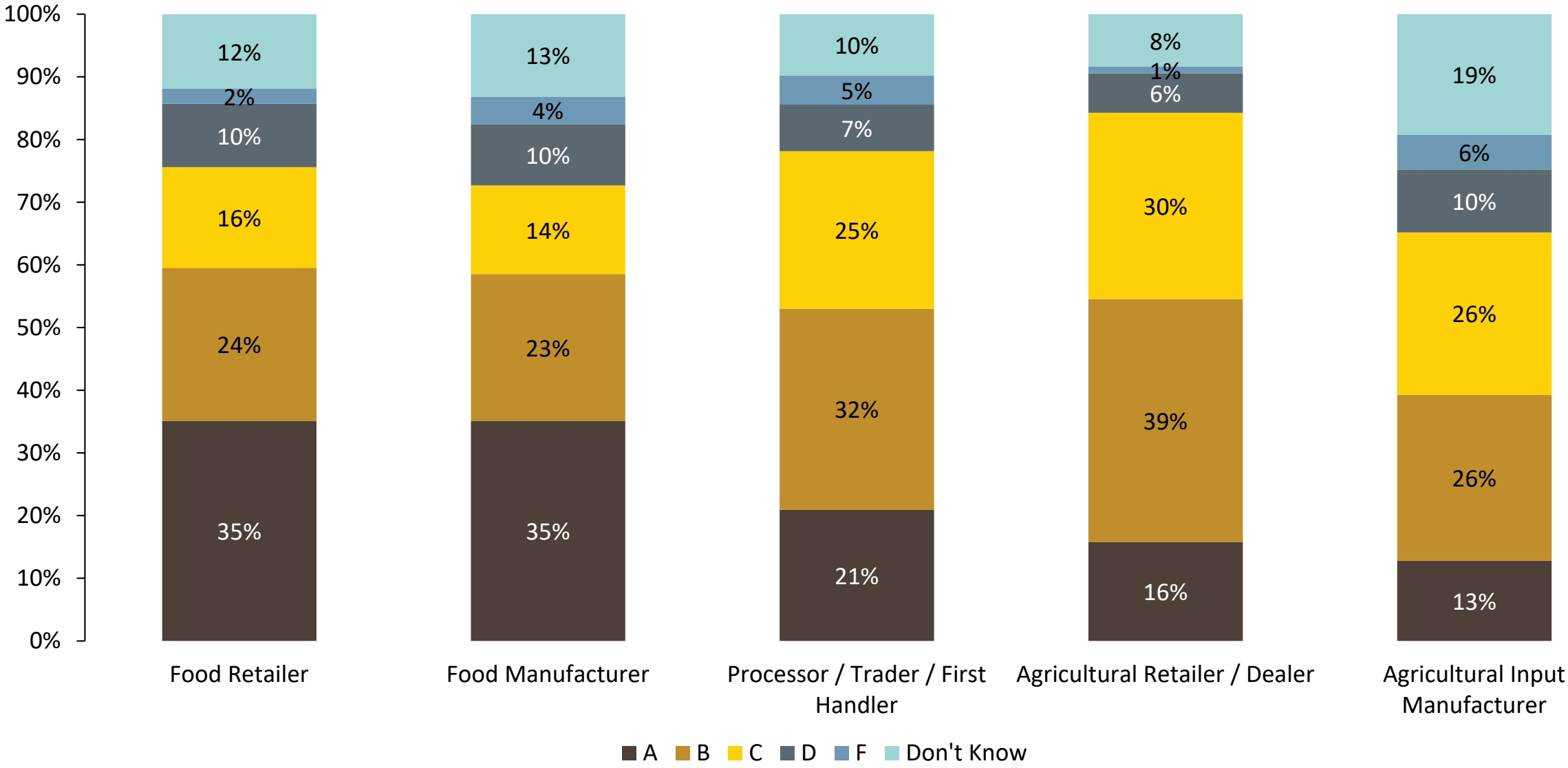
Service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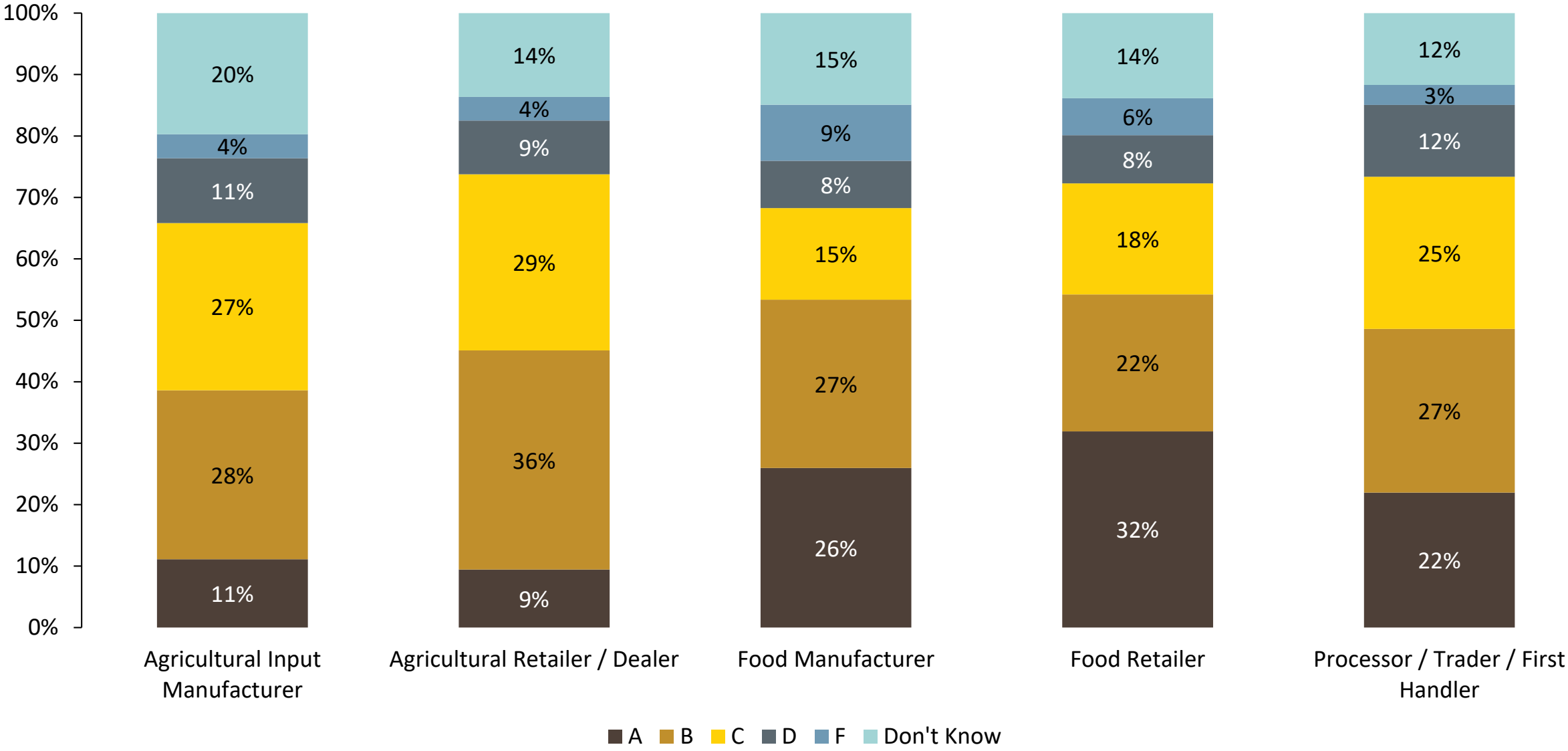
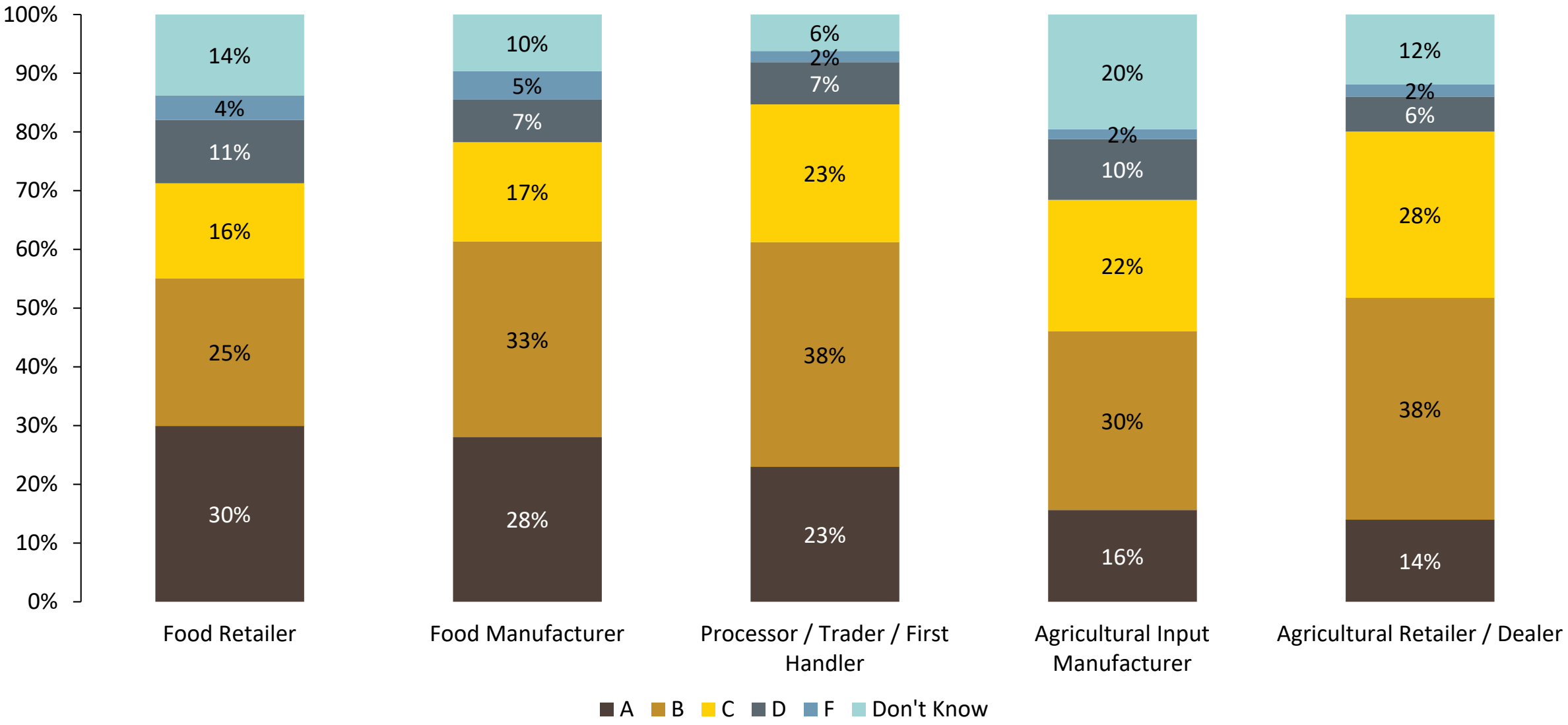
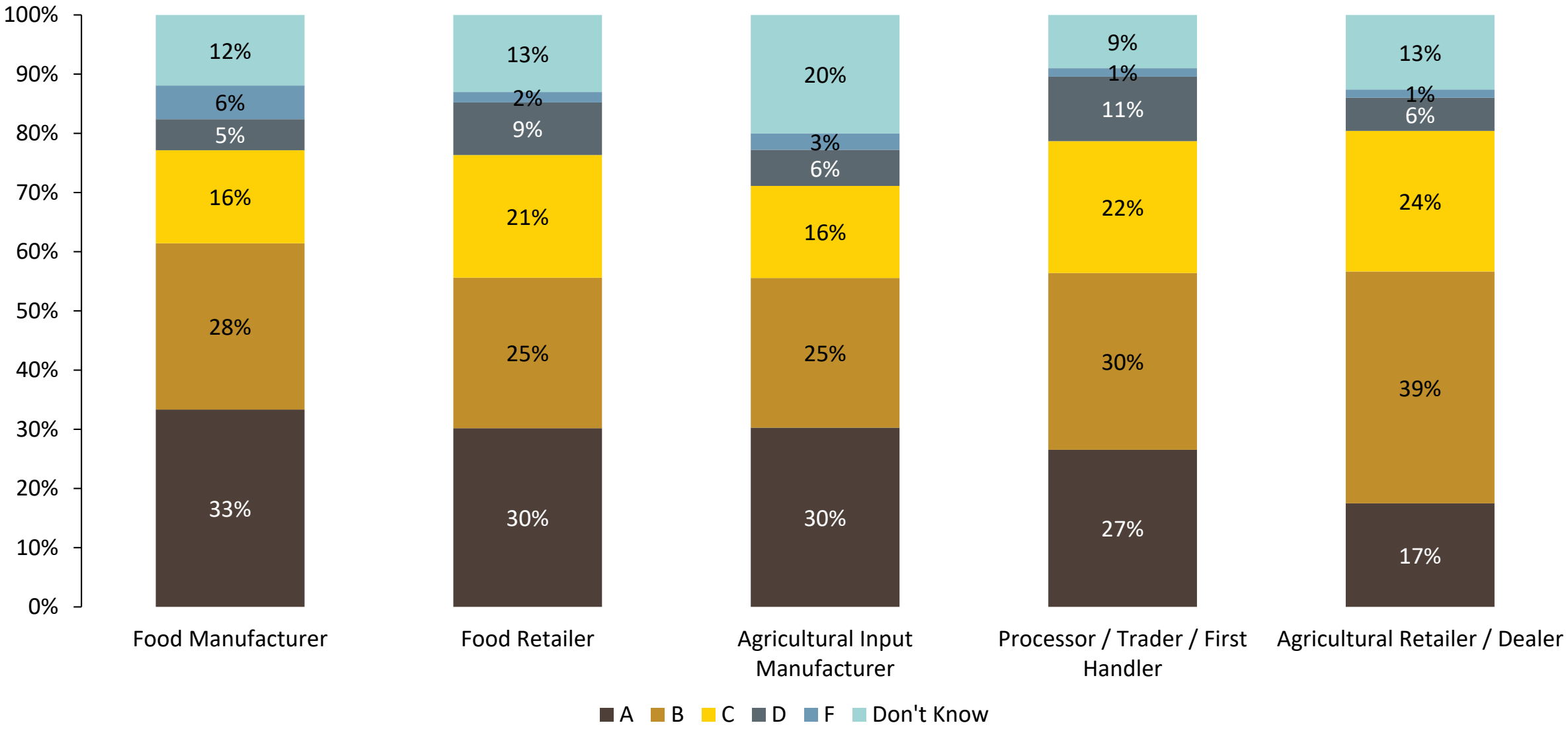
HR Management



Procurement



Regulatory Compliance

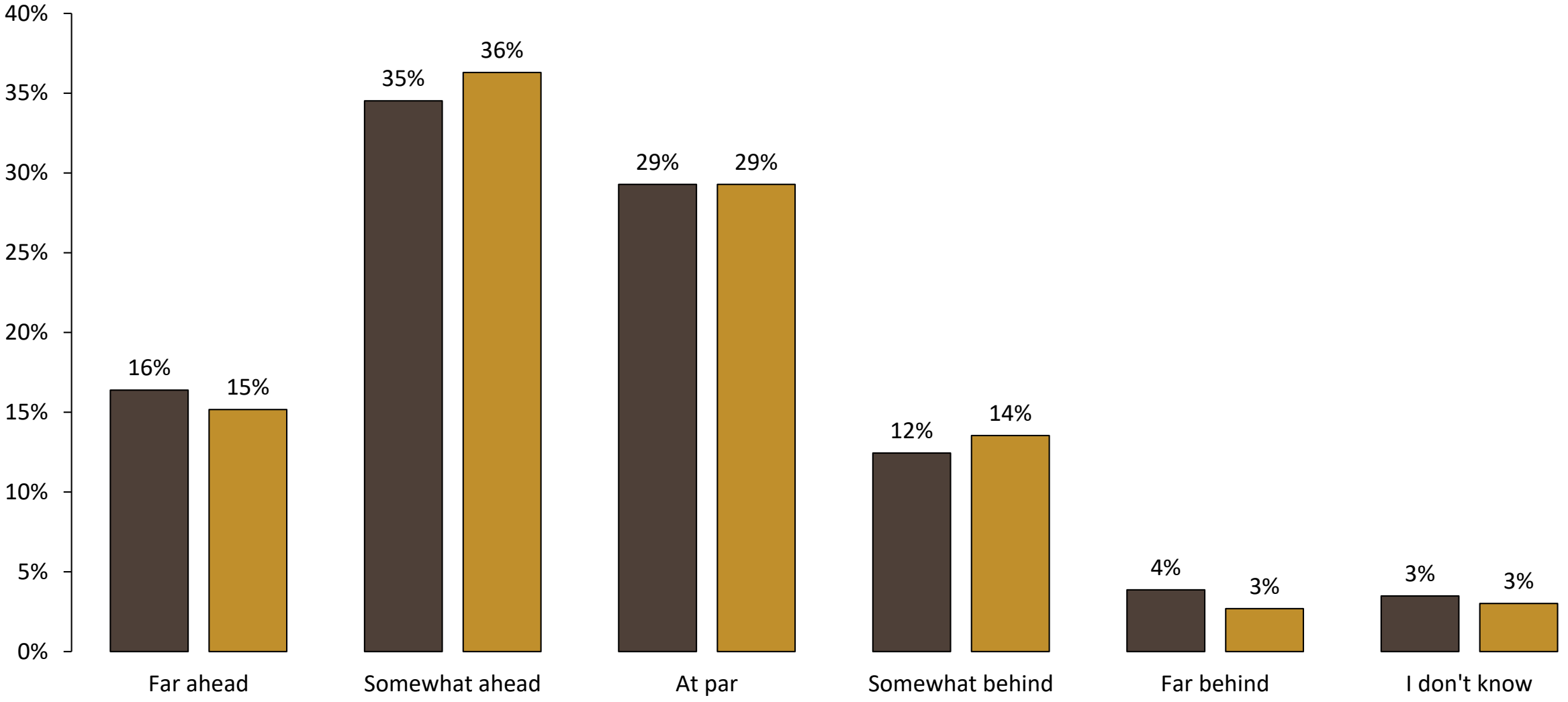


Data Collection and Analytics Compared to Competitors

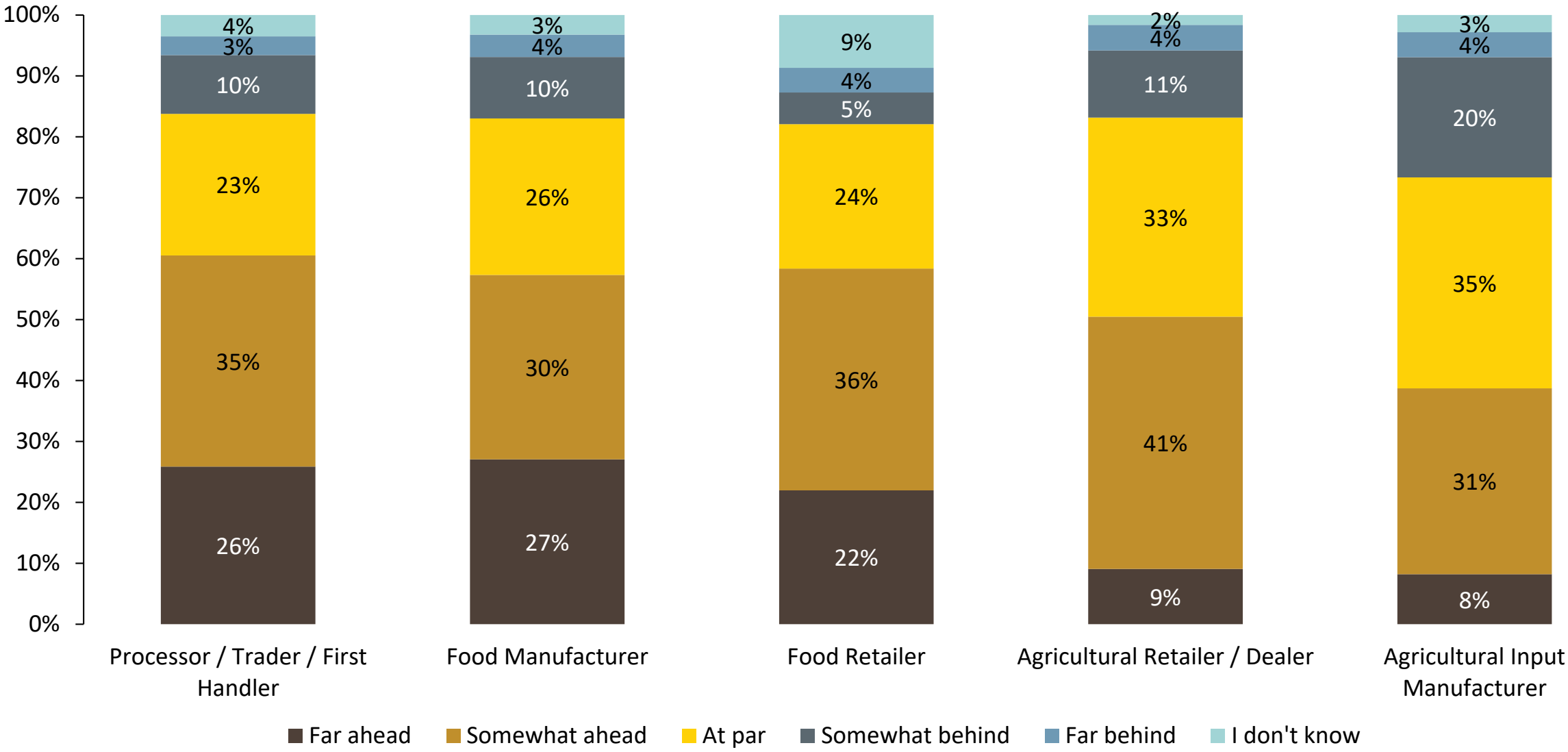
Compared to your competitors, how do you feel about **data collection** in your organization?

- ○ Far ahead
- ○ Somewhat ahead
- ○ At par
- ○ Somewhat behind
- ○ Far behind
- ○ I don't know

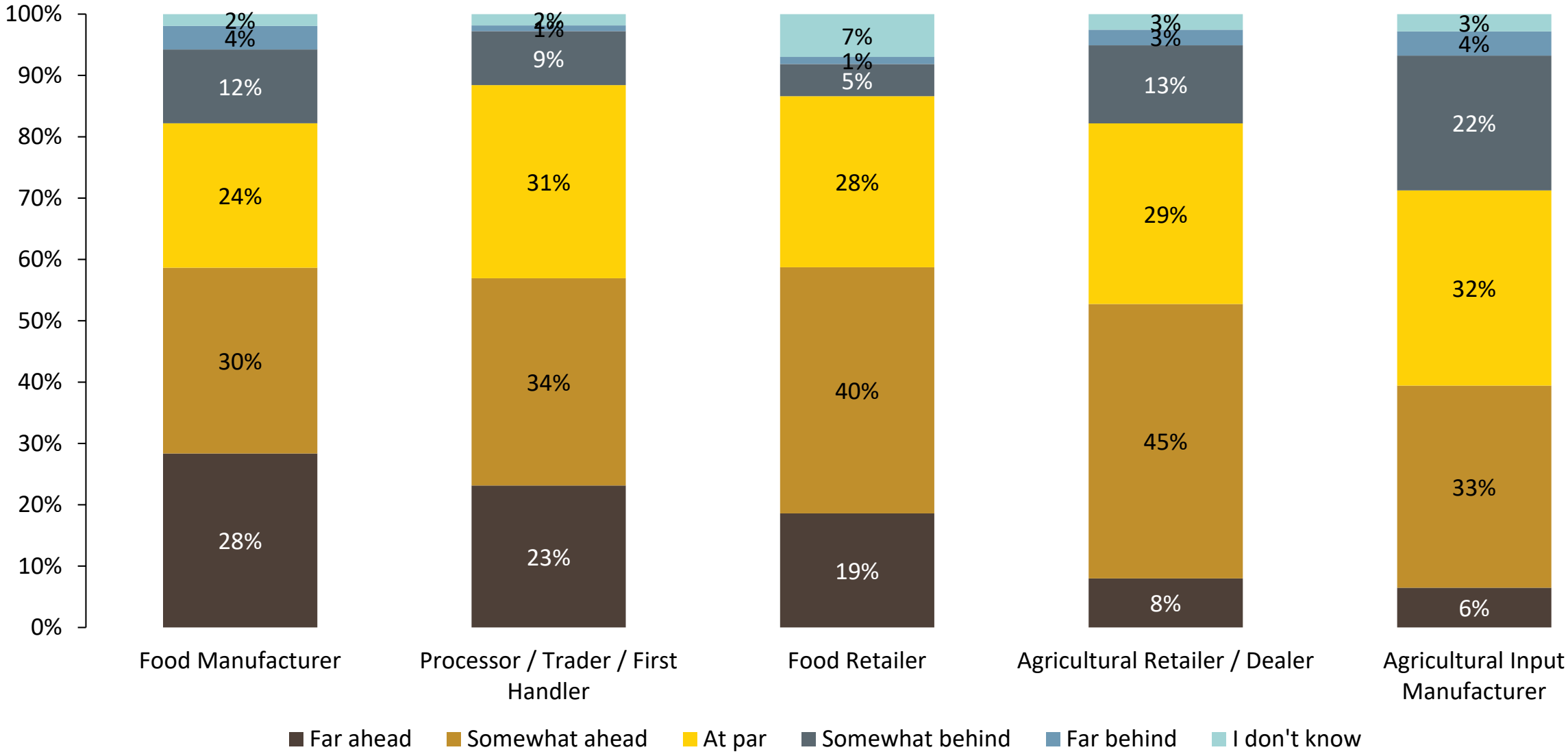
Data Collection and Analytics Compared to Competitors



Data Collection Compared to Competitors



Data Analytics Compared to Competitors



Most Benefits of Data Analytics

What do you see as the most important benefit of data analytics? Please rank the following statements from 1 to 6, where 1 is ***"the most important benefit"*** and 6 is ***"the least important benefit"***. *(Drag each term and drop it to desired rank)*

Improved decision-making

Improved customer satisfaction

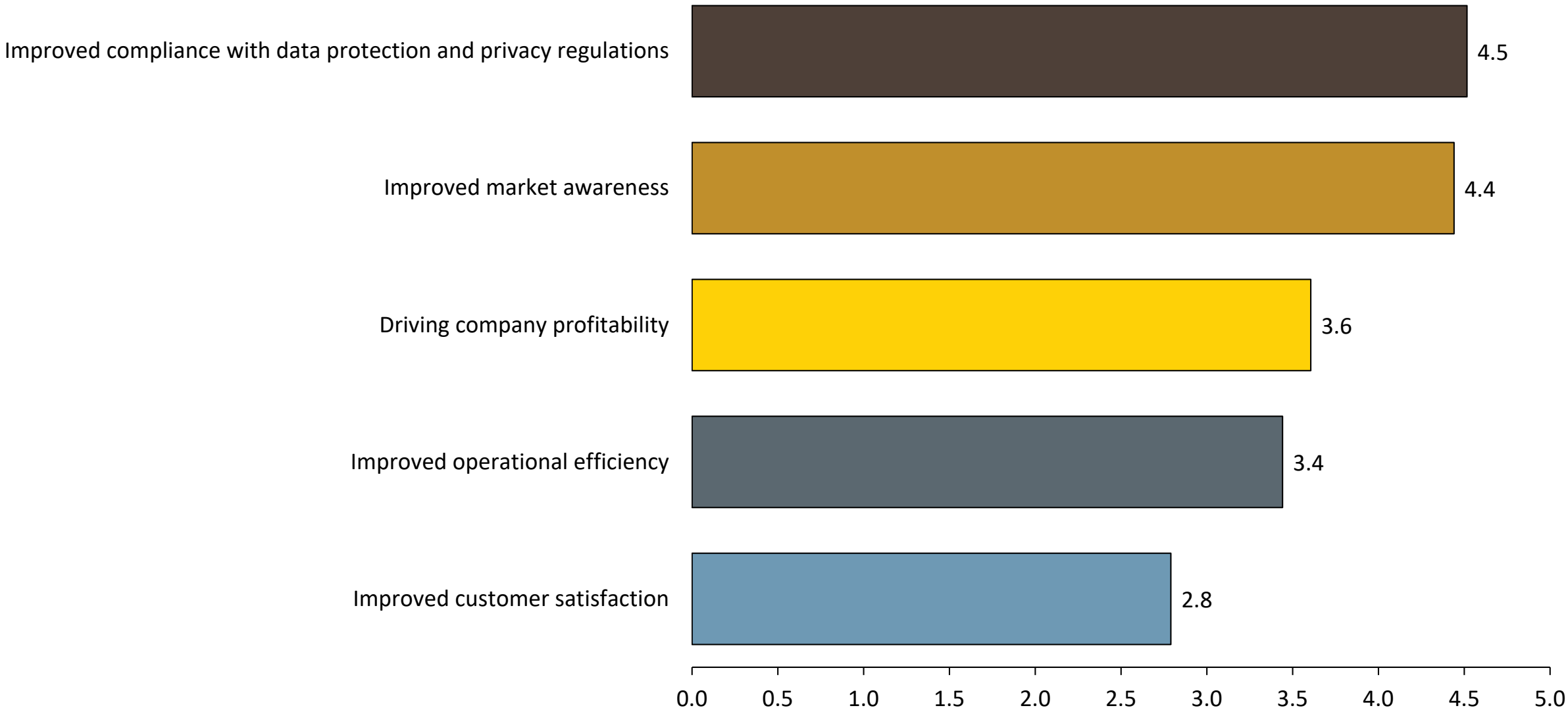
Improved compliance with data protection and privacy regulations

Improved operational efficiency

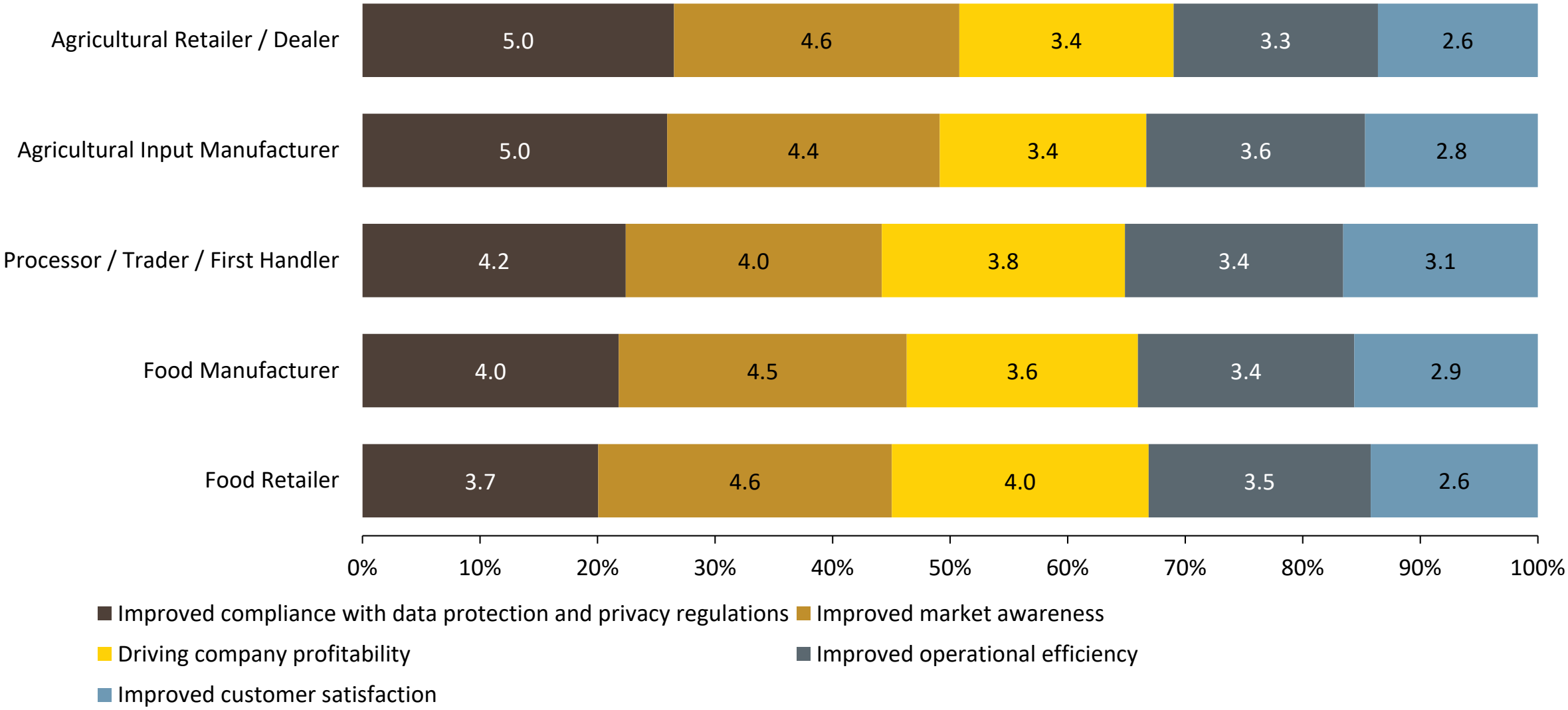
Driving company profitability

Improved market awareness

Most Important Benefits of Data Analytics Ranking



Most Important Benefits of Data Analytics Ranking by Segment



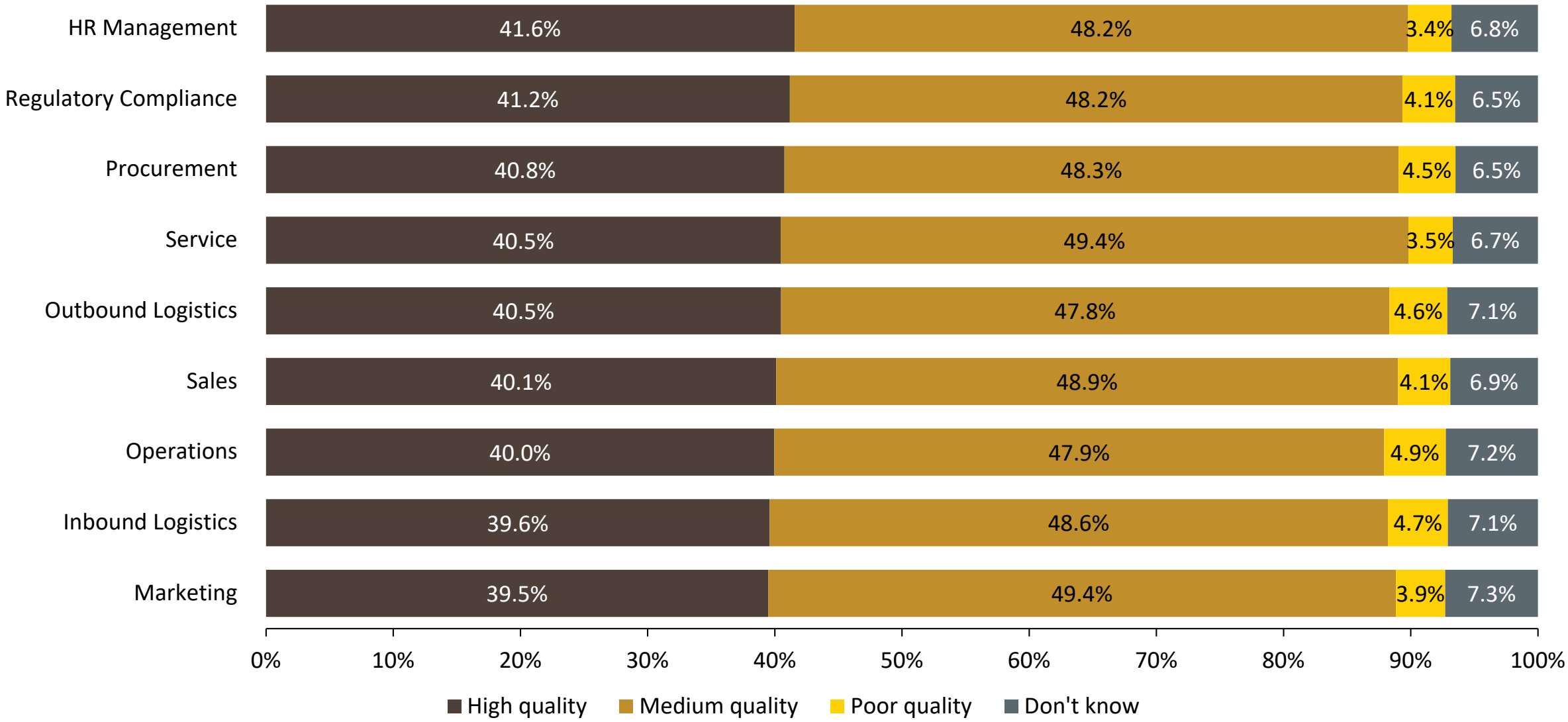
Data Quality

How would you rate your organization on the **quality** of collected data in the following business functions?

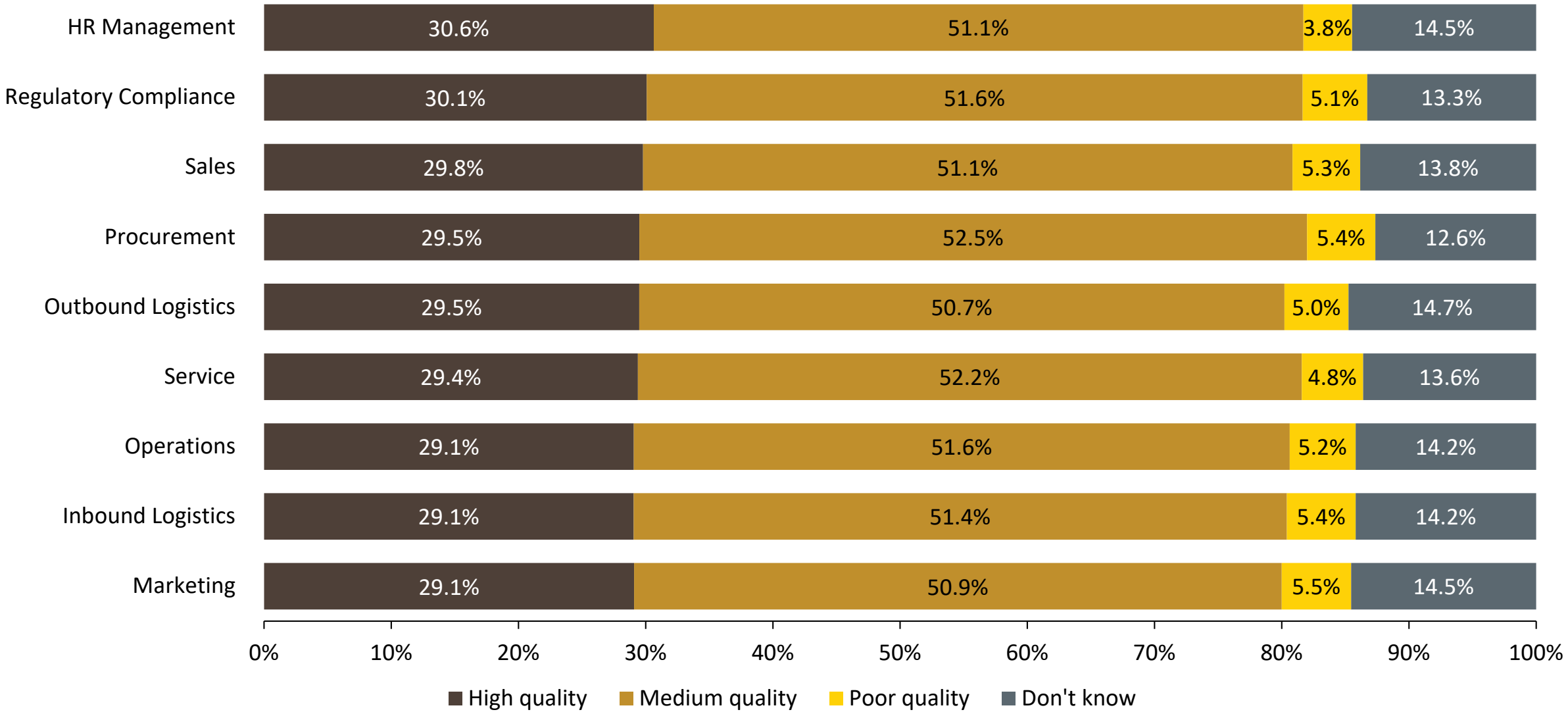
*(**Quality** refers to completeness, validity, consistency, timeliness and accuracy that makes data appropriate for a specific use.)*

	Poor quality	Medium quality	High quality	Don't know
Inbound Logistics (*e.g. ordering/receiving, inventory replenishment*)	○	○	○	○
Operations (*e.g. production volumes, process details, quality control, efficiency measure*)	○	○	○	○
Outbound Logistics (*e.g. ordering/delivery*)	○	○	○	○
Marketing (*e.g. customer data/CRM, product development, product life-cycle, segmentation*)	○	○	○	○
Sales (*e.g. customer orders, referrals, transactional data*)	○	○	○	○
Service (*e.g. application, repair, tech support*)	○	○	○	○
HR Management (*e.g. goal setting and monitoring, compensation, payroll, benefits*)	○	○	○	○
Procurement (*e.g. input costs, SRM*)	○	○	○	○
Regulatory Compliance (*e.g. labor, environmental standard*)	○	○	○	○

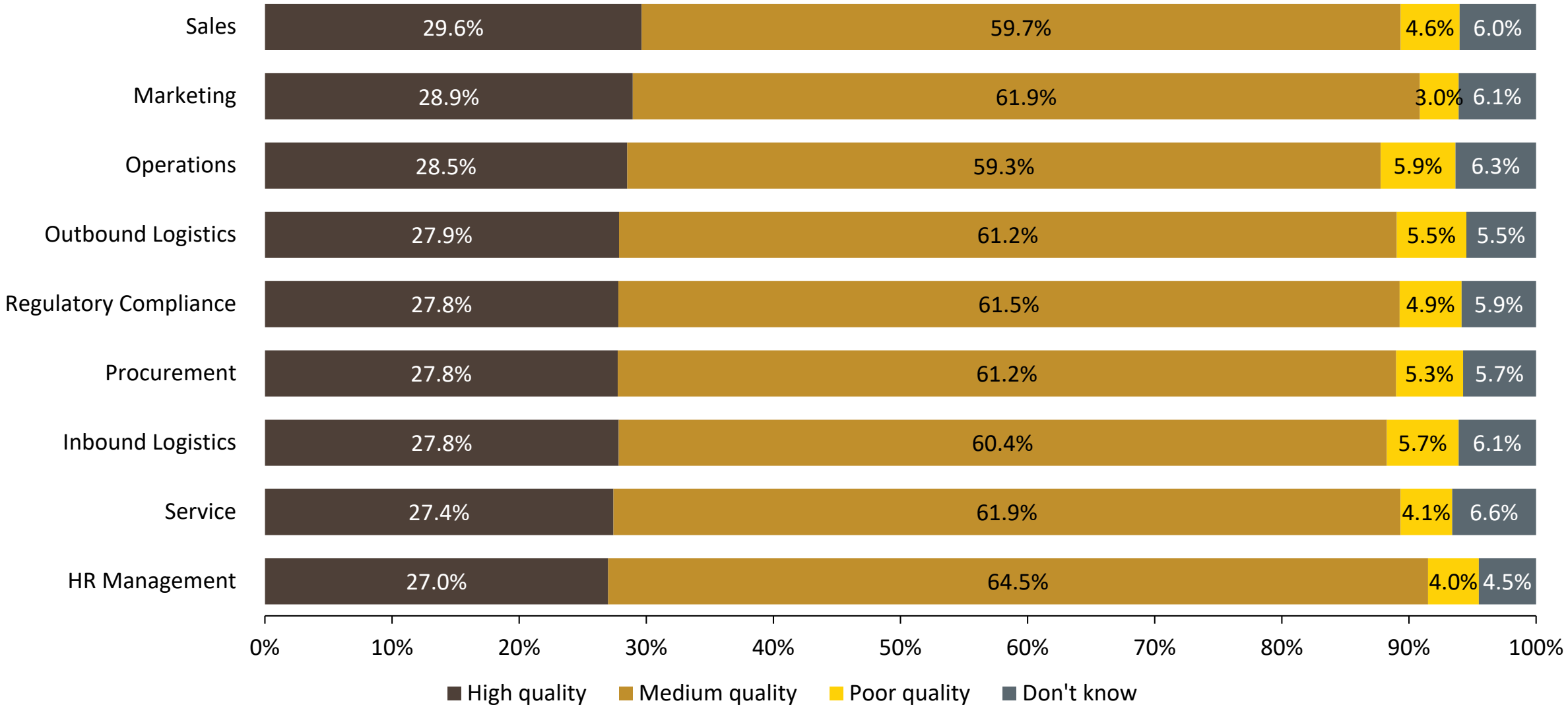
Data Quality



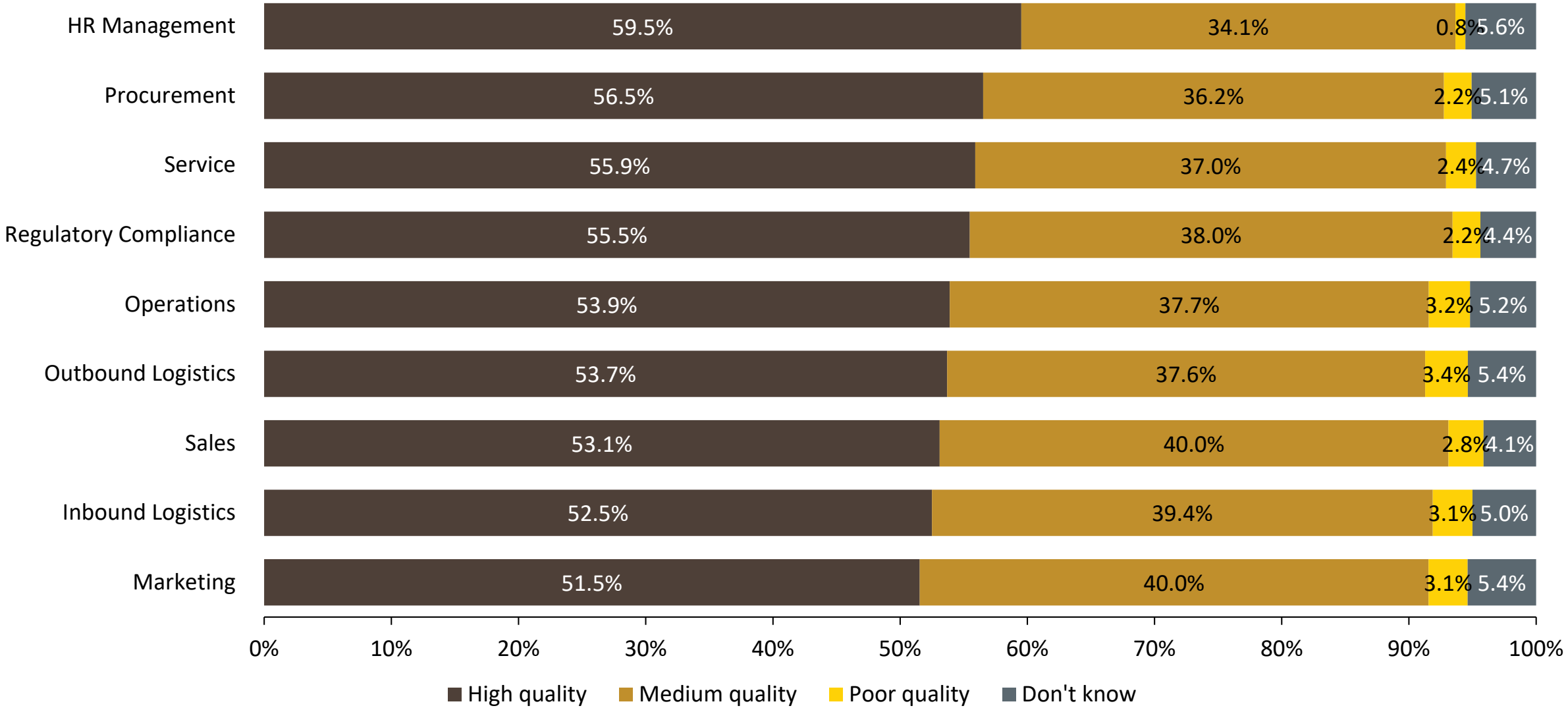
Data Quality - Agricultural Input Manufacturer



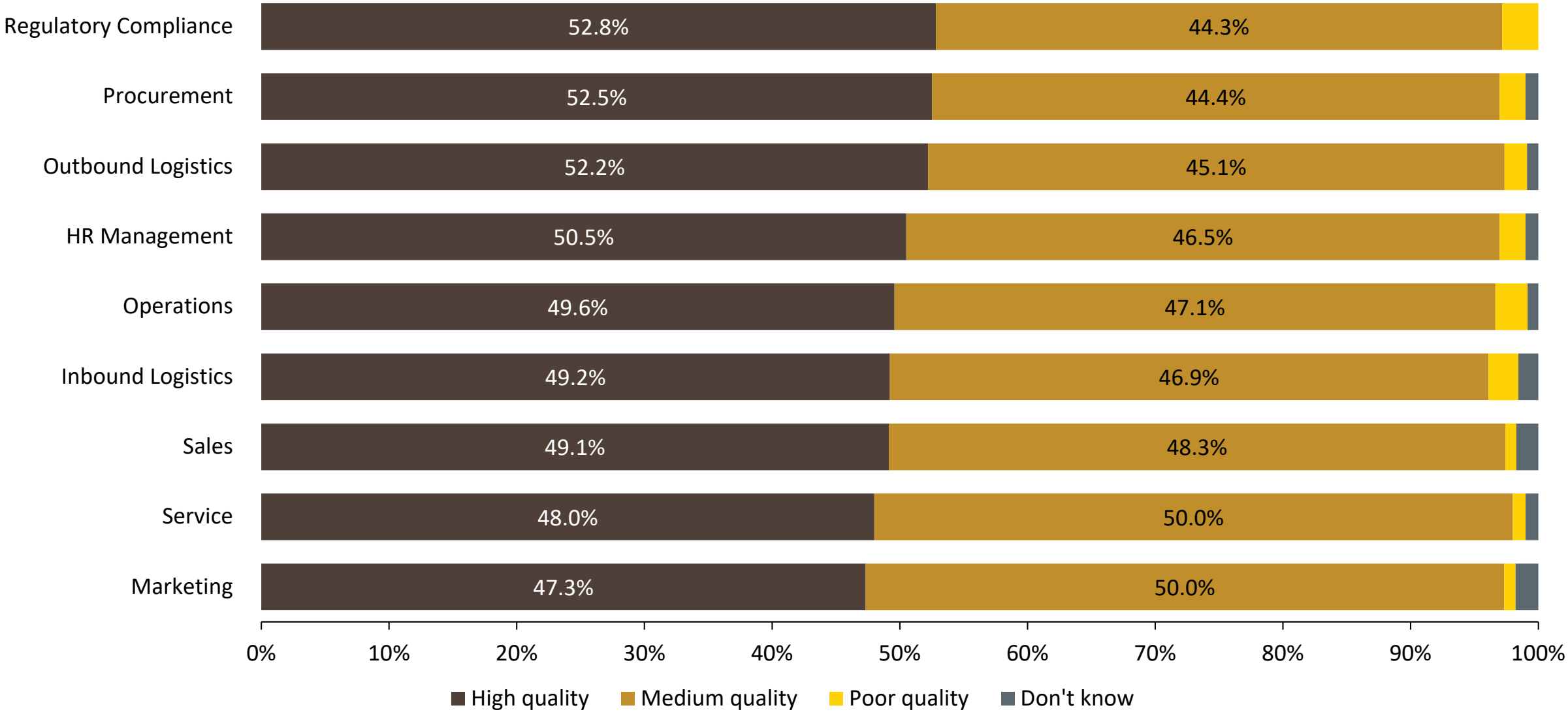
Data Quality - Agricultural Retailer / Dealer



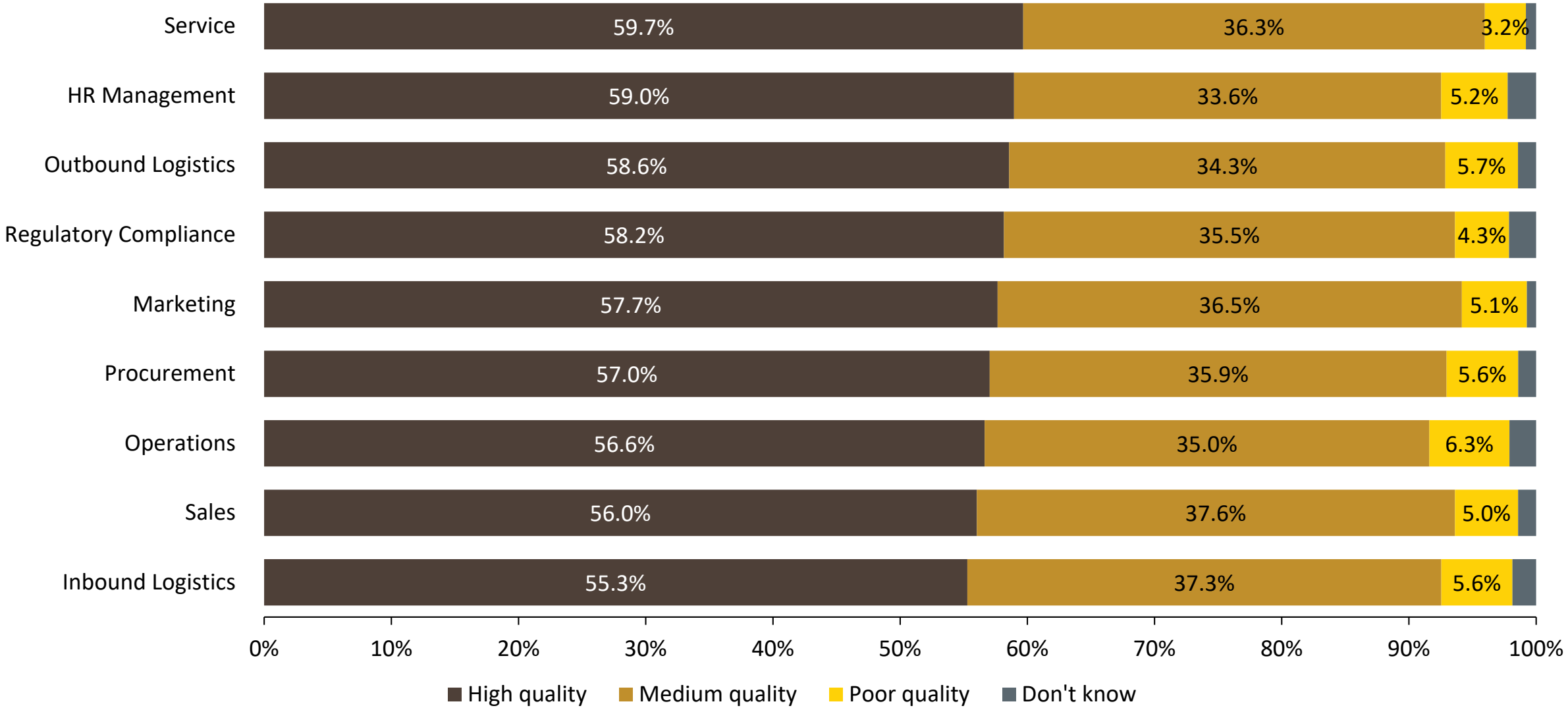
Data Quality - Food Manufacturer



Data Quality - Food Retailer



Data Quality - Processor / Trader / First Handler

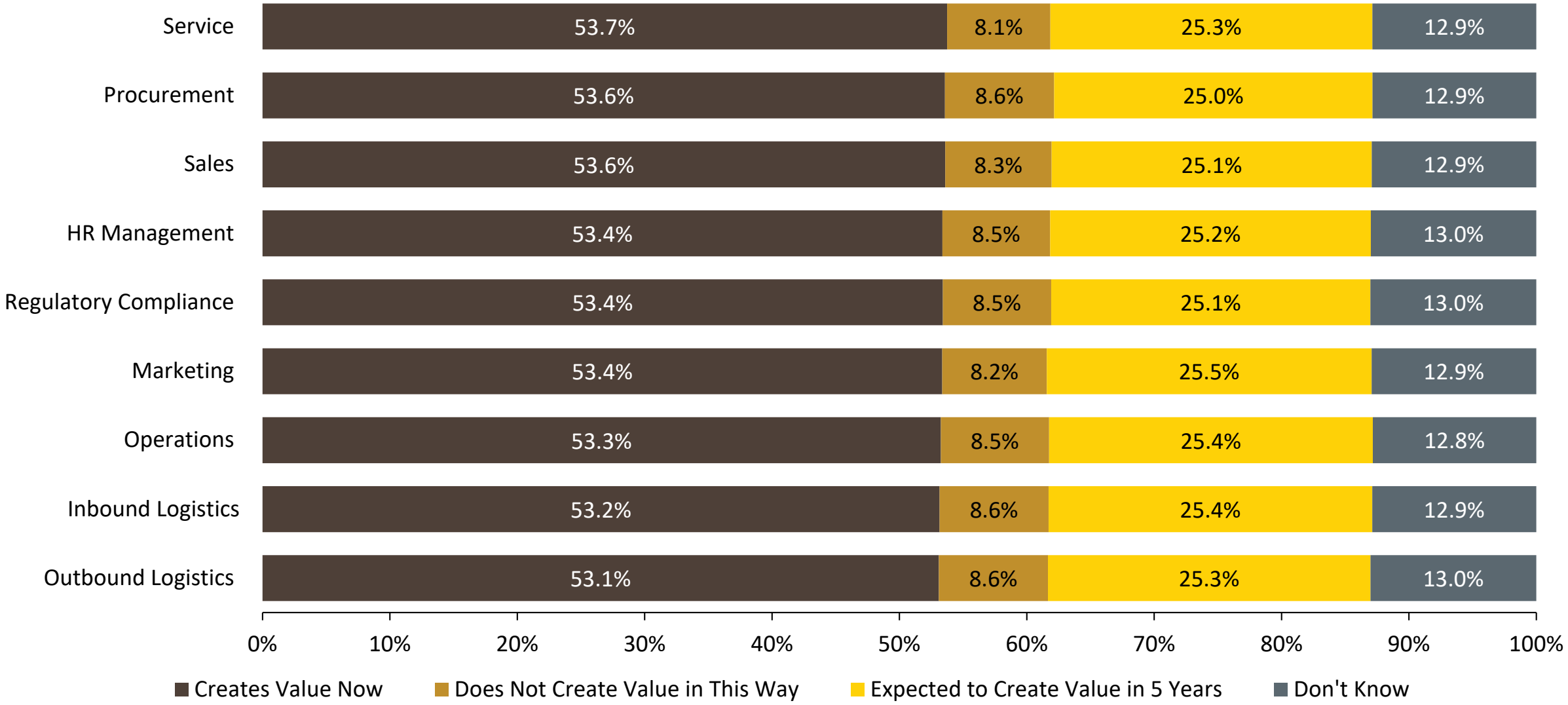


Value Creation

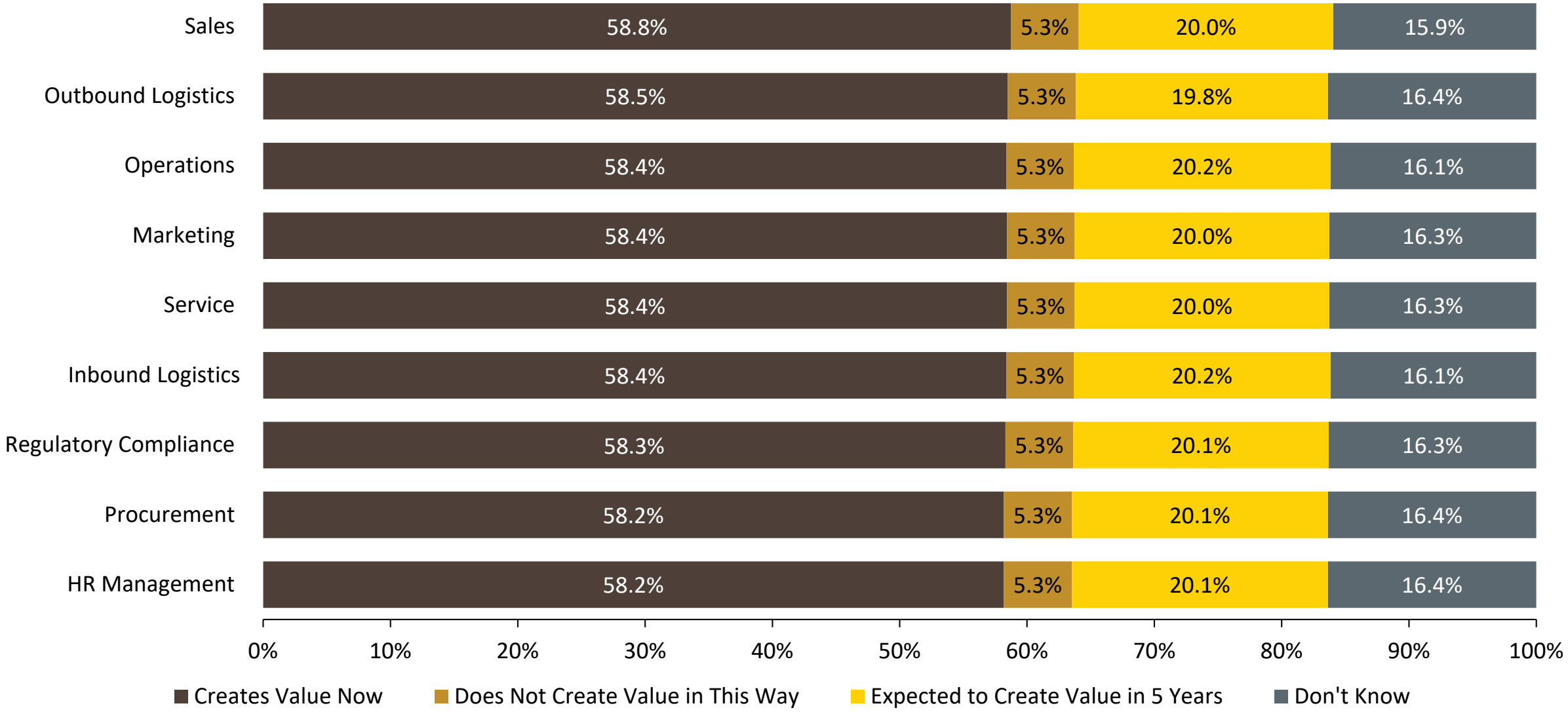
Does **data analytics** create, or is it expected to create, **value** in the following business functions of your organization?

	Creates Value **Now**	Expected to Create Value **in 5 Years**	**Does Not** Create Value in This Way	Don't Know
Inbound Logistics (*e.g. ordering/receiving, inventory replenishment*)	○	○	○	○
Operations (*e.g. production volumes, process details, quality control, efficiency measure*)	○	○	○	○
Outbound Logistics (*e.g. ordering/delivery*)	○	○	○	○
Marketing (*e.g. customer data/CRM, product development, product life-cycle, segmentation*)	○	○	○	○
Sales (*e.g. customer orders, referrals, transactional data*)	○	○	○	○
Service (*e.g. application, repair, tech support*)	○	○	○	○
HR Management (*e.g. goal setting and monitoring, compensation, payroll, benefits*)	○	○	○	○
Procurement (*e.g. input costs, SRM*)	○	○	○	○
Regulatory Compliance (*e.g. labor, environmental standard*)	○	○	○	○

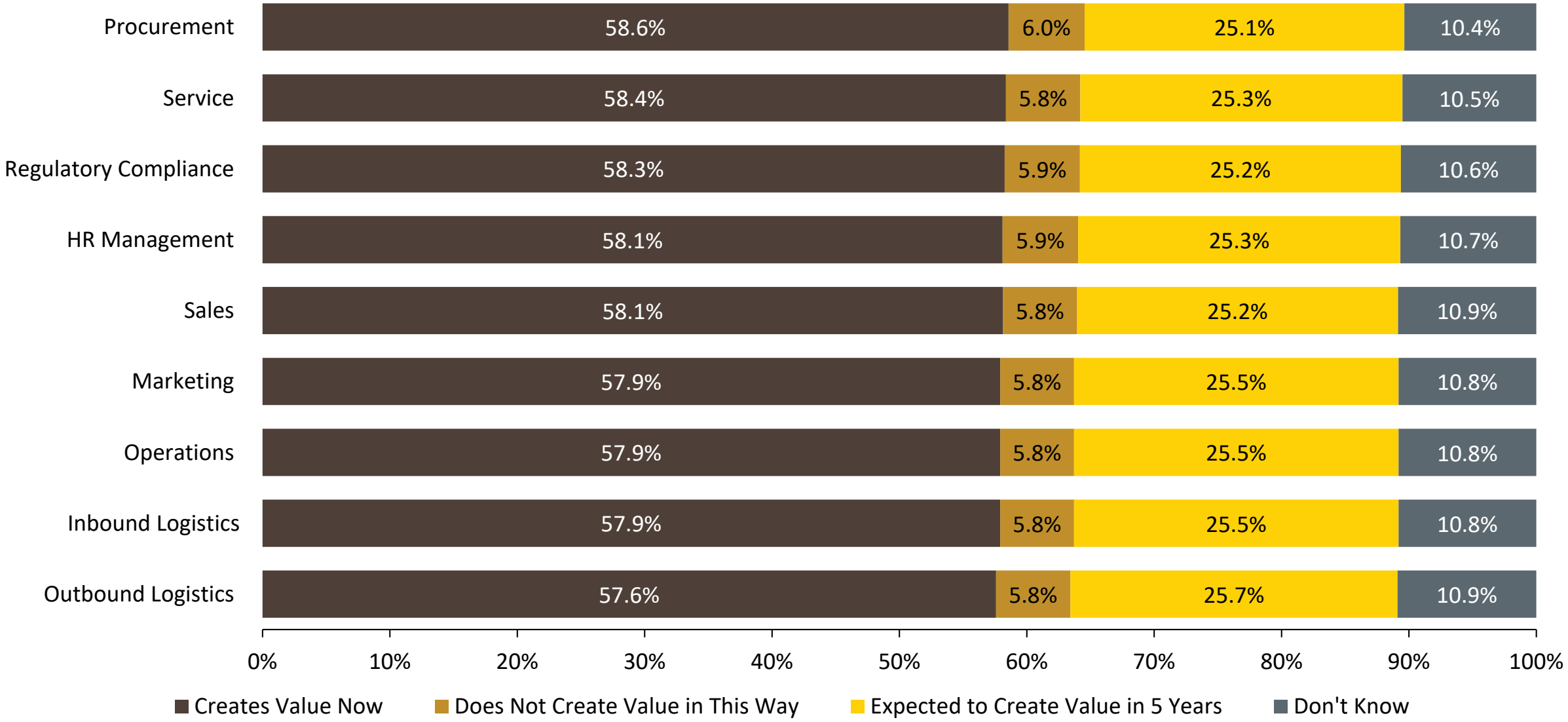
Value Creation



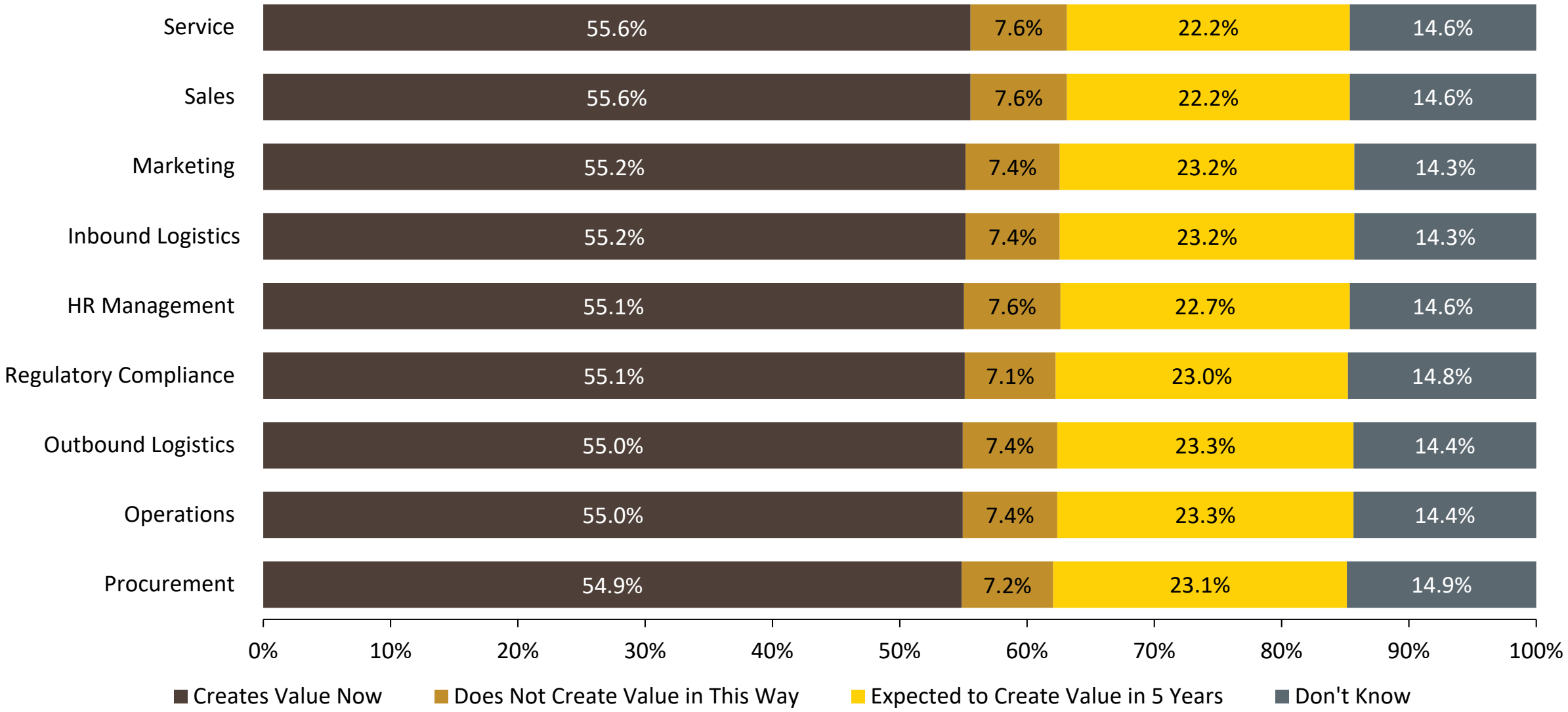
Value Creation - Agricultural Input Manufacturer



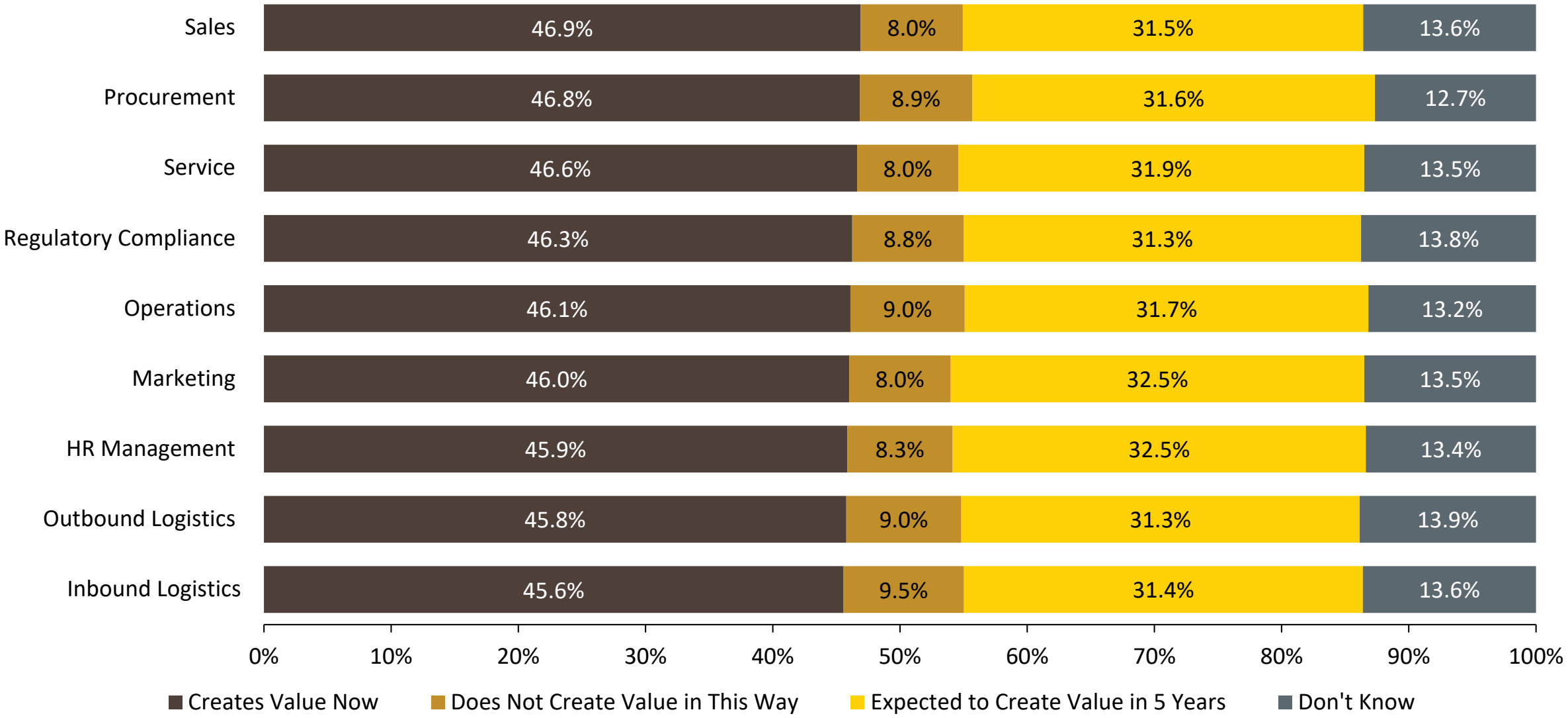
Value Creation - Agricultural Retailer / Dealer



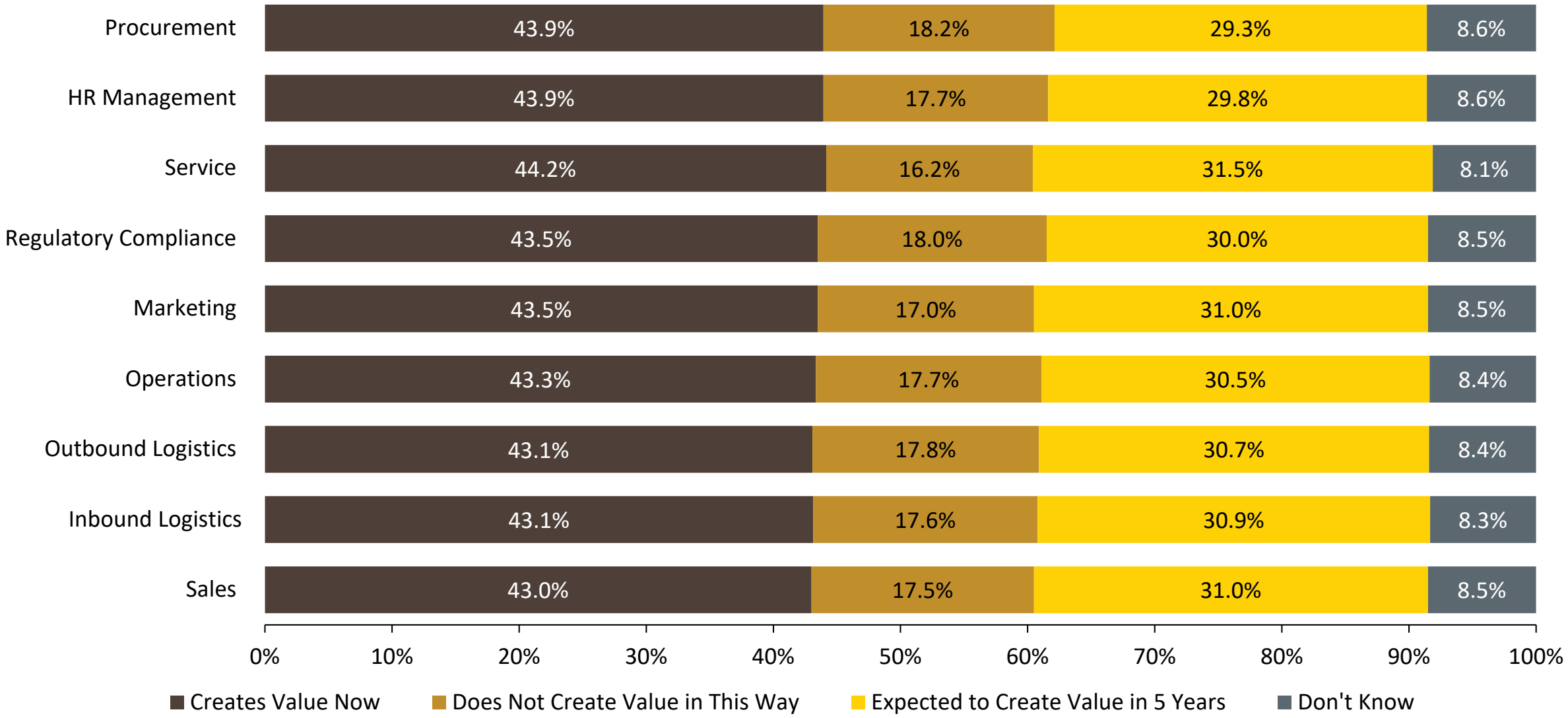
Value Creation - Food Manufacturer



Value Creation - Food Retailer

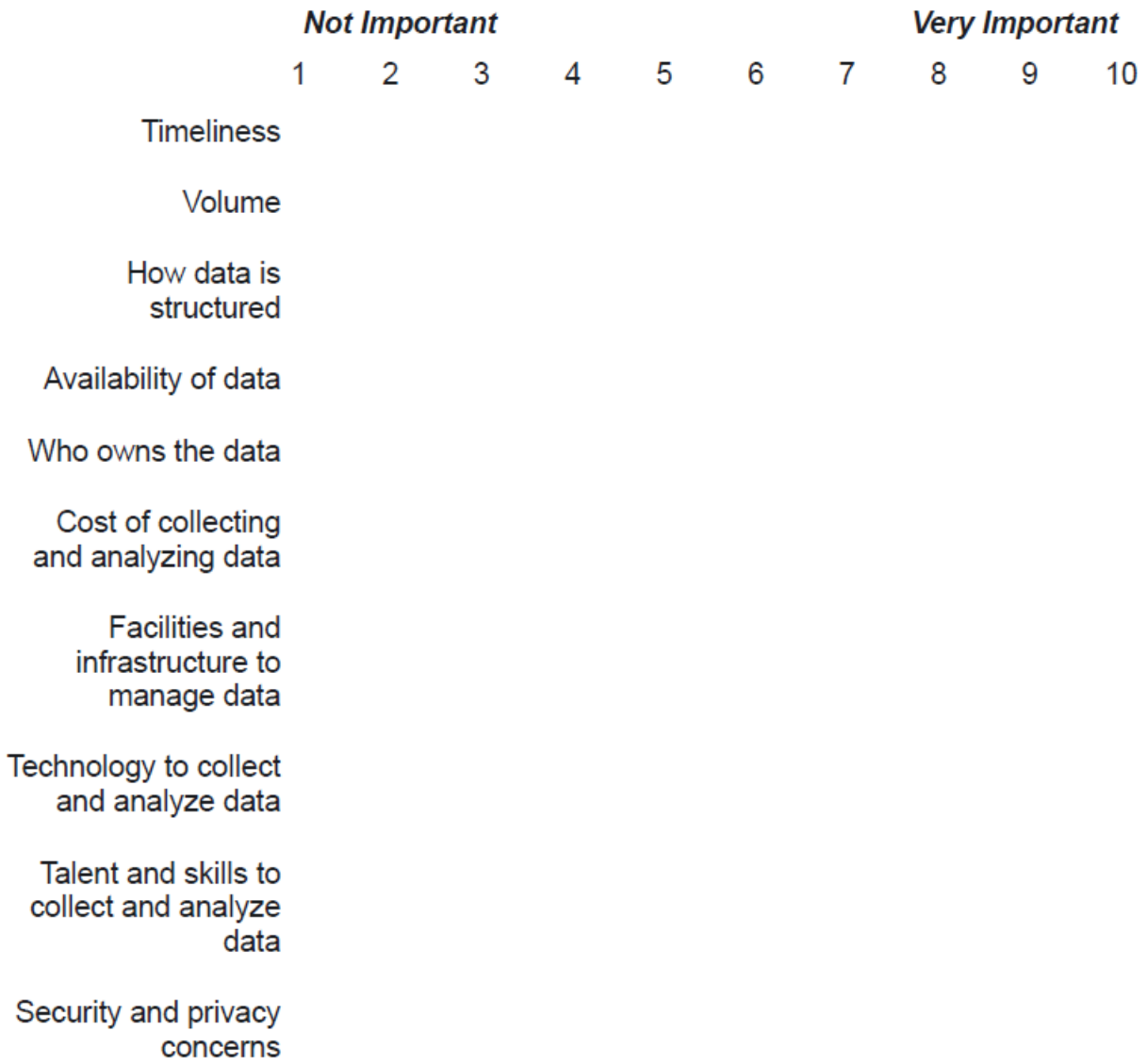


Value Creation - Processor / Trader / First Handler

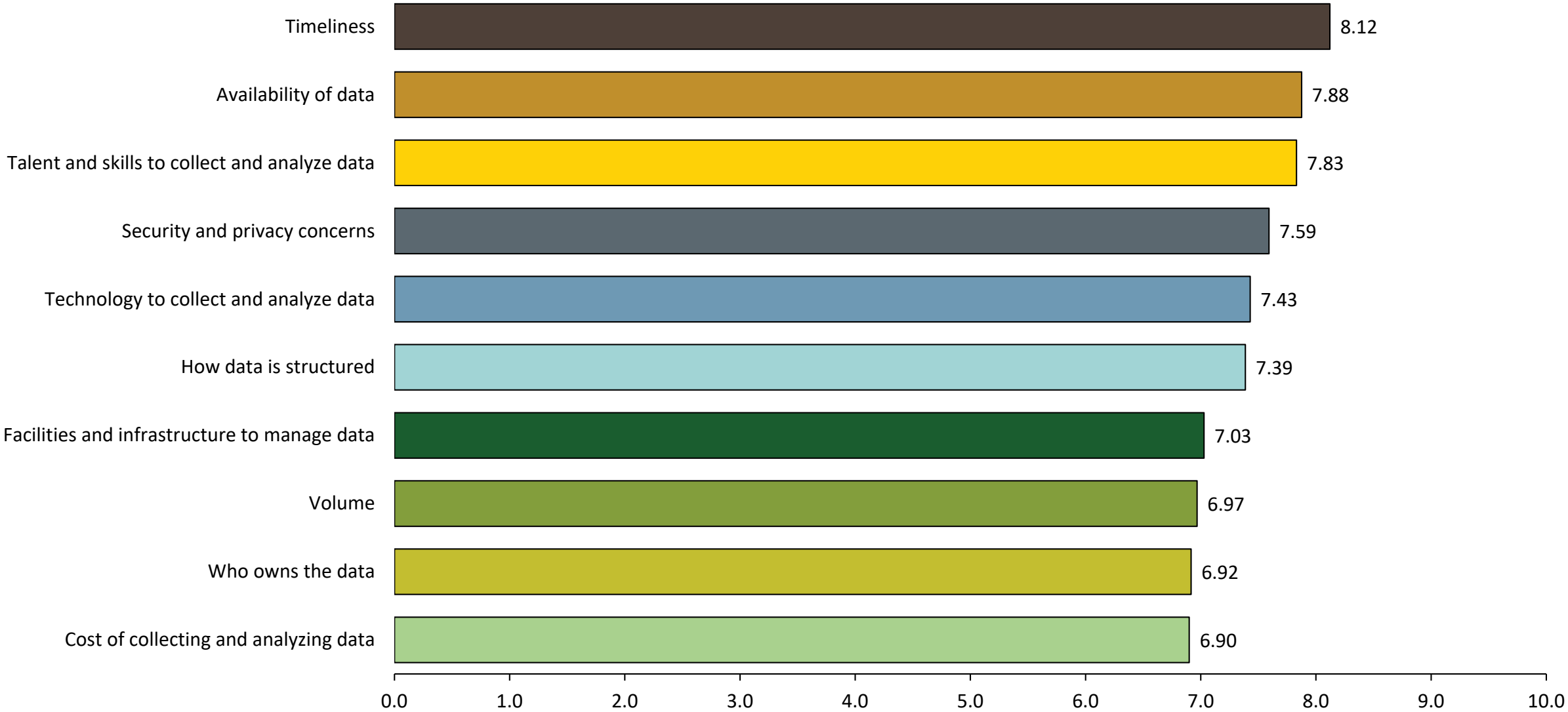


Data Collection Challenges

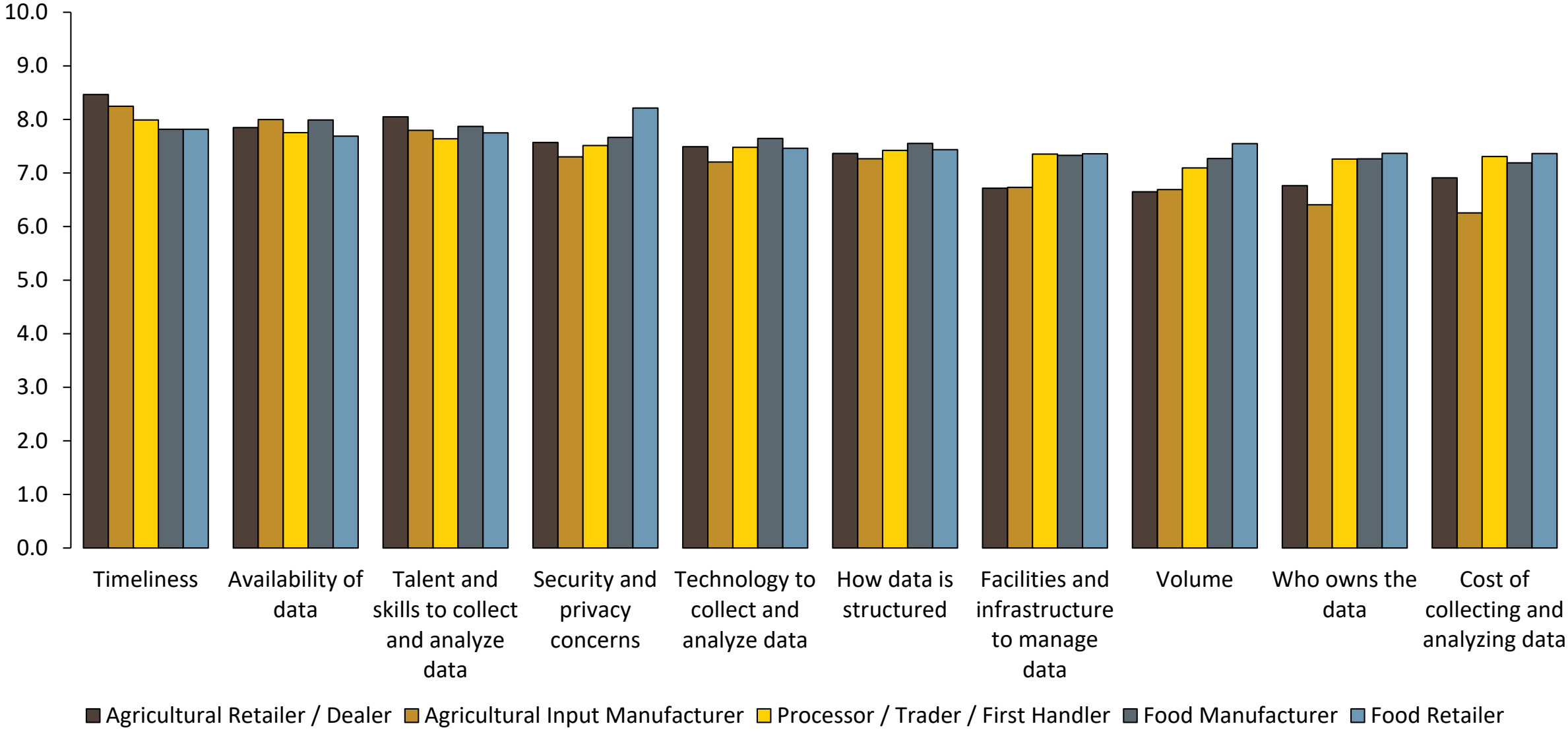
On a scale of 1 to 10, where 1 means ***"not important"*** and 10 means ***"very important"***, please rate the importance of the following data-related challenges in your organization. *(Use the slider to select your rating.)*



Challenges (Average)



Challenges by Segment



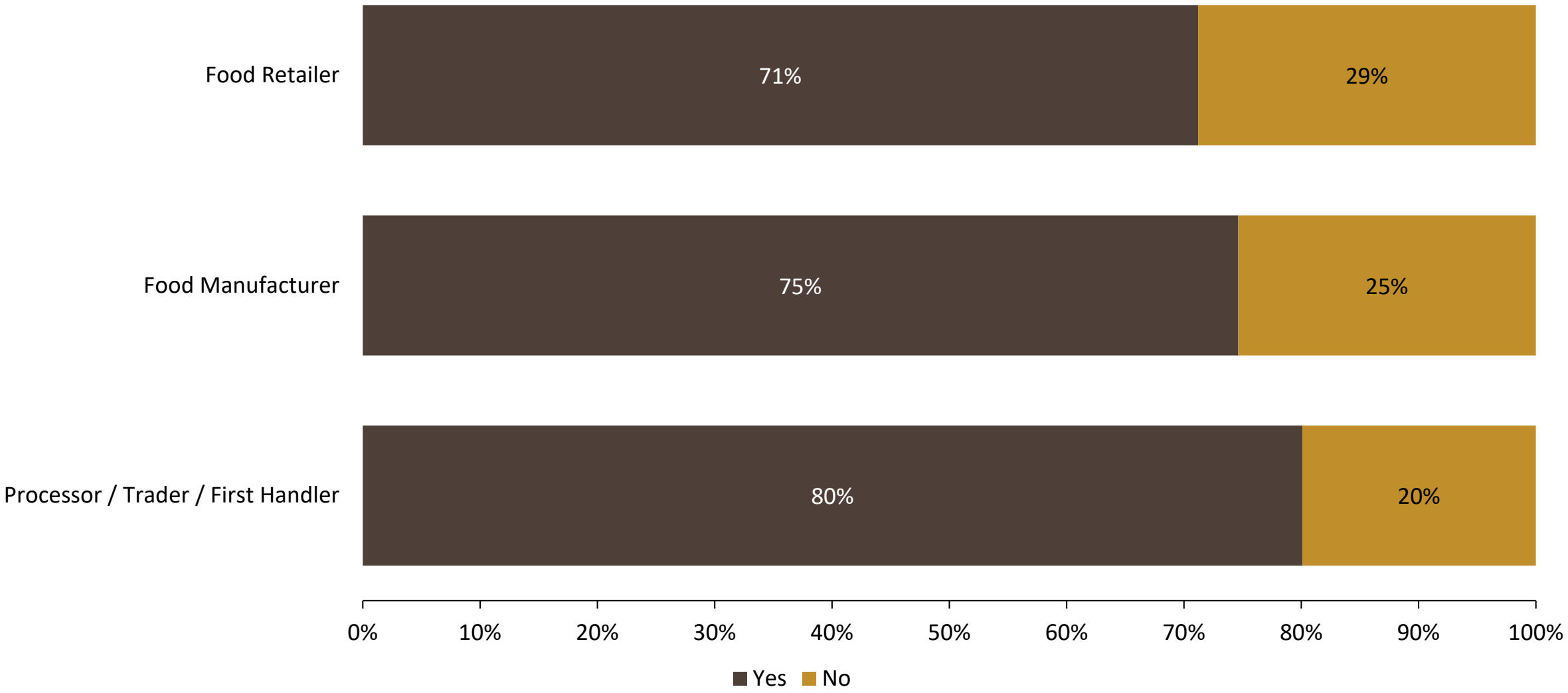
Data Sharing – Food

(First Handlers/Processors, Manufacturers, Retailers)

Does your organization purchase **agricultural products** (*e.g. corn, soybeans, cattle, poultry, dairy, sugar, fruits, vegetables, etc.*) directly from farmers?

- ○ Yes
- ○ No

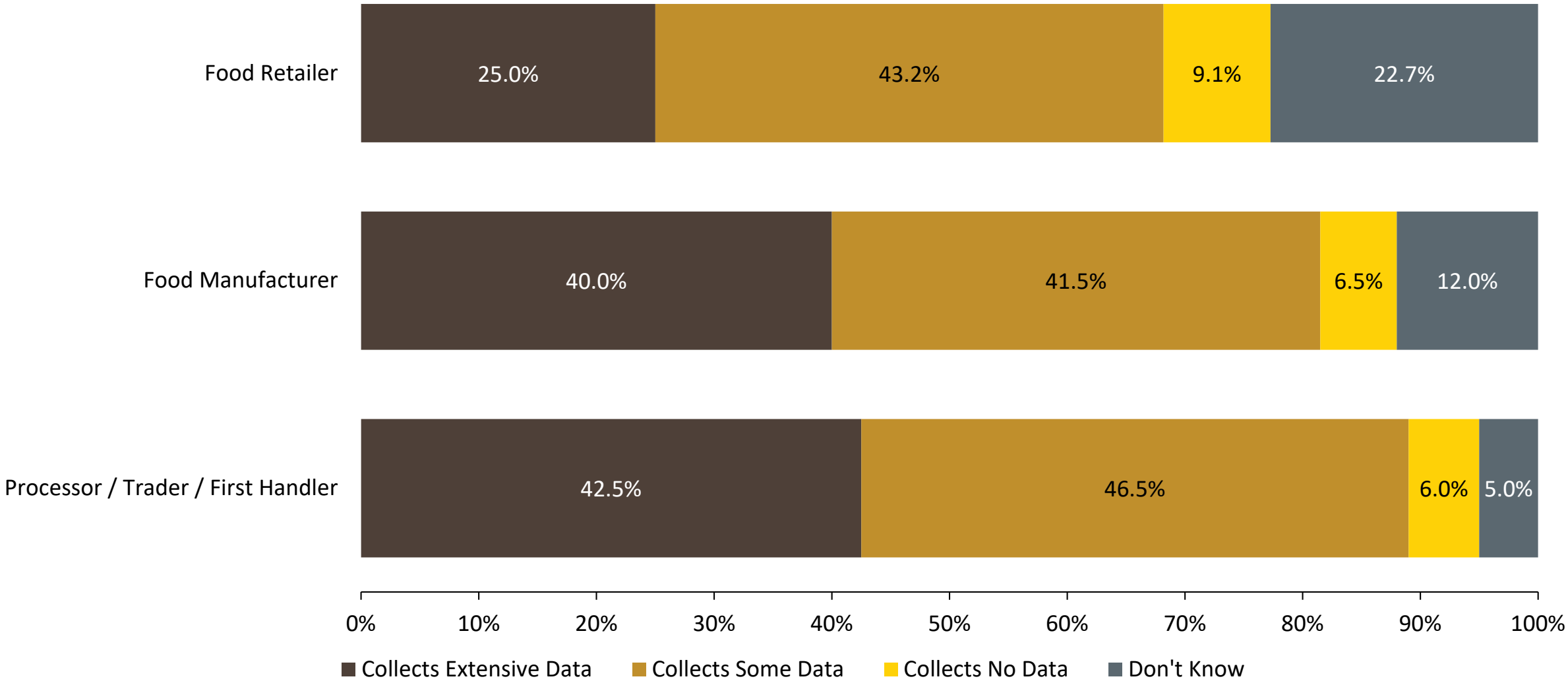
Direct Purchase from Farmers



Does your organization **collect data** related to **agricultural products** that purchases? (*e.g. Ag-inputs, quality levels, production methods, etc.*)

- ○ Collects **No** Data
- ○ Collects **Some** Data
- ○ Collects **Extensive** Data
- ○ Don't Know

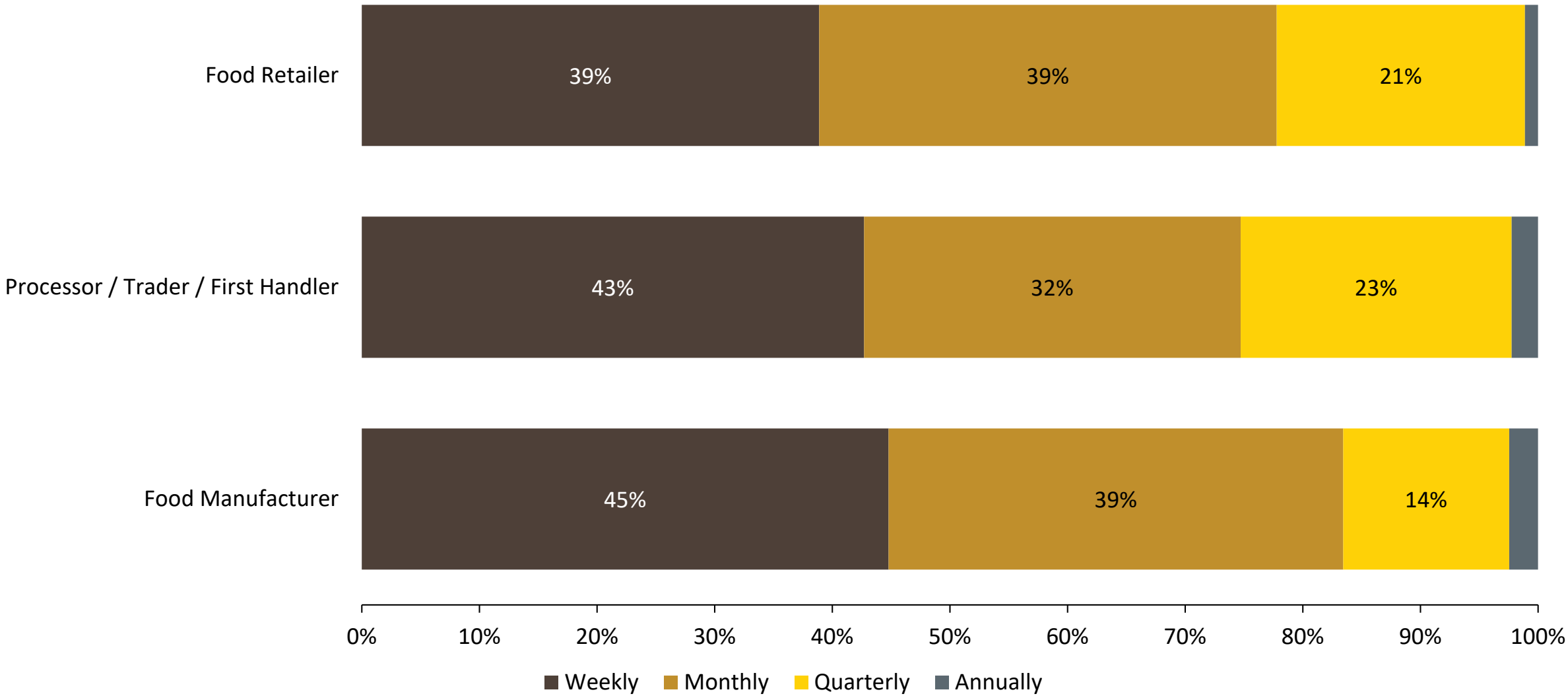
Data Collection on Ag Products



How **<u>often</u>** does your organization collect data related to **agricultural products**? (*e.g. Ag-inputs, quality levels, production methods, etc.*)

- ○ Weekly
- ○ Monthly
- ○ Quarterly
- ○ Annually

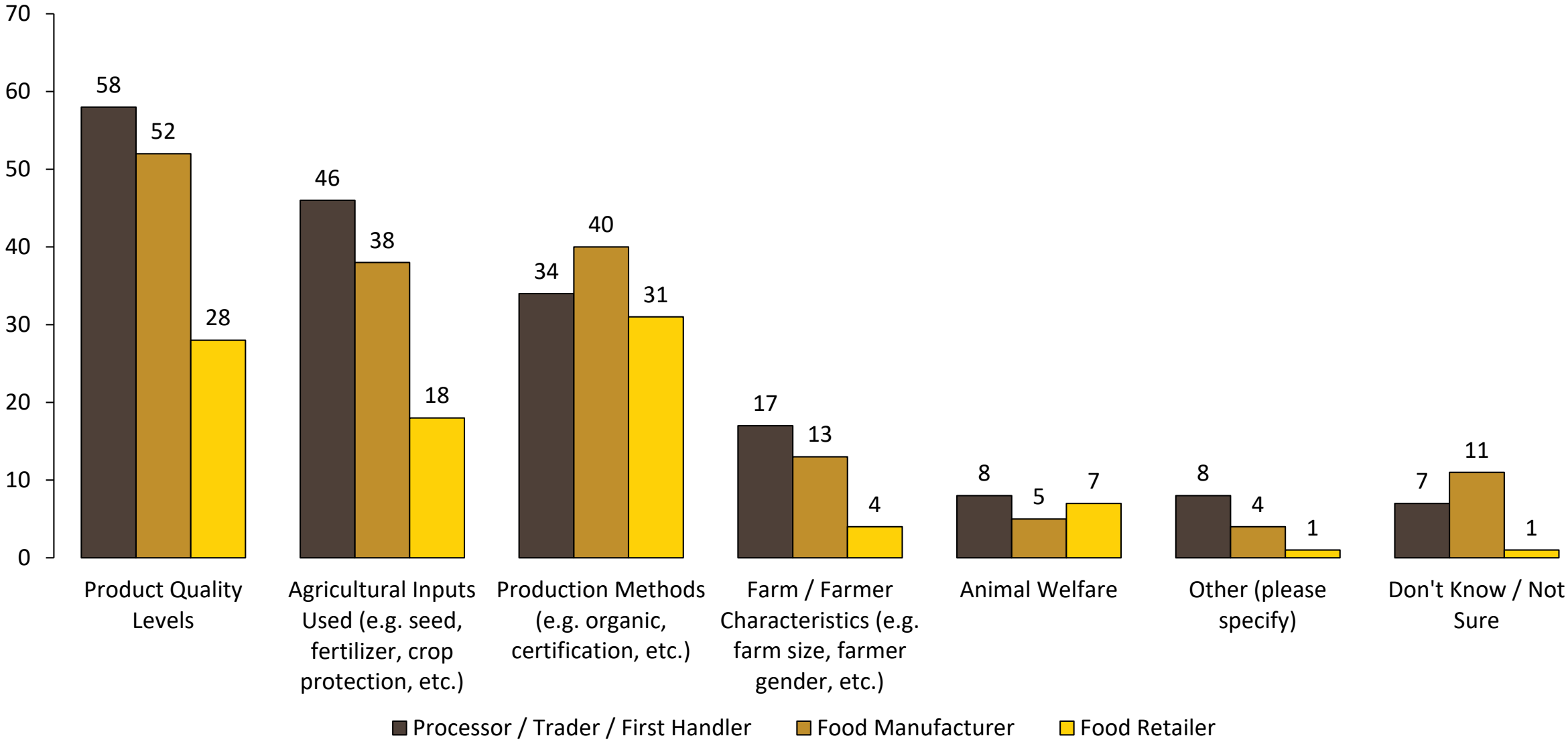
Frequency of Collecting Data



What **type** of information does your organization collect data related to **agricultural products**?

- ○ Agricultural Inputs Used (*e.g. seed, fertilizer, crop protection, etc.*)
- ○ Production Methods (*e.g. organic, certification, etc.*)
- ○ Product Quality Levels
- ○ Animal Welfare
- ○ Farm / Farmer Characteristics (*e.g. farm size, farmer gender, etc.*)
- ○ Other (please specify) _____
- ○ Don't Know / Not Sure

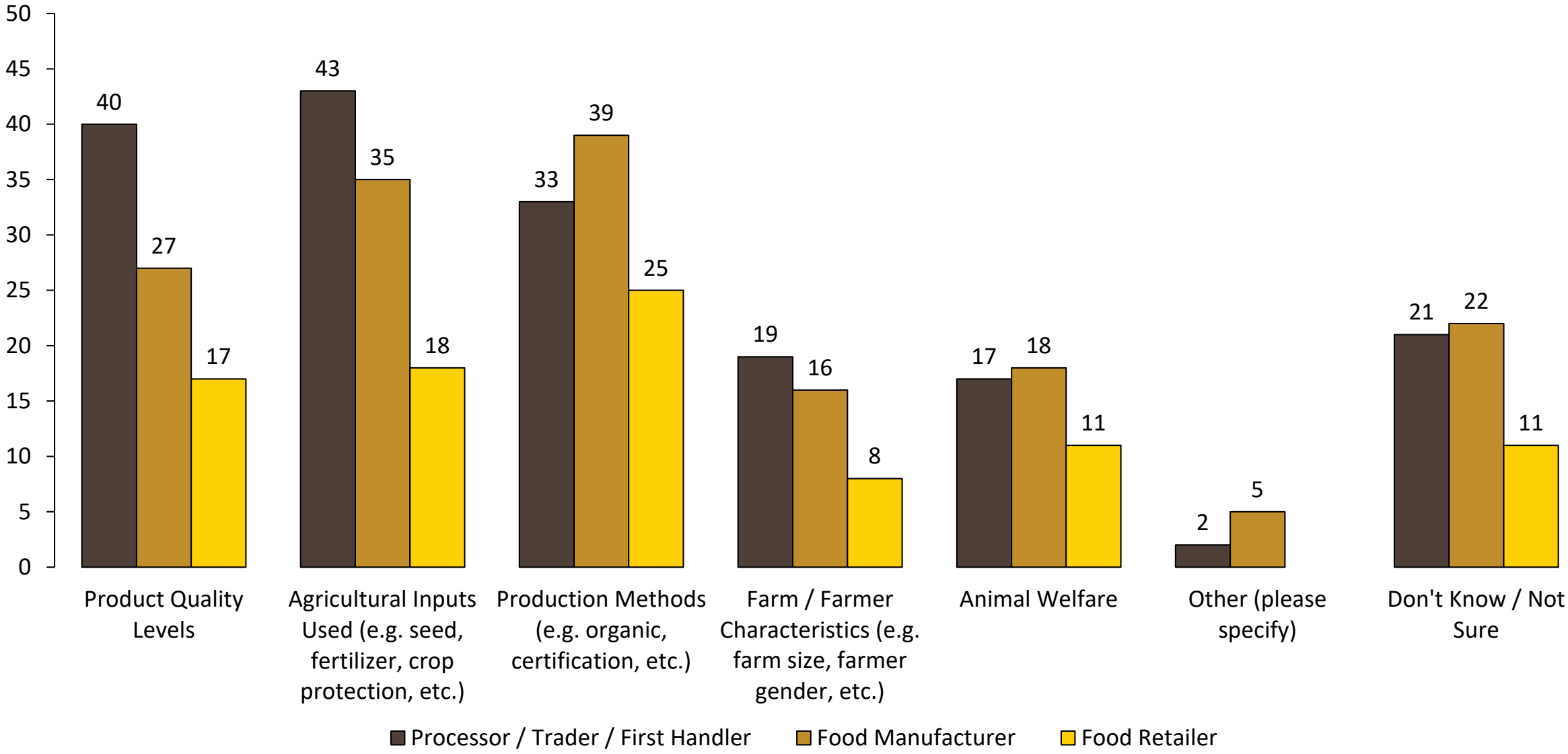
Type of Information Collected



What **type** of information does your organization plan to collect related to **agricultural products** in the **future** that is NOT being collected today?

- ○ Agricultural Inputs Used (*e.g. seed, fertilizer, crop protection, etc.*)
- ○ Production Methods (*e.g. organic, certification, etc.*)
- ○ Products Quality Levels
- ○ Animal Welfare
- ○ Farm / Farmer Characteristics (*e.g. farm size, farmer gender, etc.*)
- ○ Other (please specify) _____
- ○ Don't Know / Not Sure

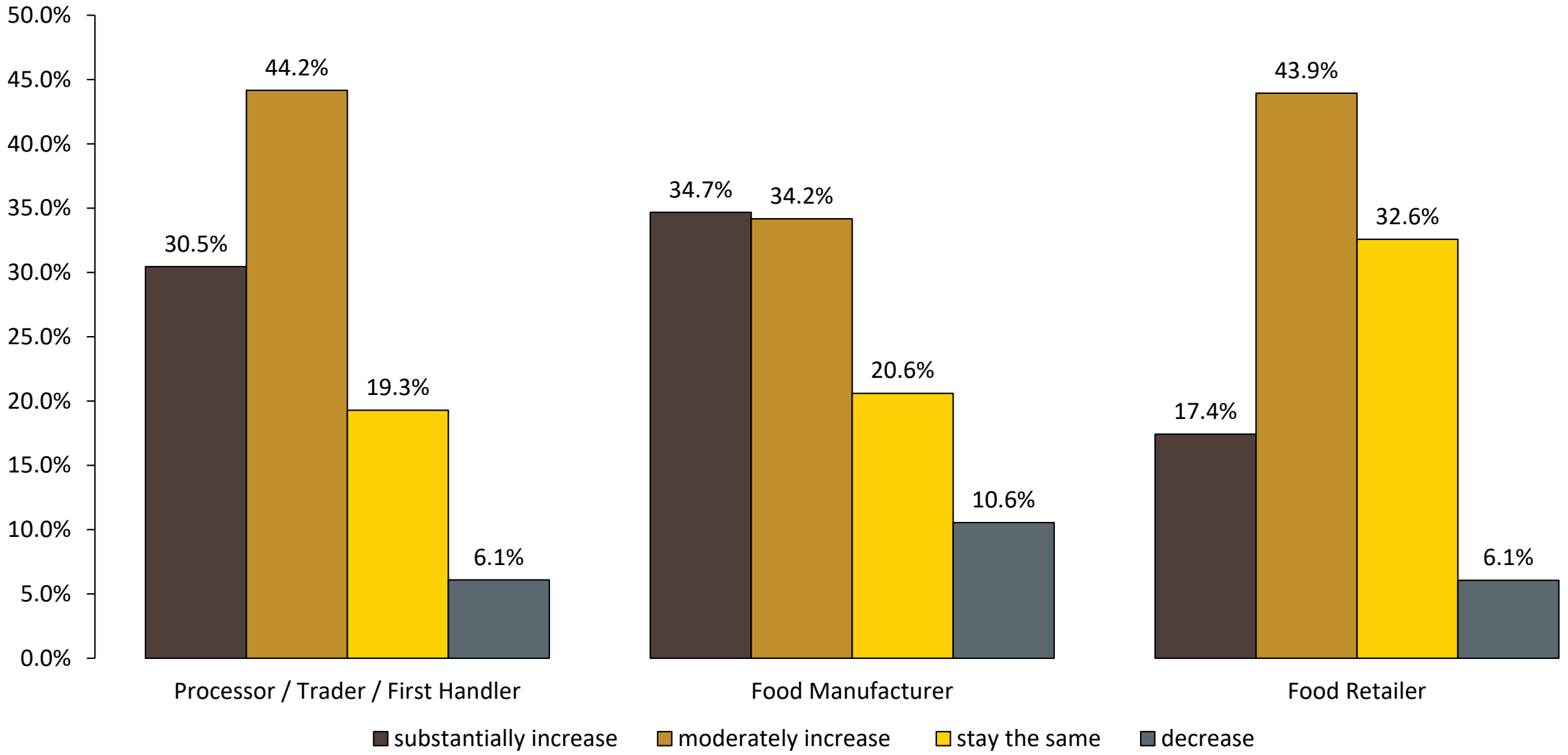
Type of Information Plan to Collect in Future



In general, how do you see the **future of information exchange** between your organization and **farmers** or **other suppliers**?

- ○ The information exchange **will decrease** in the future
- ○ The information exchange **will stay the same** in the future
- ○ The information exchange **will moderately increase** in the future
- ○ The information exchange **will substantially increase** in the future

Future Data Exchange

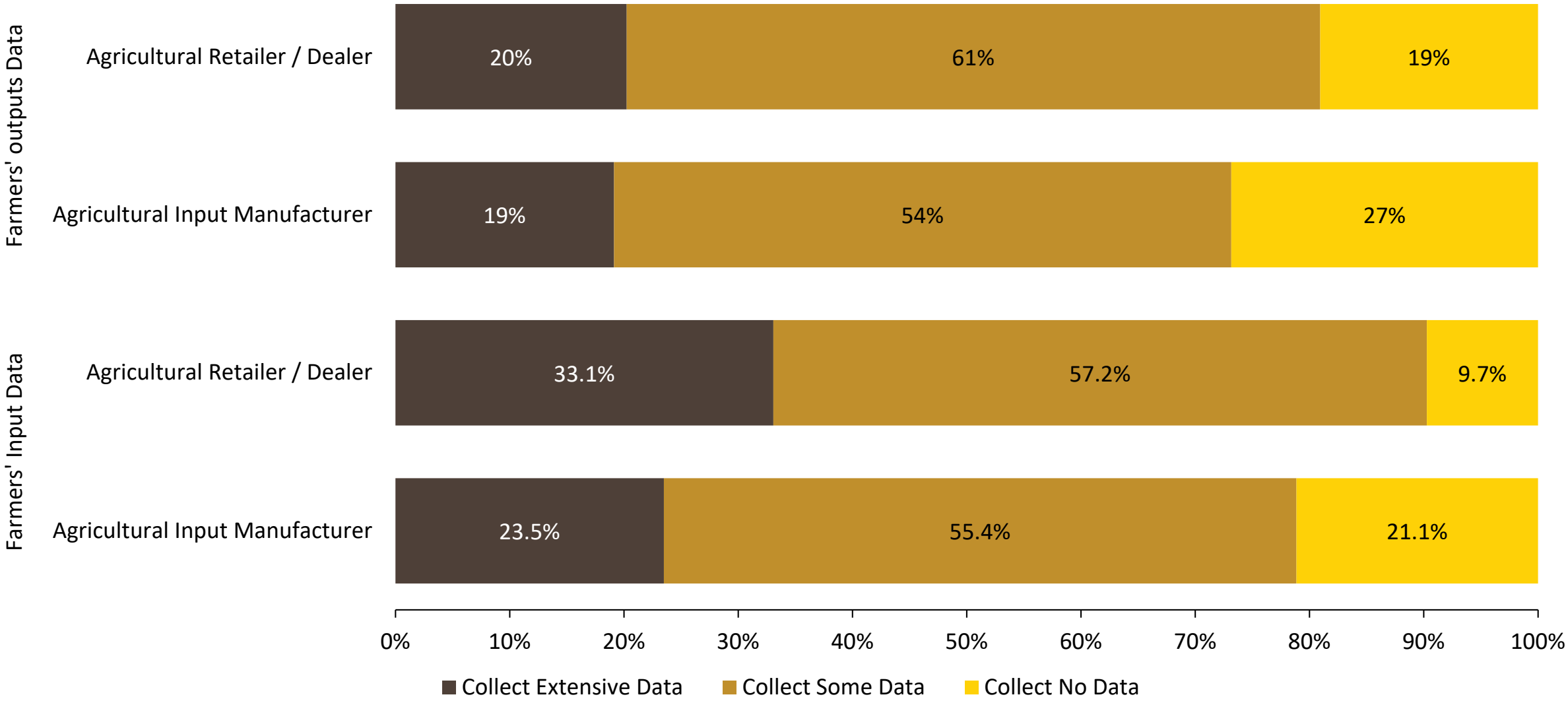


Data Sharing – Ag Input
(Manufacturers & Retailers)

Does your organization collect data on its farmer customers' inputs and outputs?

	Collect **No** Data	Collect **Some** Data	Collect **Extensive** Data
Farmers' inputs data	○	○	○
Farmers' outputs data	○	○	○

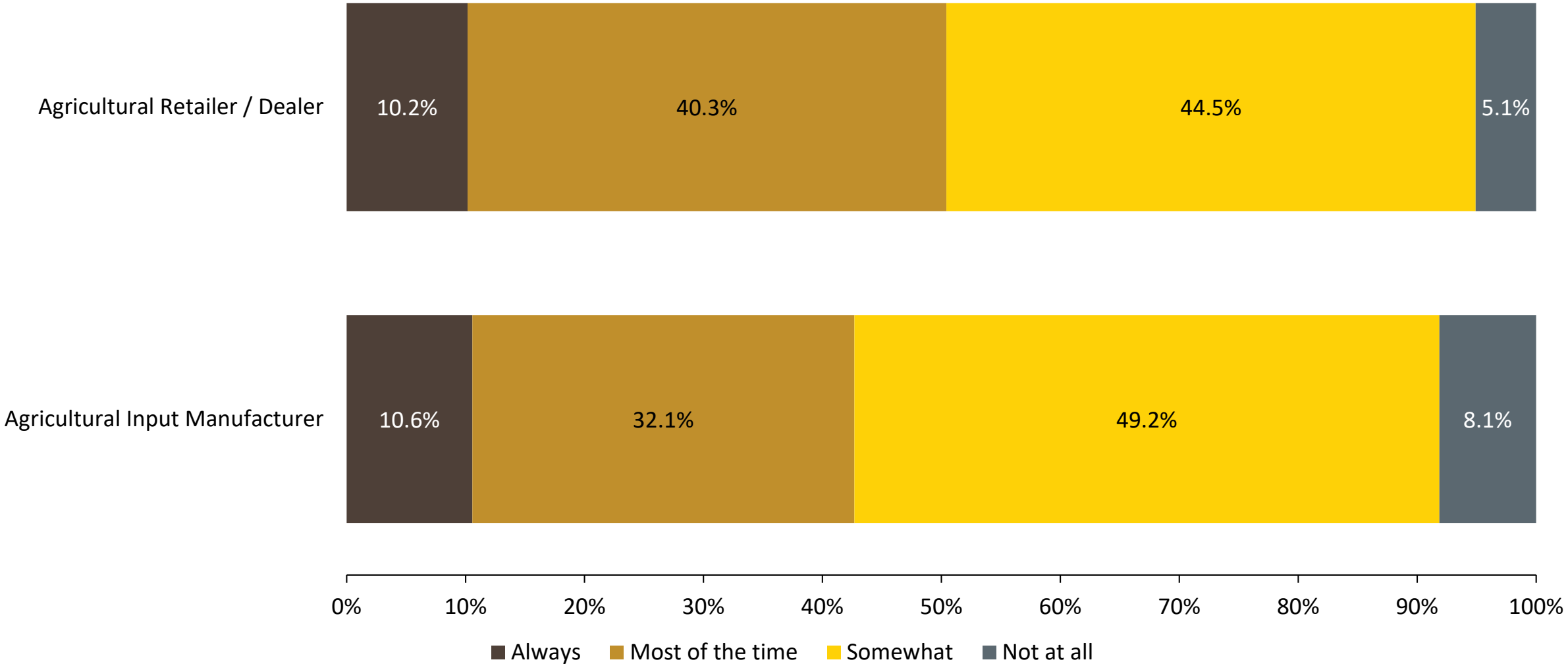
Farmer’s input and output Data



Have you used the data your organization collects on your farmer customers' inputs and/or outputs to provide support for their decision making on their farm input purchases and usage?

- ○ Not at all
- ○ Somewhat
- ○ Most of the time
- ○ Always

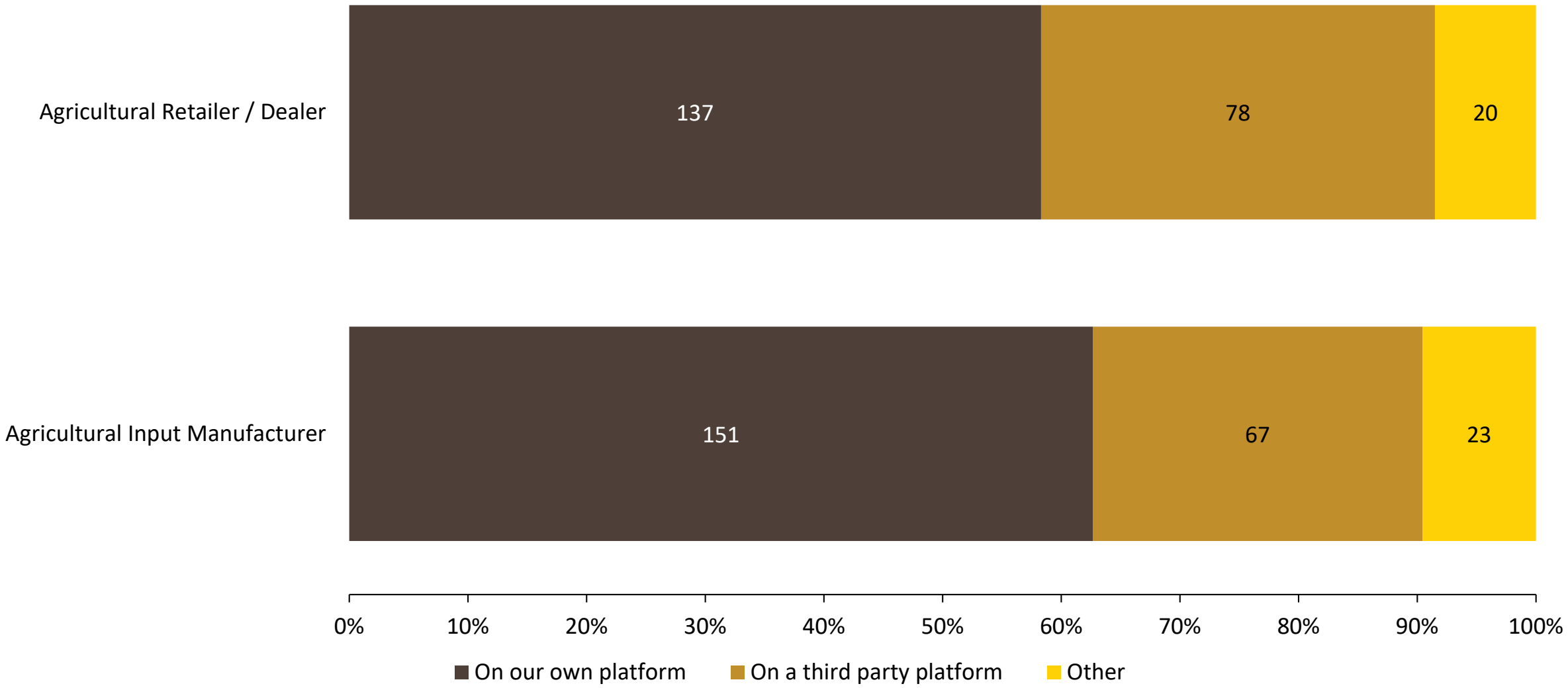
Using Farmer Data to Provide Support



Where do you store the data that you collect on farmer customers' inputs and/or outputs?

- ○ On our own platform (please specify the name) [ ]
- ○ On a third party platform (please specify the name) [ ]
- ○ Other (please specify) [ ]

Storing Farmer Customers' Data



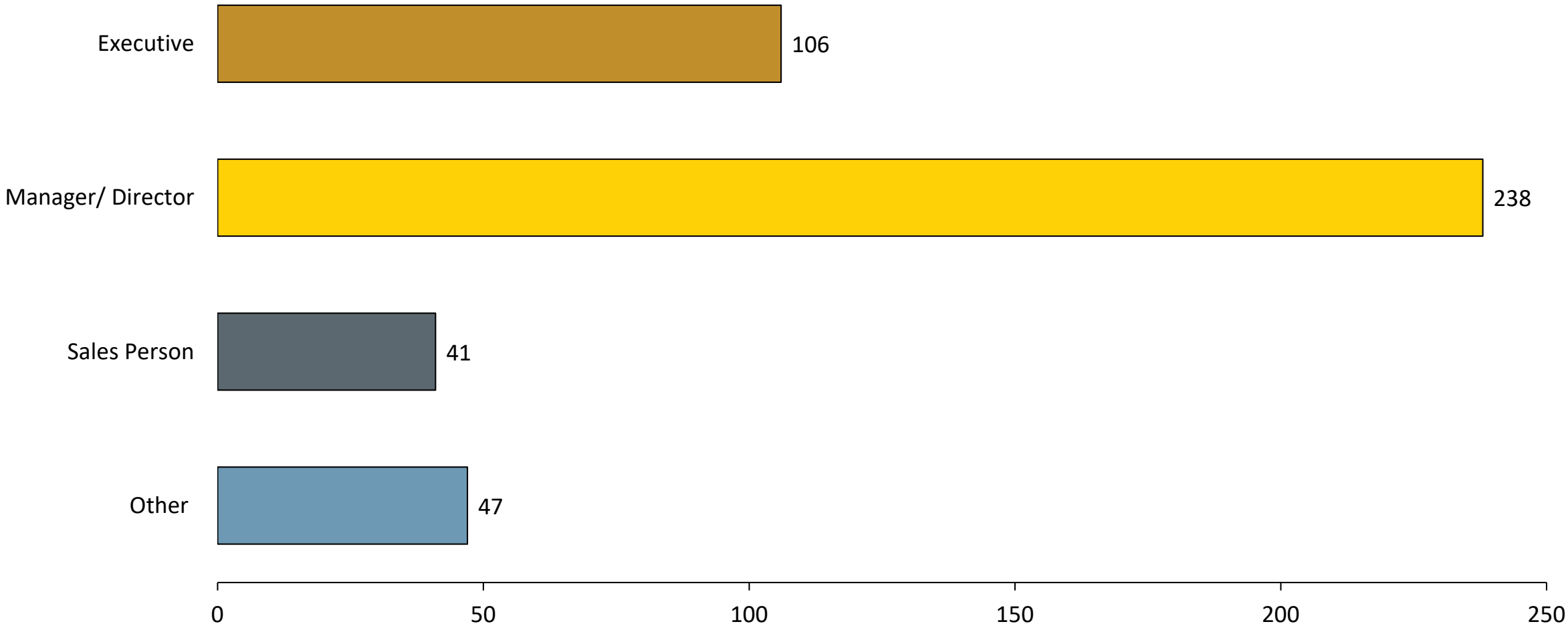
Ag Input Manufacturers

PURDUE UNIVERSITY

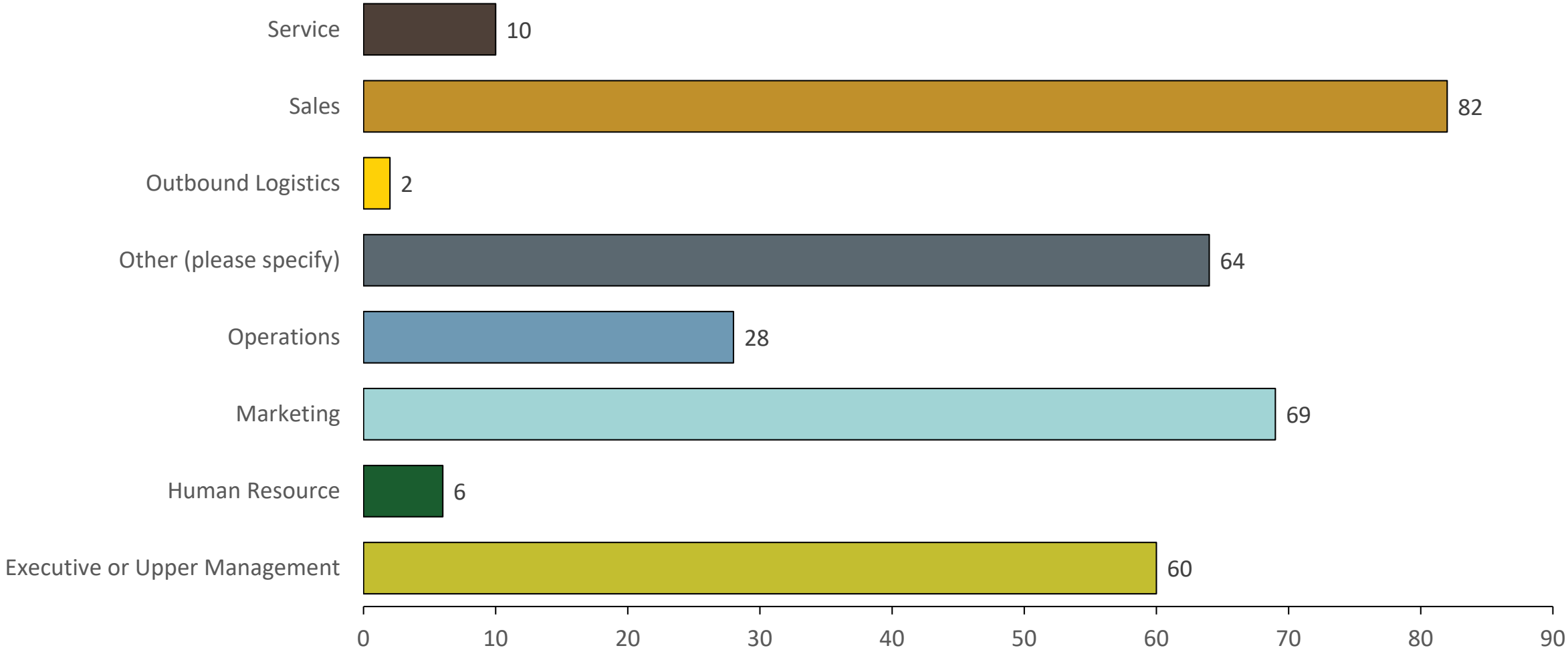
Center for Food and Agricultural Business
COLLEGE OF AGRICULTURE

Demographics

Respondents by Role - Ag Input Manufacturers



Respondents by Business Function - Ag Input Manufacturers

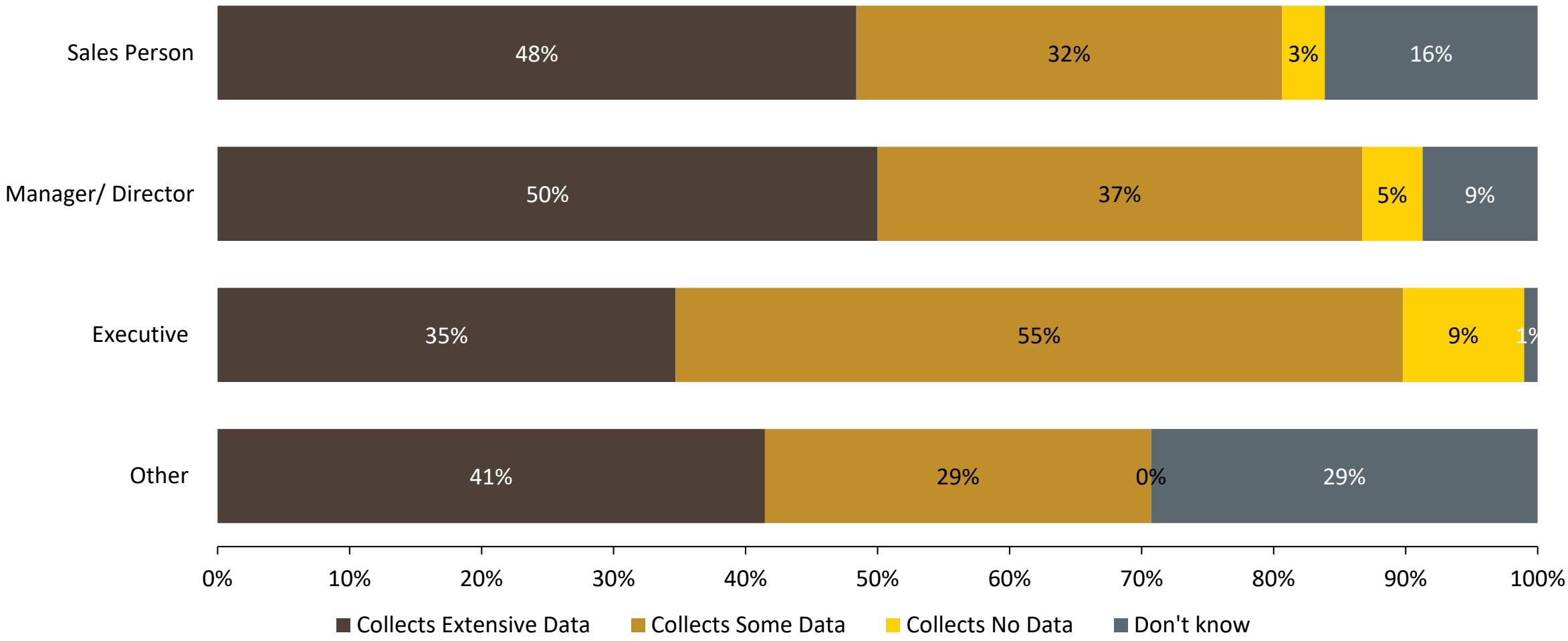


The Extent Data is Collected - by Role

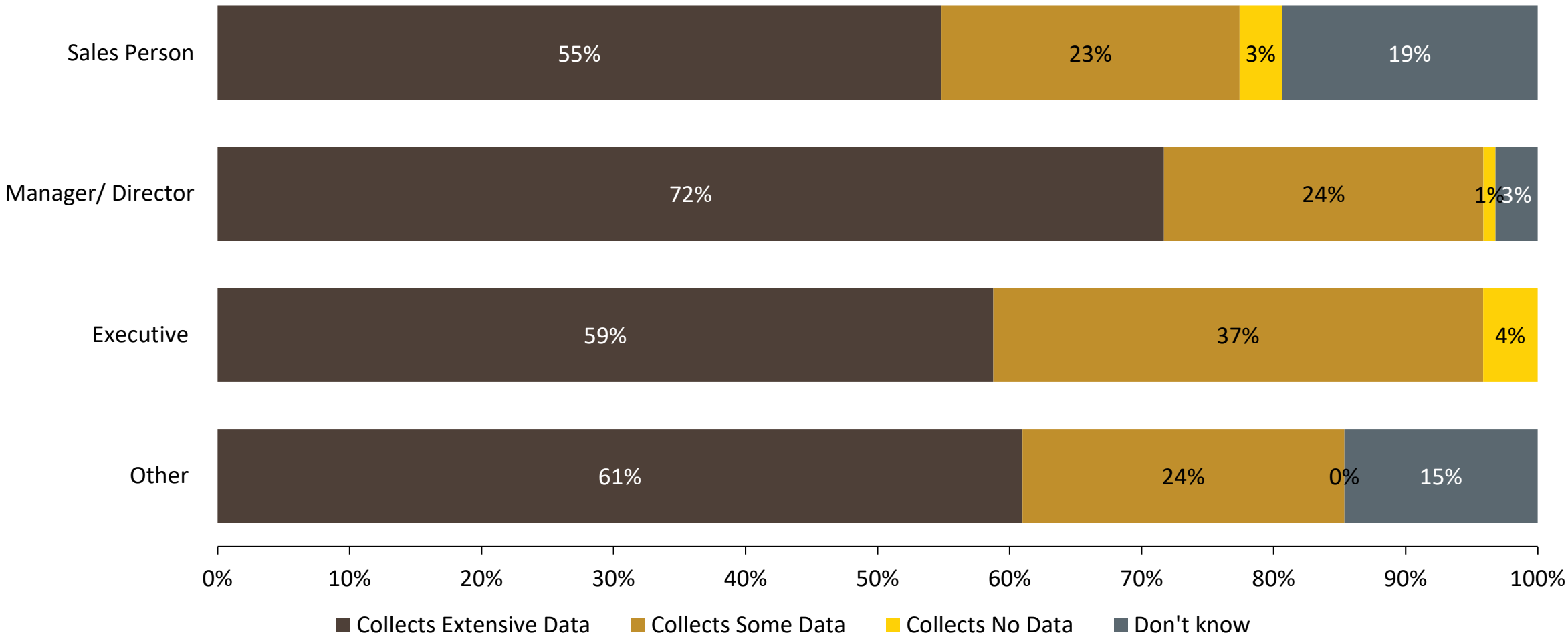
To what extent does your organization **collect data** for the following business functions?

	Don't know	Collects **No** Data	Collects **Some** Data	Collects **Extensive** Data
Inbound Logistics (*e.g. ordering/receiving, inventory replenishment*)	○	○	○	○
Operations (*e.g. production volumes, process details, quality control, efficiency measure*)	○	○	○	○
Outbound Logistics (*e.g. ordering/delivery*)	○	○	○	○
Marketing (*e.g. customer data/CRM, product development, product life-cycle, segmentation*)	○	○	○	○
Sales (*e.g. customer orders, referrals, transactional data*)	○	○	○	○
Service (*e.g. application, repair, tech support*)	○	○	○	○
HR Management (*e.g. goal setting and monitoring, compensation, payroll, benefits*)	○	○	○	○
Procurement (*e.g. input costs, SRM*)	○	○	○	○
Regulatory Compliance (*e.g. labor, environmental standard*)	○	○	○	○

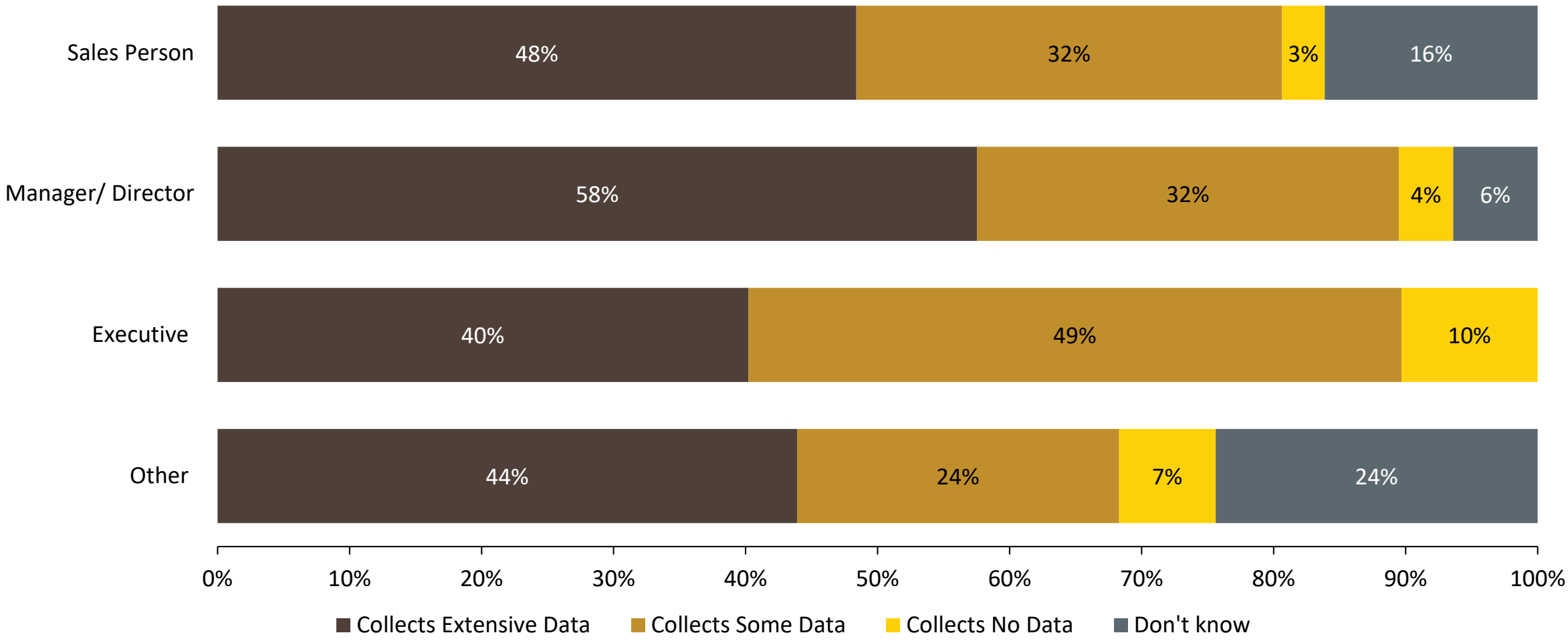
The Extent Data is Collected by Role - Inbound Logistics



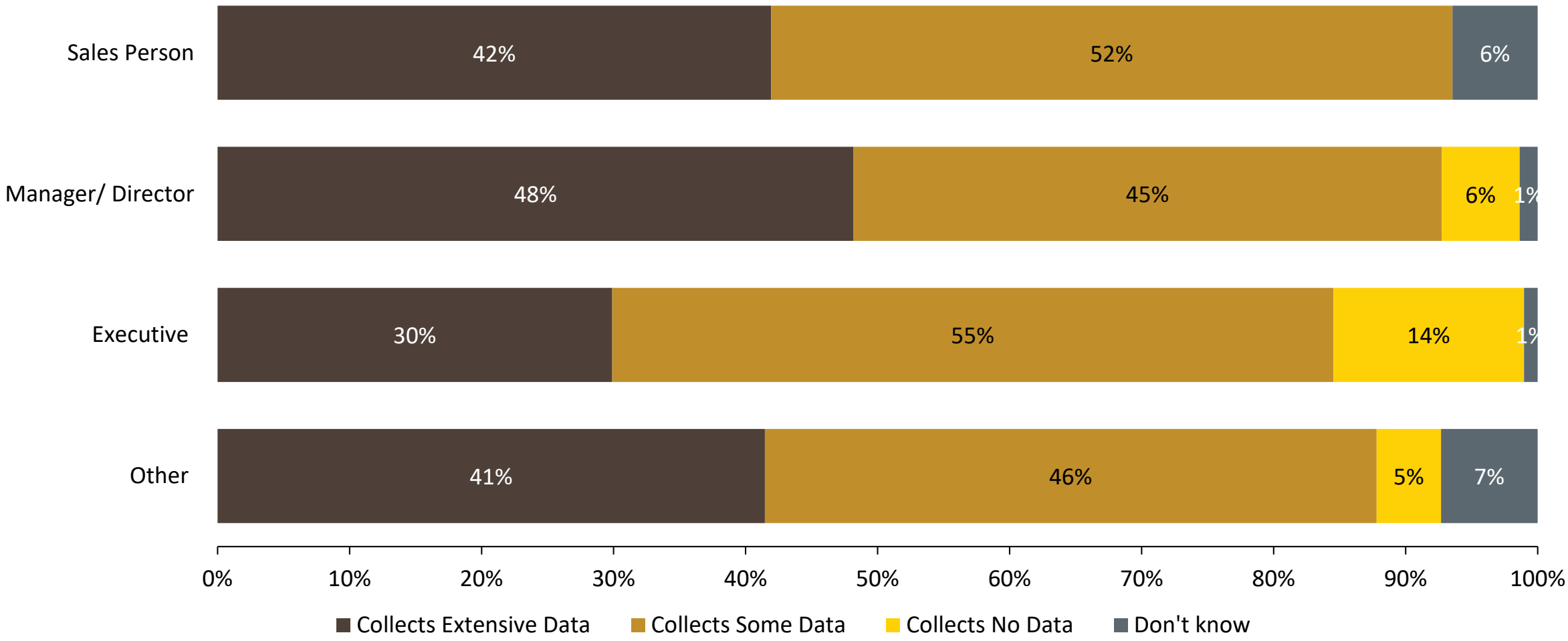
The Extent Data is Collected by Role - Operations



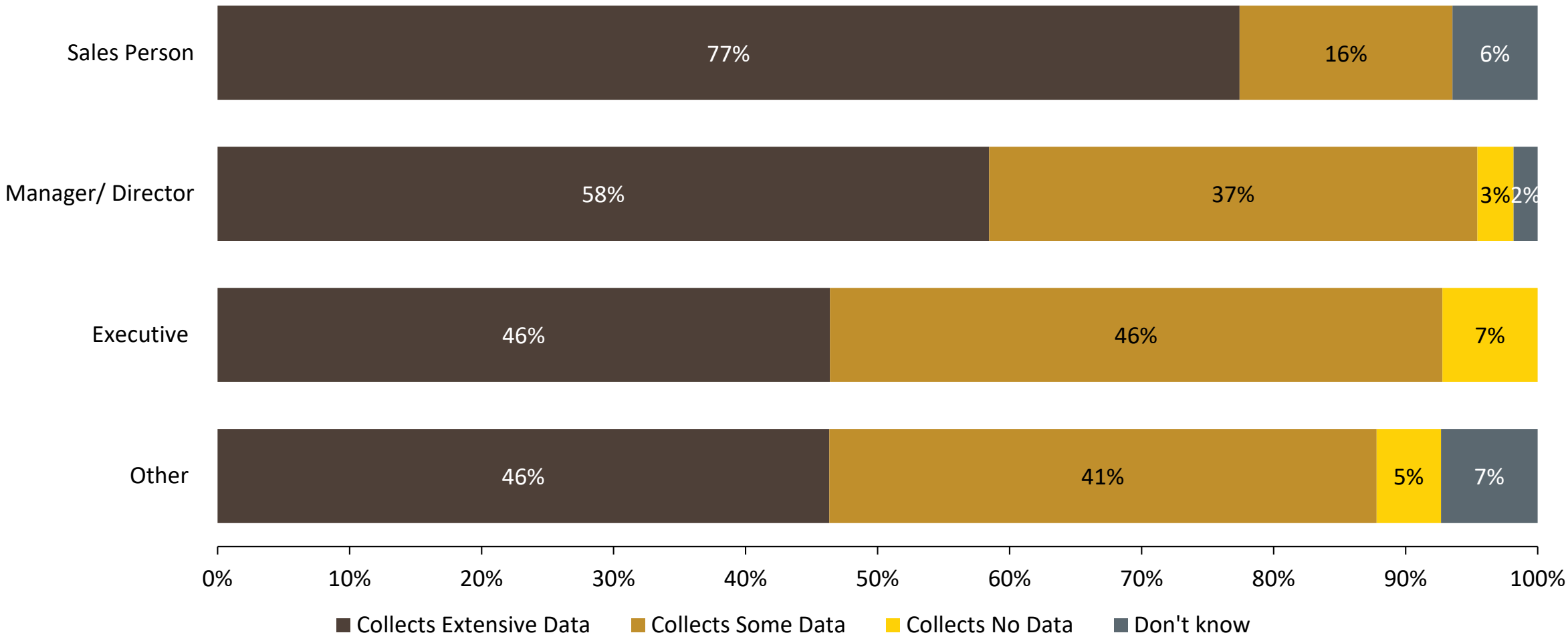
The Extent Data is Collected by Role - Outbound Logistics



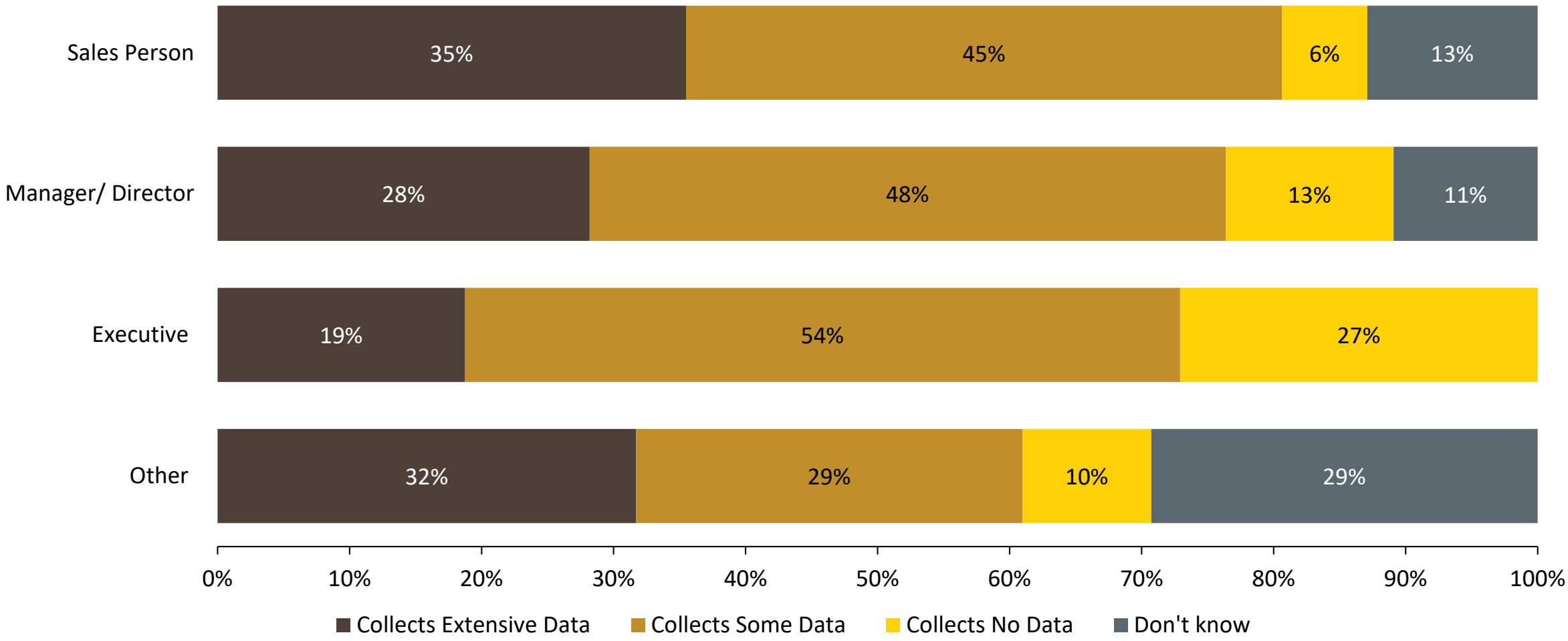
The Extent Data is Collected by Role - Marketing



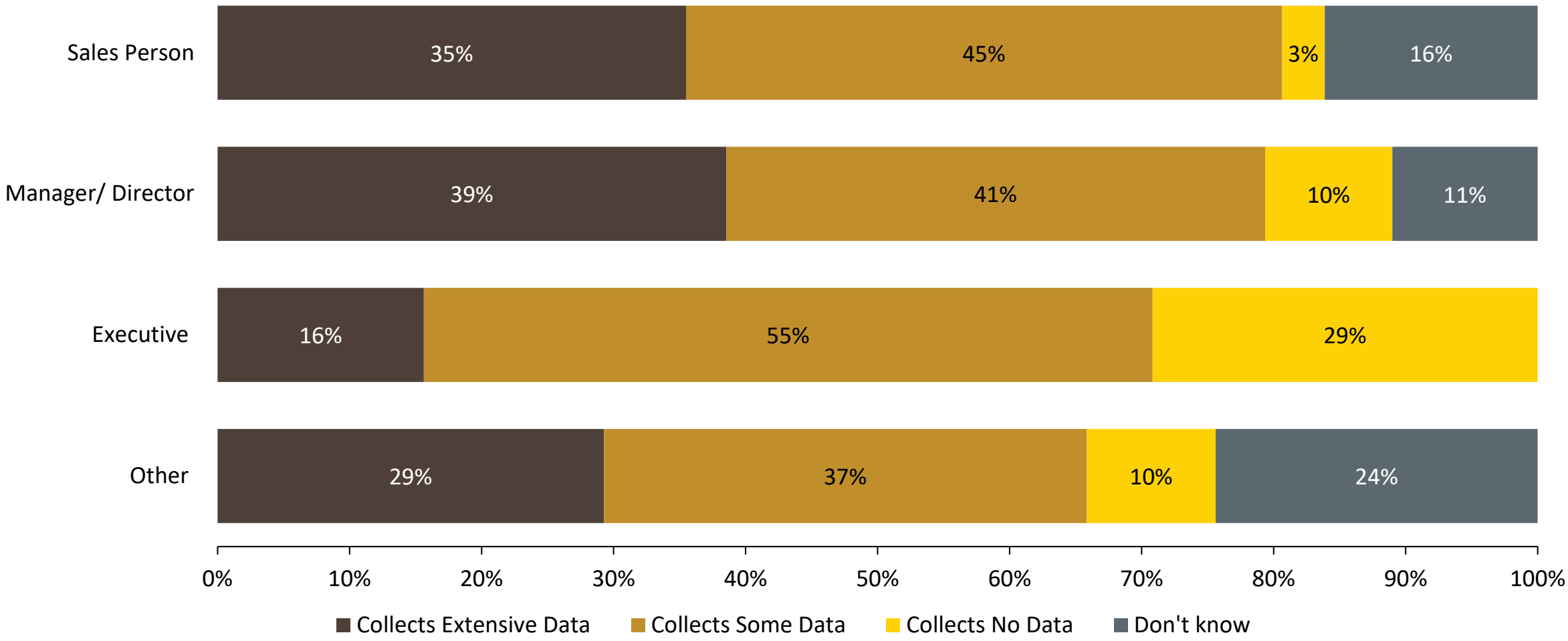
The Extent Data is Collected by Role - Sales



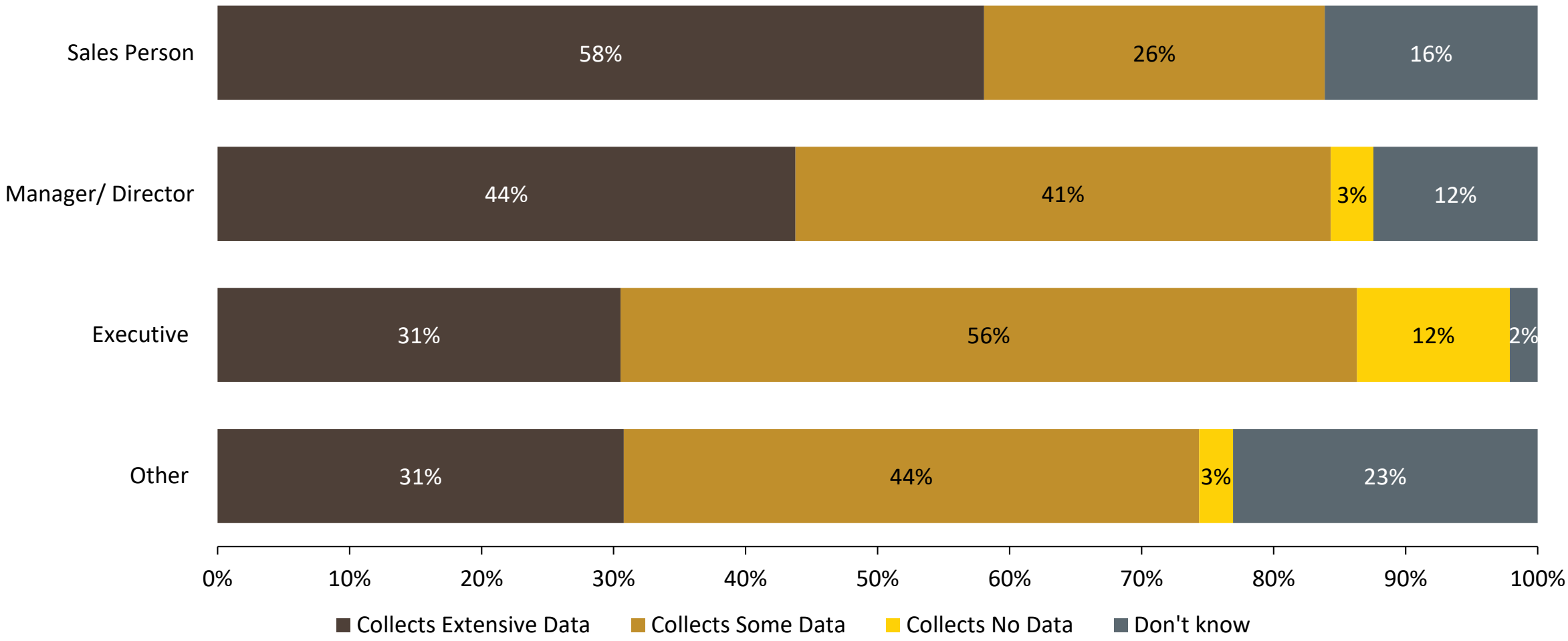
The Extent Data is Collected by Role - Services



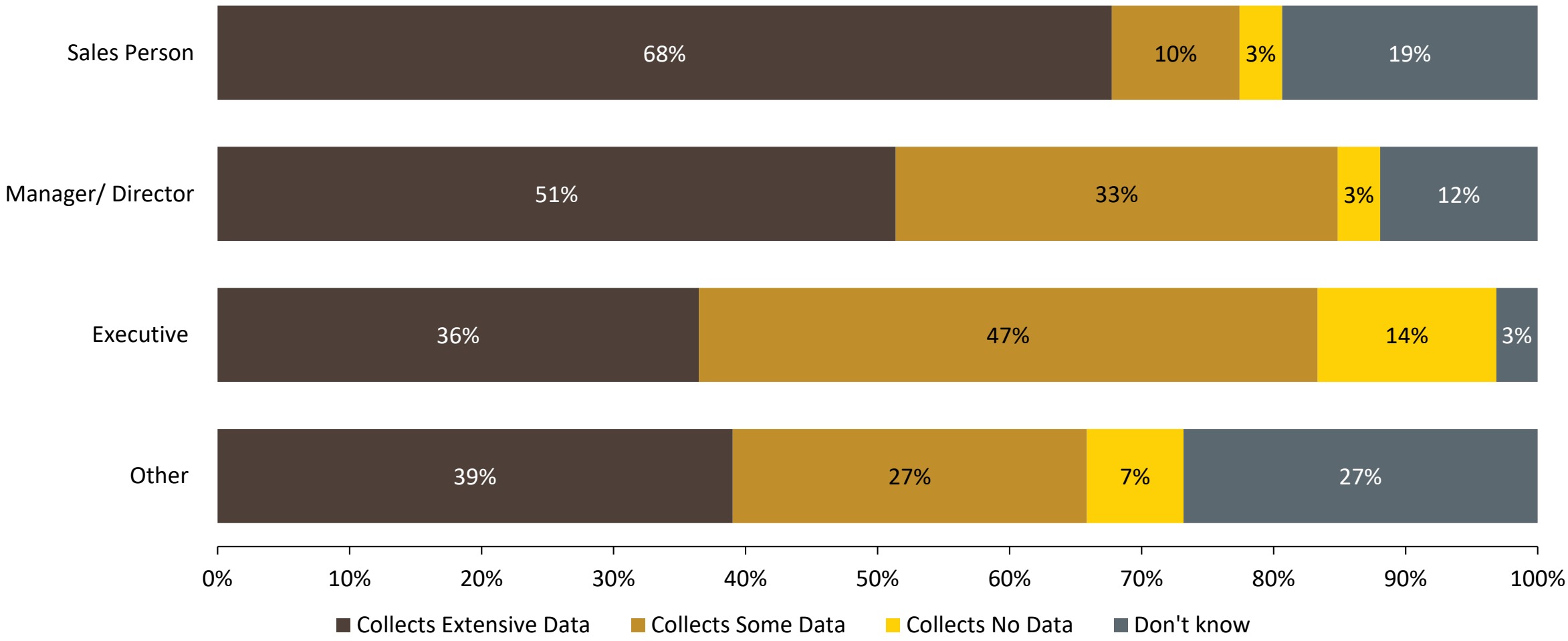
The Extent Data is Collected by Role - HR Management



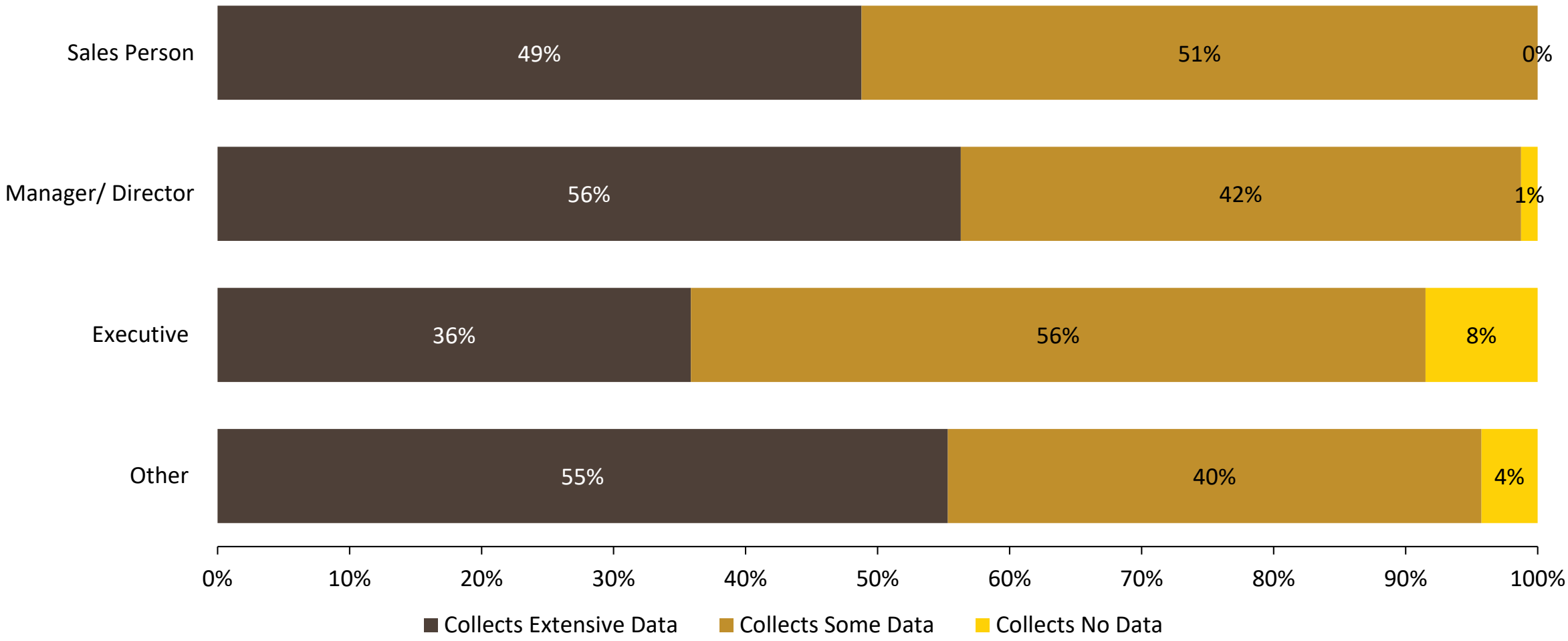
The Extent Data is Collected by Role - Procurement



The Extent Data is Collected by Role - Regulatory Compliance



The Extent Data is Collected by Role - Overall

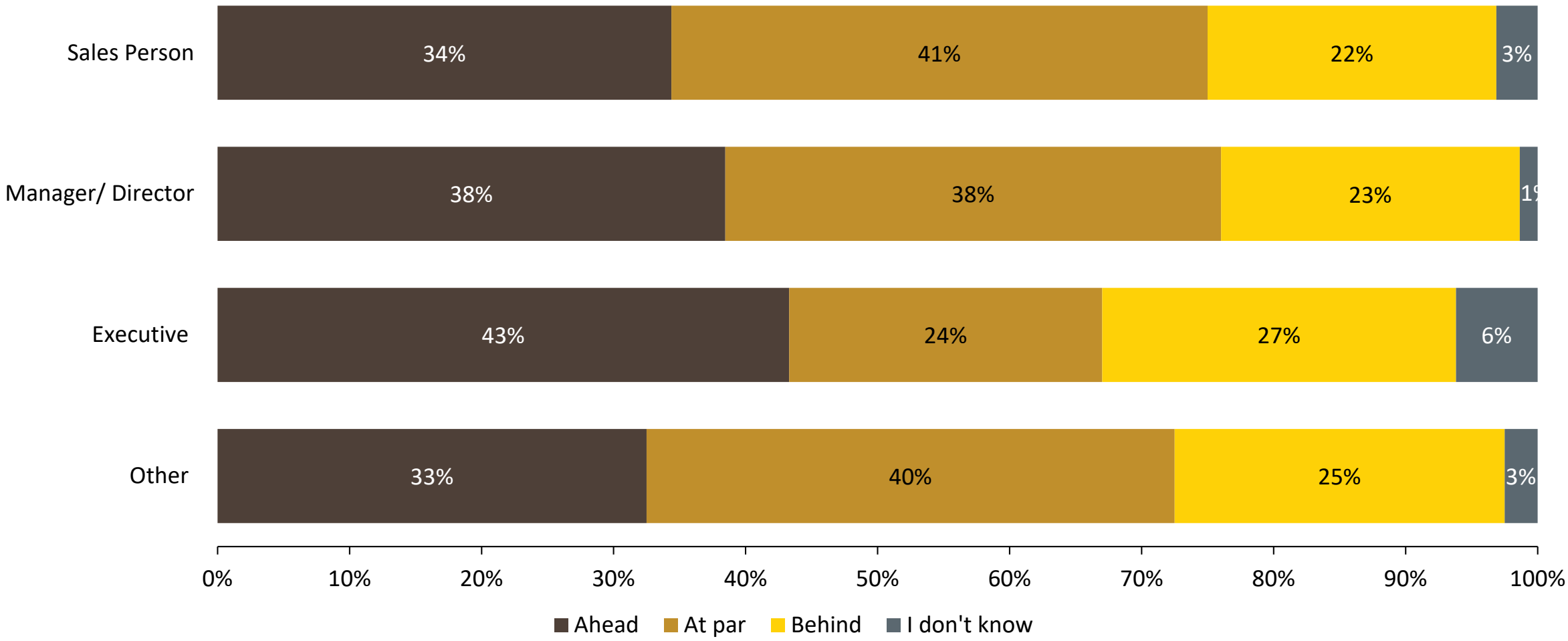


Data Collection and Analytics Compared to Competitors – by Role

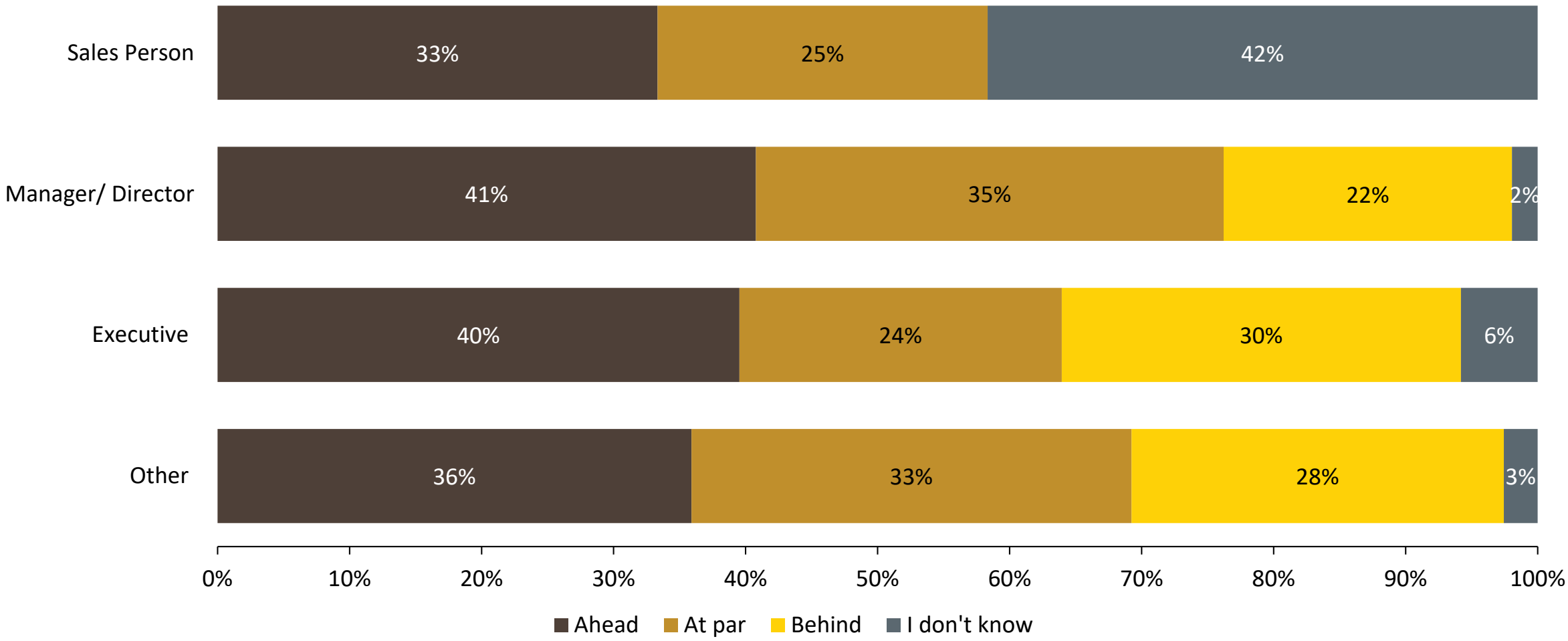
Compared to your competitors, how do you feel about **data collection** in your organization?

- ○ Far ahead
- ○ Somewhat ahead
- ○ At par
- ○ Somewhat behind
- ○ Far behind
- ○ I don't know

Data Collection Compared to Competitors by Role



Data Analytics Compared to Competitors by Role

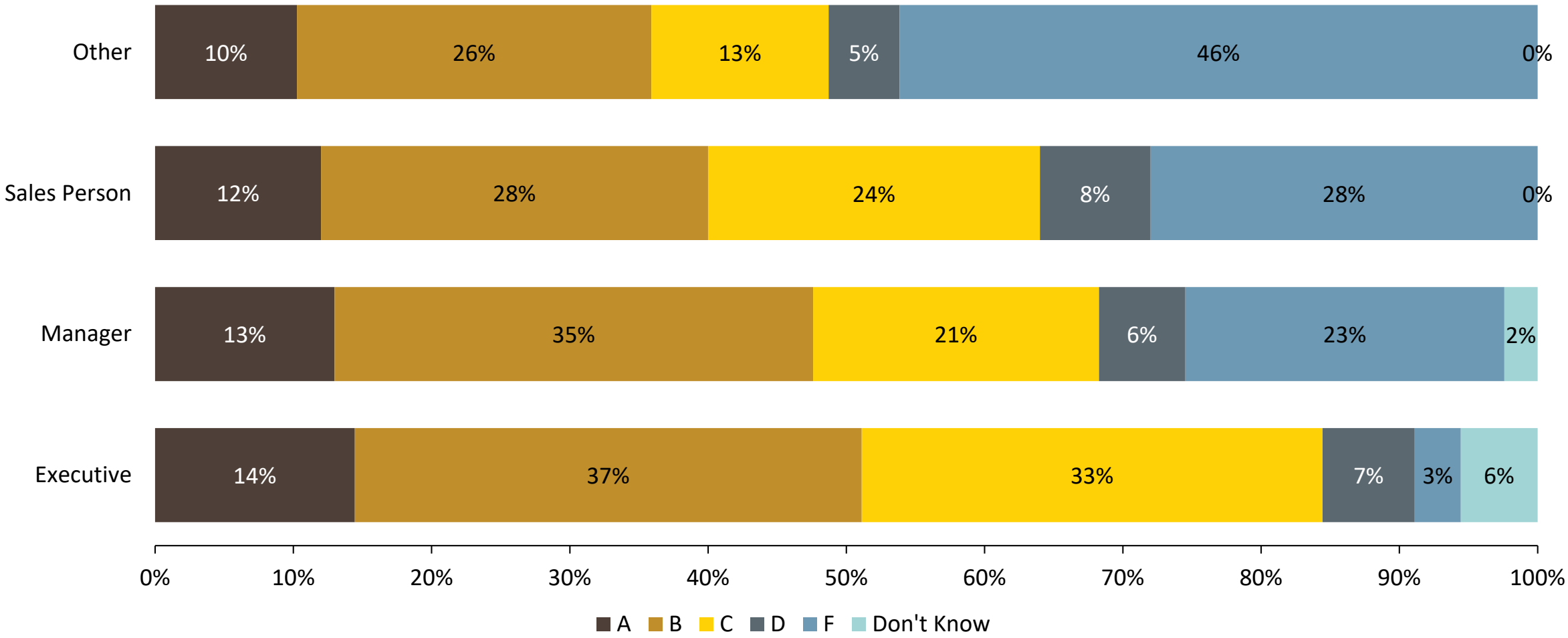


Organization Grade on Data Analytics by Role and Business Function

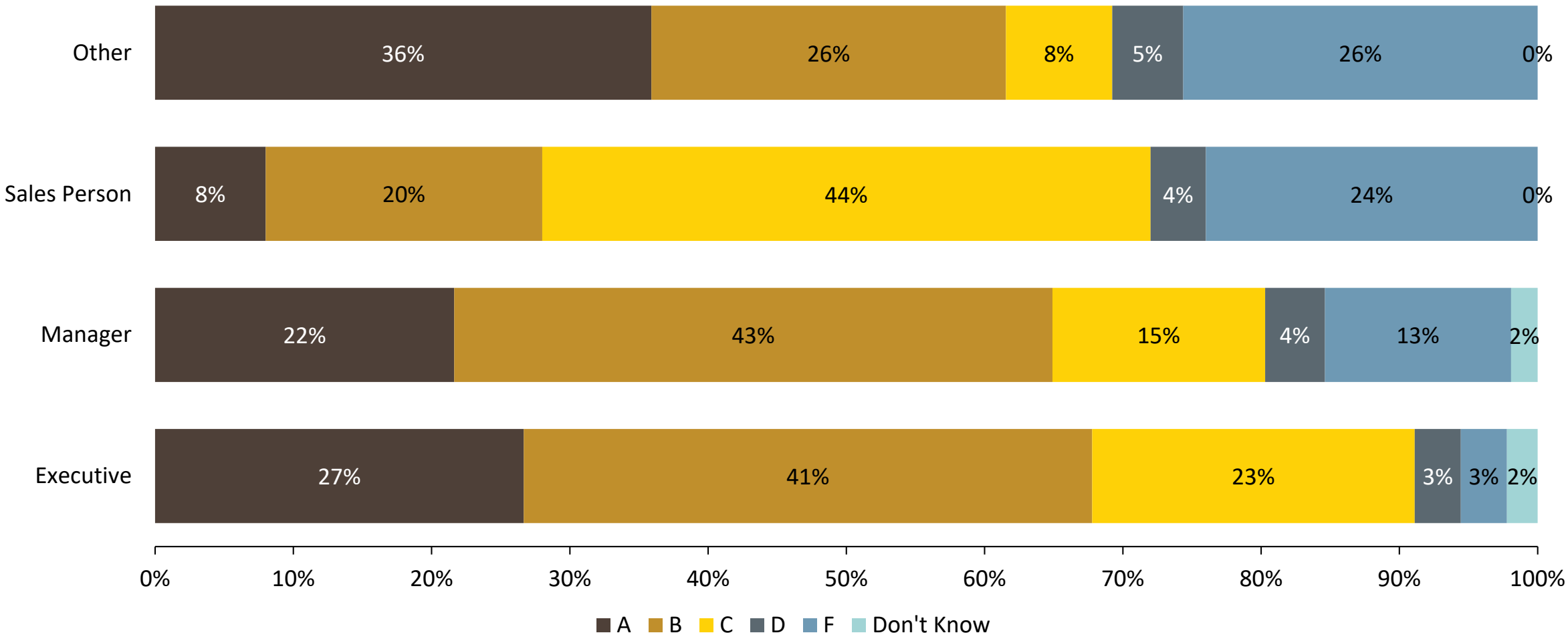
If you were to give your organization a "grade" based on using **data analytics** on decision making, what grade would you give for the following business functions?

	A	B	C	D	F	Don't Know
Inbound Logistics (*e.g. ordering/receiving, inventory replenishment*)	○	○	○	○	○	○
Operations (*e.g. production volumes, process details, quality control, efficiency measure*)	○	○	○	○	○	○
Outbound Logistics (*e.g. ordering/delivery*)	○	○	○	○	○	○
Marketing (*e.g. customer data/CRM, product development, product life-cycle, segmentation*)	○	○	○	○	○	○
Sales (*e.g. customer orders, referrals, transactional data*)	○	○	○	○	○	○
Service (*e.g. application, repair, tech support*)	○	○	○	○	○	○
HR Management (*e.g. goal setting and monitoring, compensation, payroll, benefits*)	○	○	○	○	○	○
Procurement (*e.g. input costs, SRM*)	○	○	○	○	○	○
Regulatory Compliance (*e.g. labor, environmental standard*)	○	○	○	○	○	○
Overall	○	○	○	○	○	○

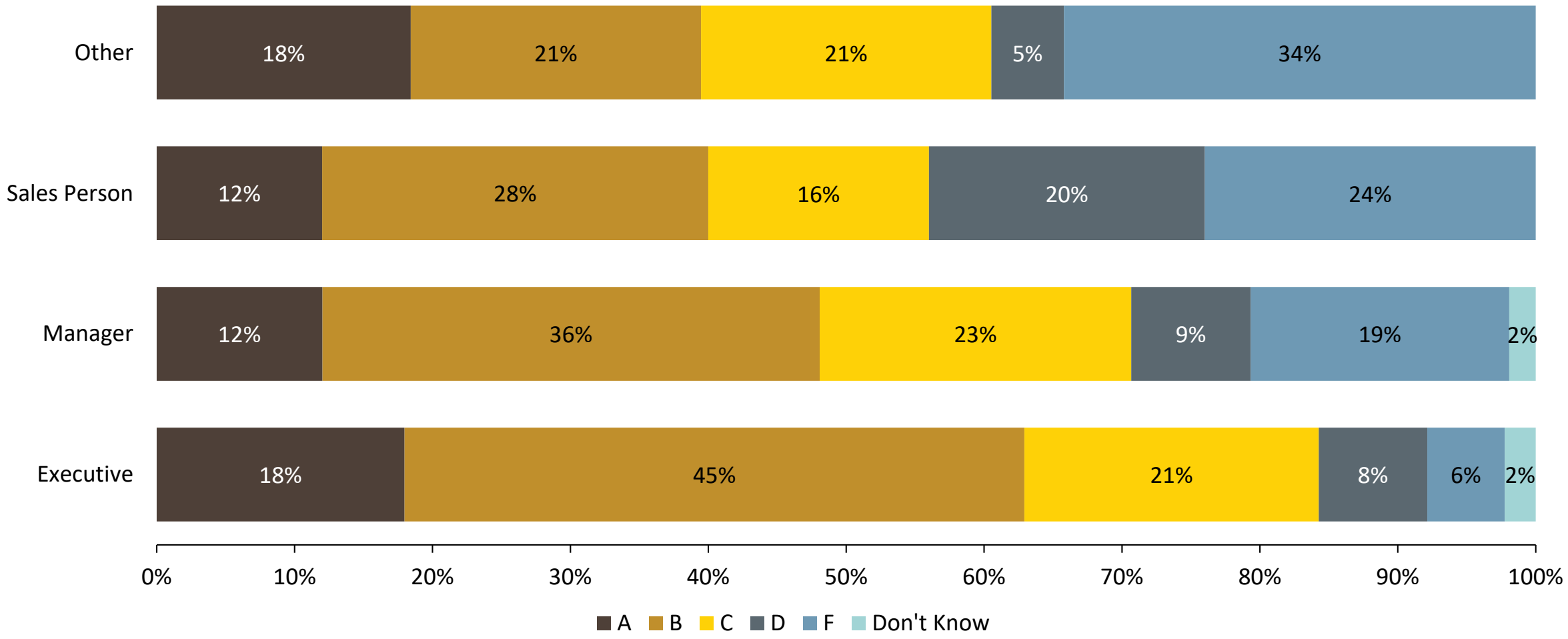
Organization Grade on Data Analytics by Role – Inbound Logistics



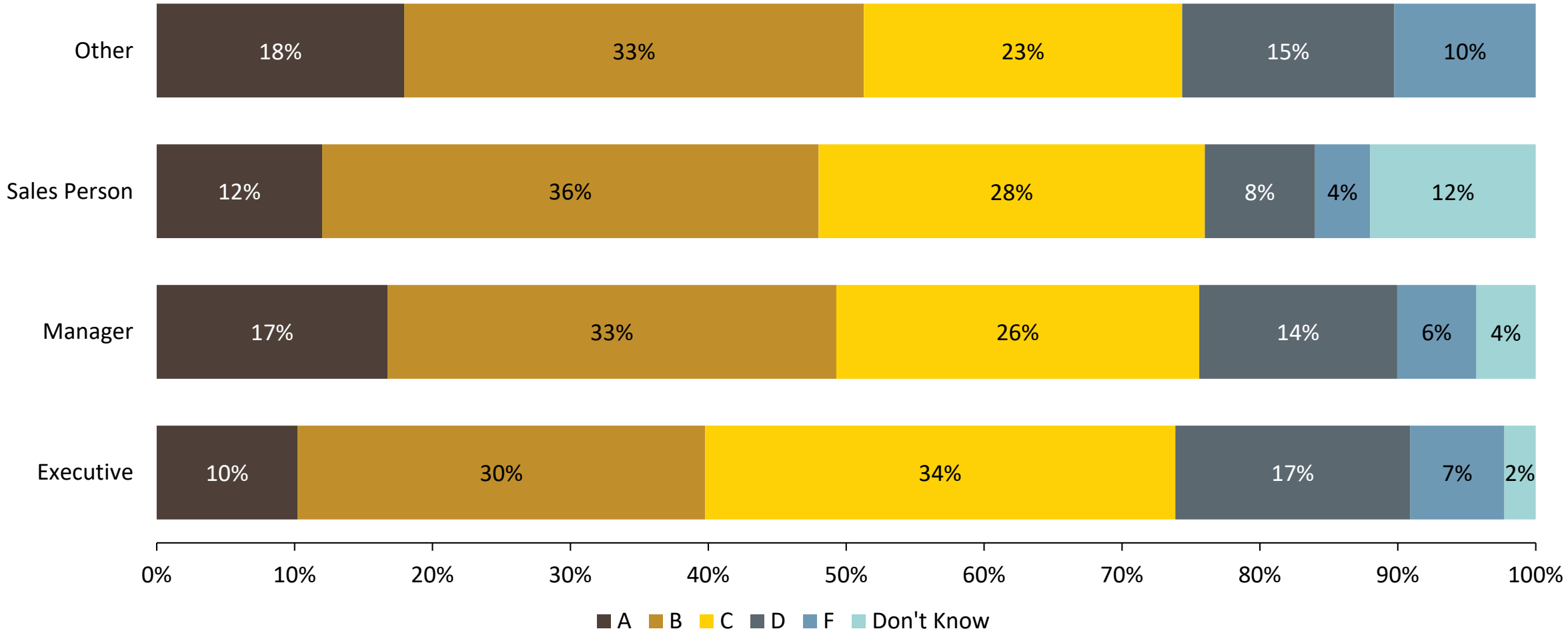
Organization Grade on Data Analytics by Role - Operations



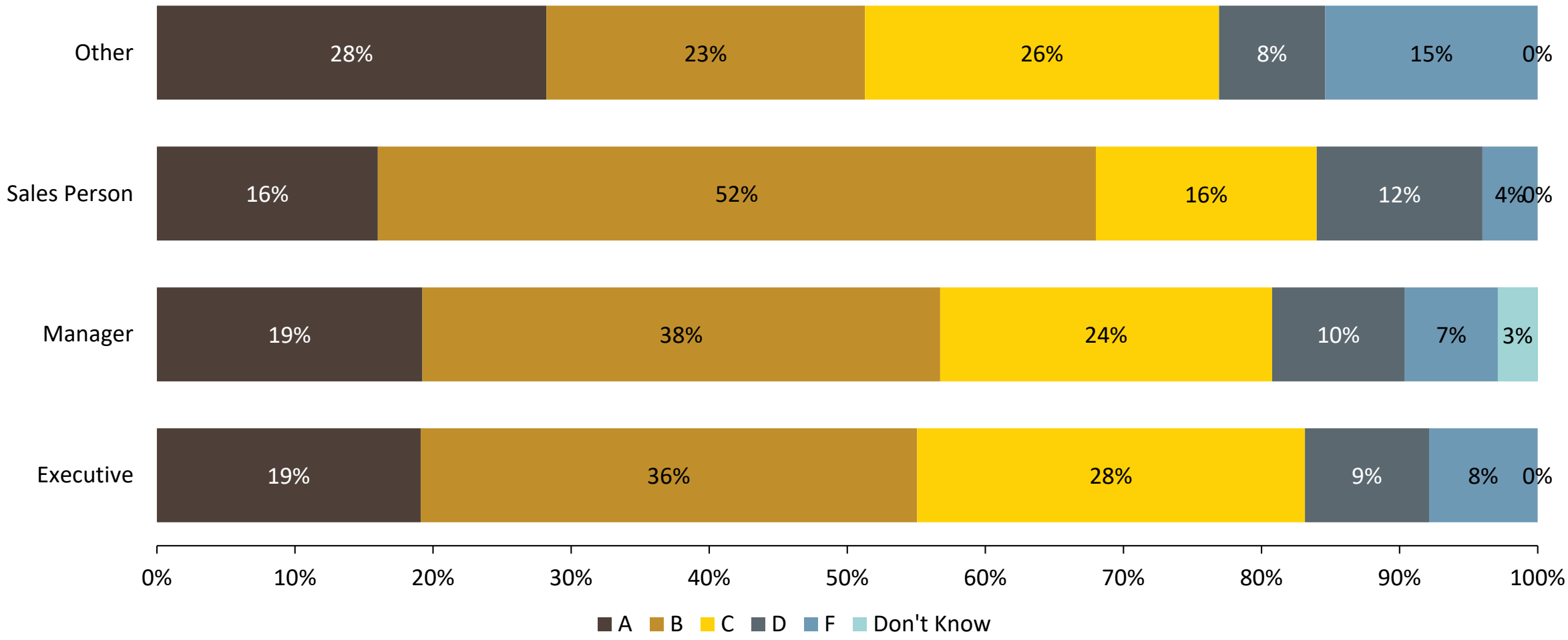
Organization Grade on Data Analytics by Role – Outbound Logistics



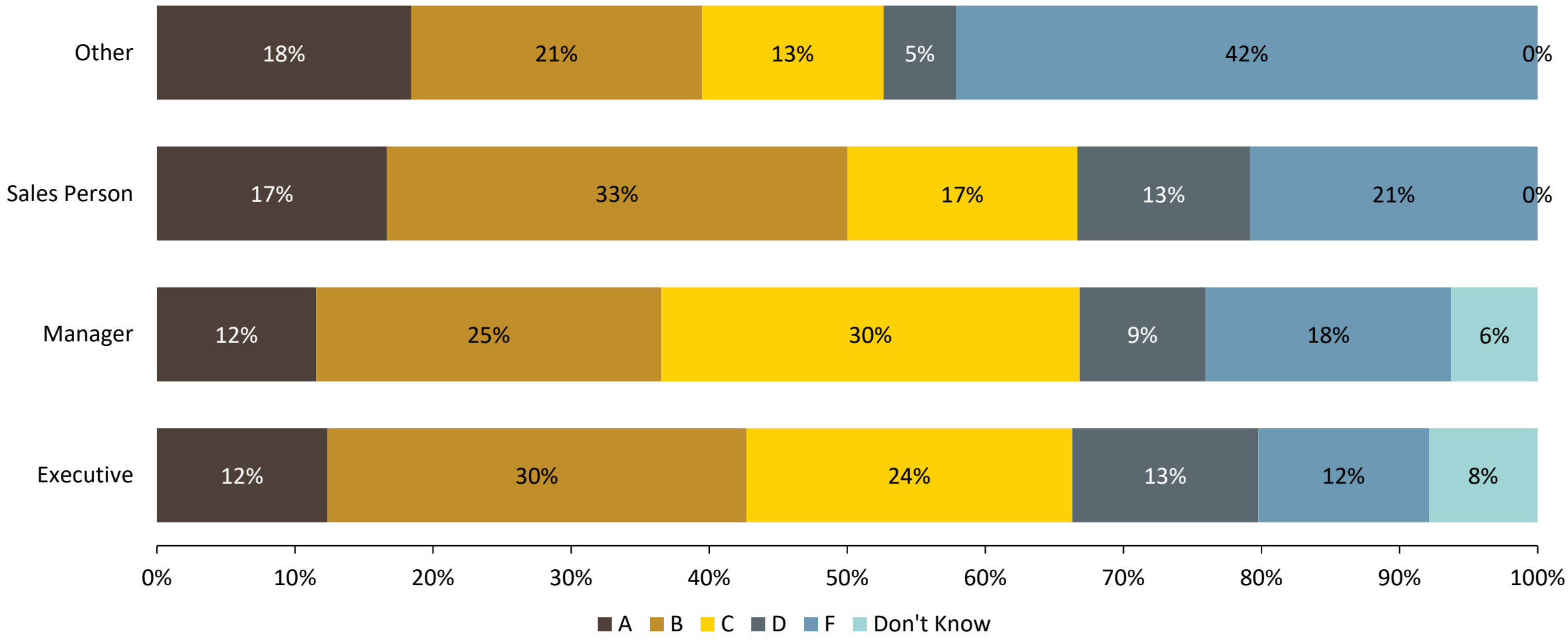
Organization Grade on Data Analytics by Role - Marketing



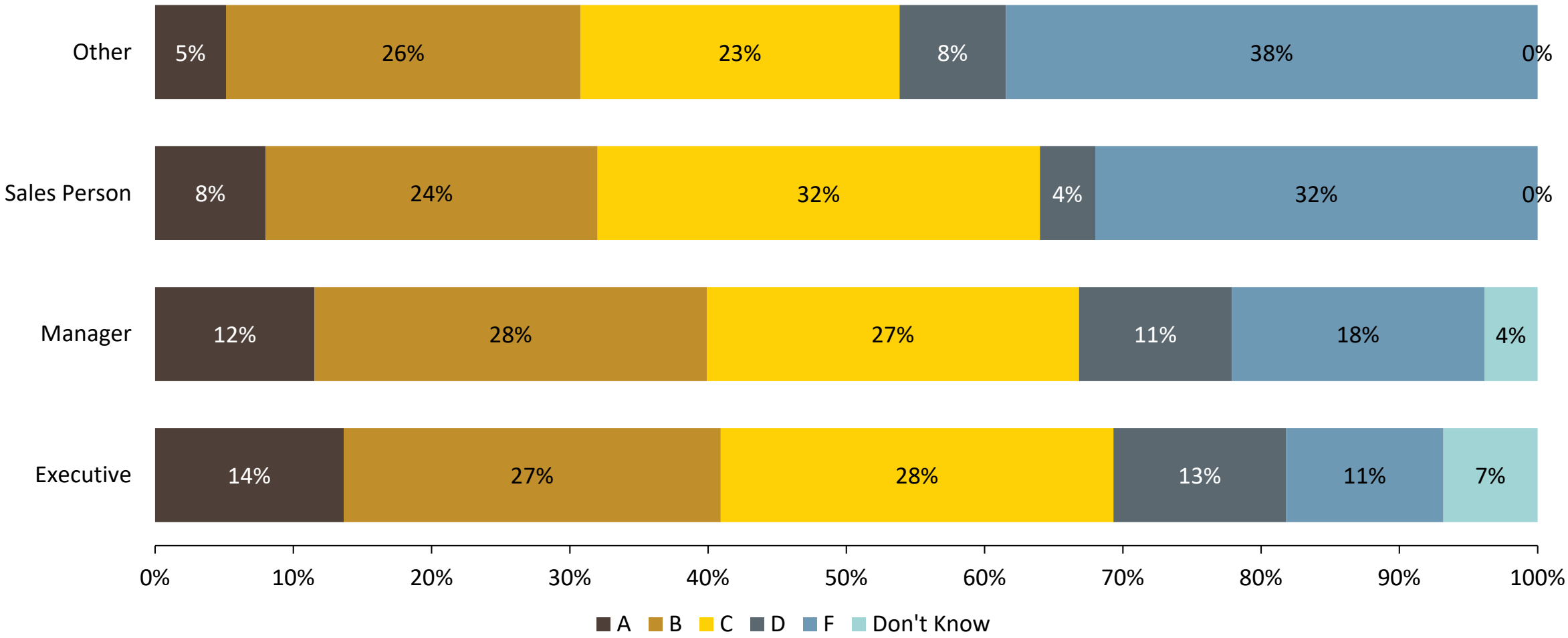
Organization Grade on Data Analytics by Role - Sales



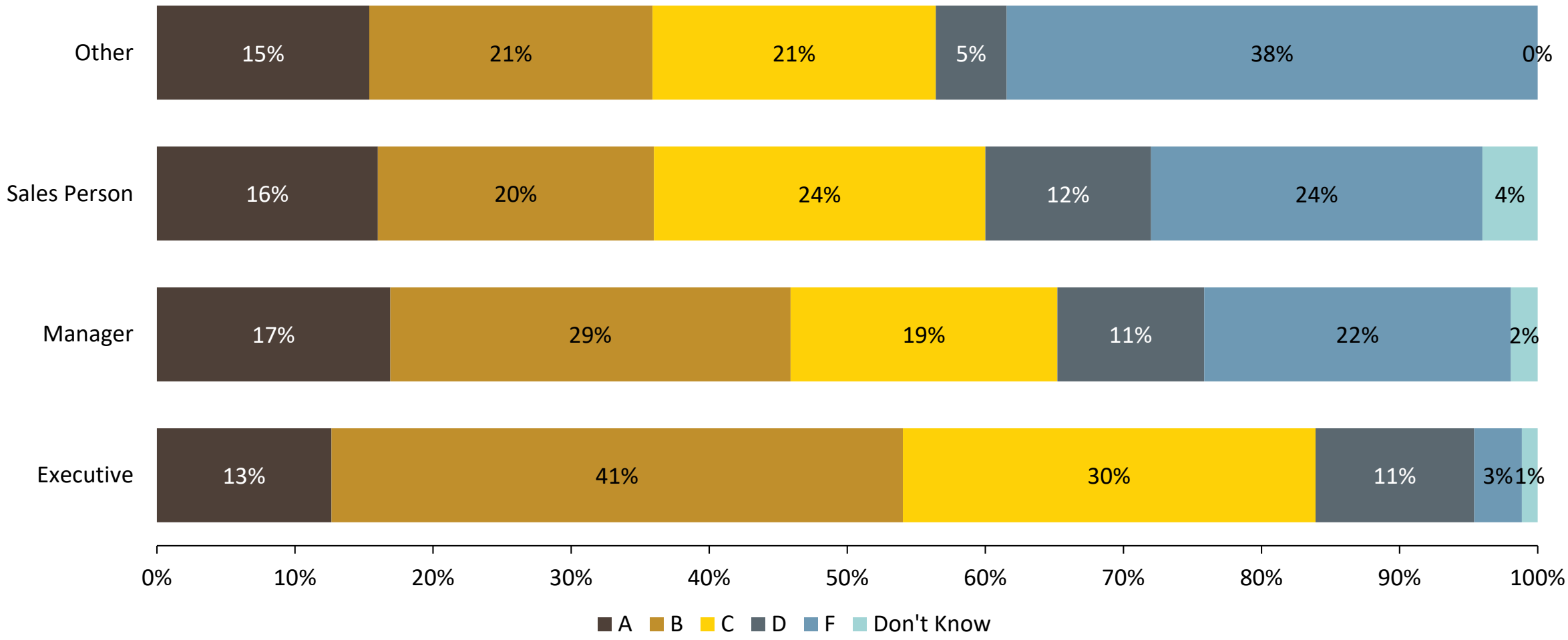
Organization Grade on Data Analytics by Role - Service



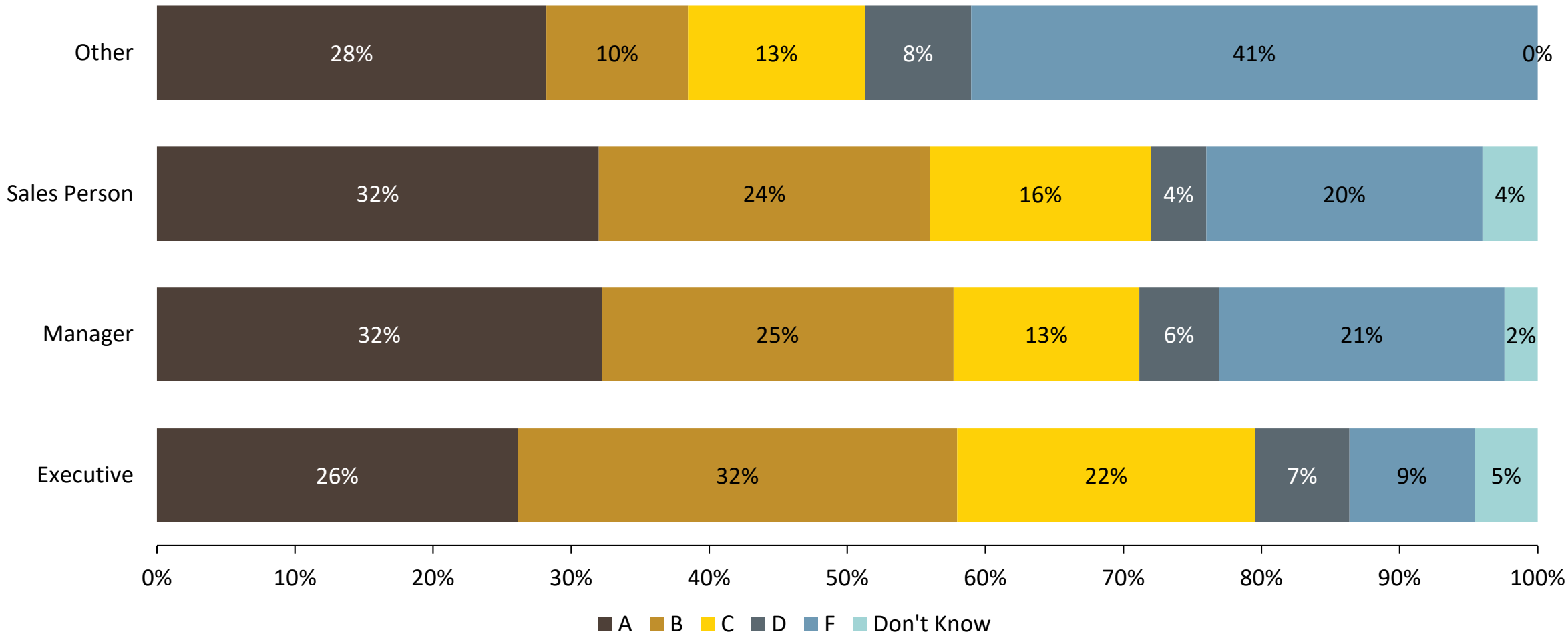
Organization Grade on Data Analytics by Role – HR Management



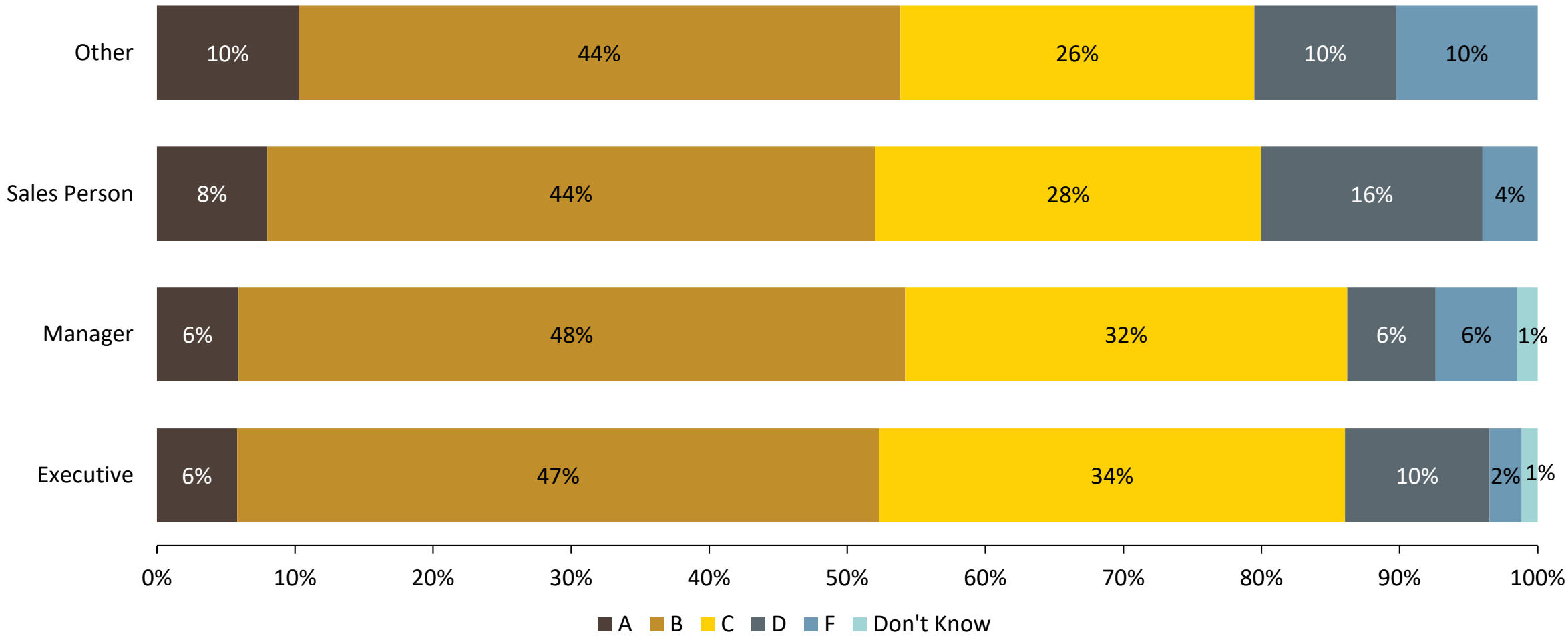
Organization Grade on Data Analytics by Role - Procurement



Organization Grade on Data Analytics by Role - Regulatory Compliance



Organization Grade on Data Analytics by Role – Overall



Most Important Benefits of Data Analytics by Role

What do you see as the most important benefit of data analytics? Please rank the following statements from 1 to 6, where 1 is ***"the most important benefit"*** and 6 is ***"the least important benefit"***. *(Drag each term and drop it to desired rank)*

Improved decision-making

Improved customer satisfaction

Improved compliance with data protection and privacy regulations

Improved operational efficiency

Driving company profitability

Improved market awareness

Most Important Benefits of Data Analytics by Role

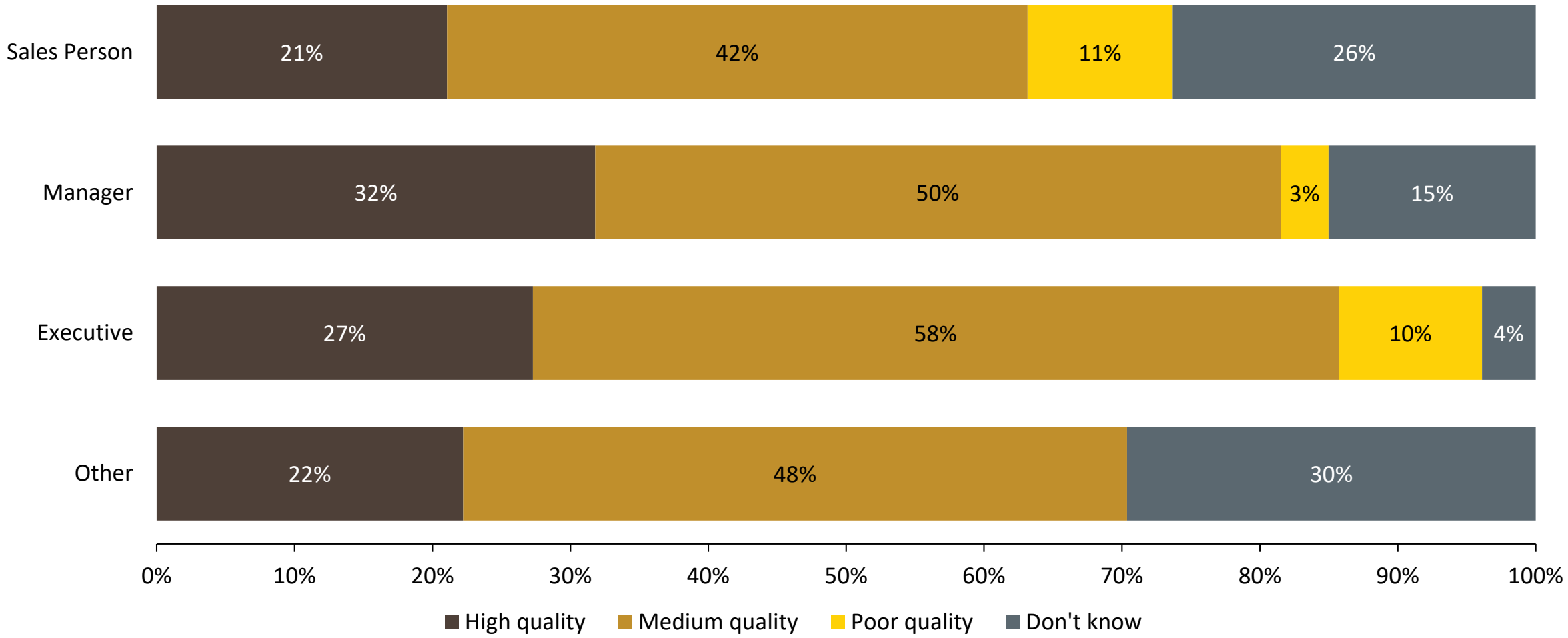
Data Quality by Role

How would you rate your organization on the **quality** of collected data in the following business functions?

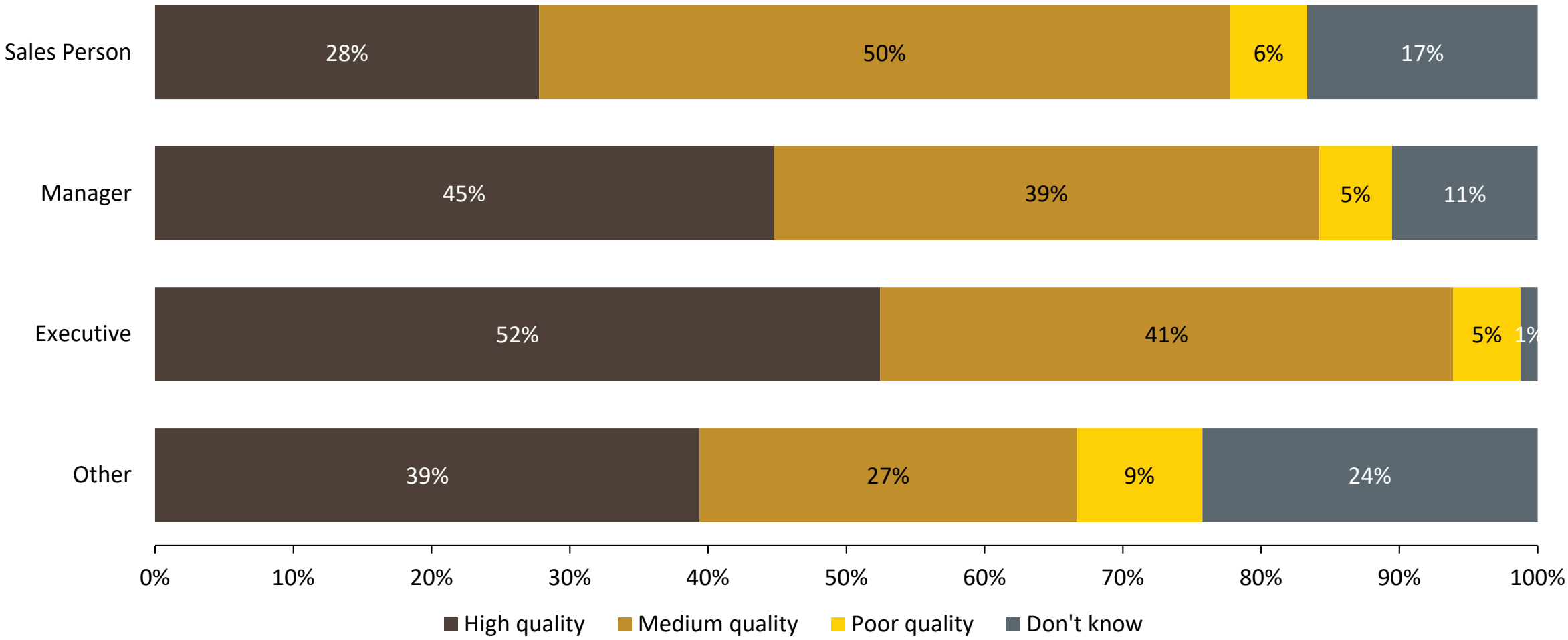
*(**Quality** refers to completeness, validity, consistency, timeliness and accuracy that makes data appropriate for a specific use.)*

	Poor quality	Medium quality	High quality	Don't know
Inbound Logistics (*e.g. ordering/receiving, inventory replenishment*)	○	○	○	○
Operations (*e.g. production volumes, process details, quality control, efficiency measure*)	○	○	○	○
Outbound Logistics (*e.g. ordering/delivery*)	○	○	○	○
Marketing (*e.g. customer data/CRM, product development, product life-cycle, segmentation*)	○	○	○	○
Sales (*e.g. customer orders, referrals, transactional data*)	○	○	○	○
Service (*e.g. application, repair, tech support*)	○	○	○	○
HR Management (*e.g. goal setting and monitoring, compensation, payroll, benefits*)	○	○	○	○
Procurement (*e.g. input costs, SRM*)	○	○	○	○
Regulatory Compliance (*e.g. labor, environmental standard*)	○	○	○	○

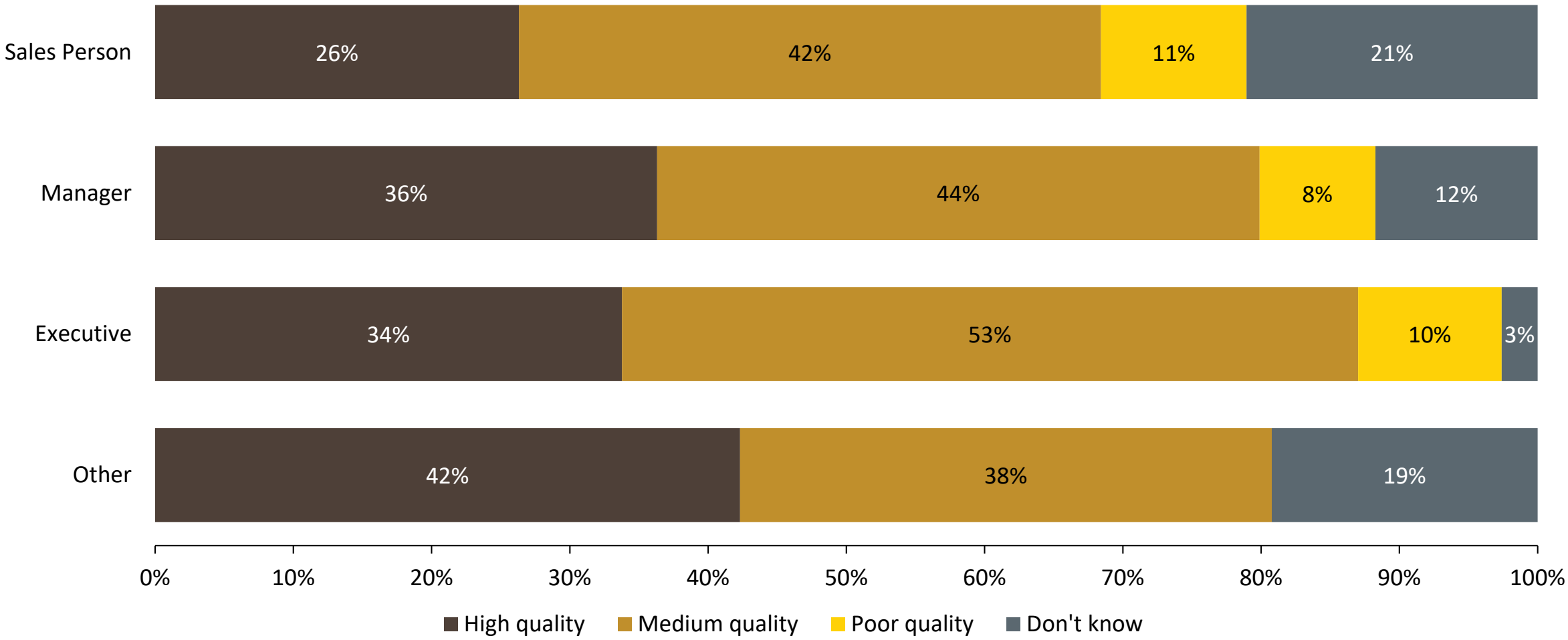
Data Quality by Role - Inbound Logistics



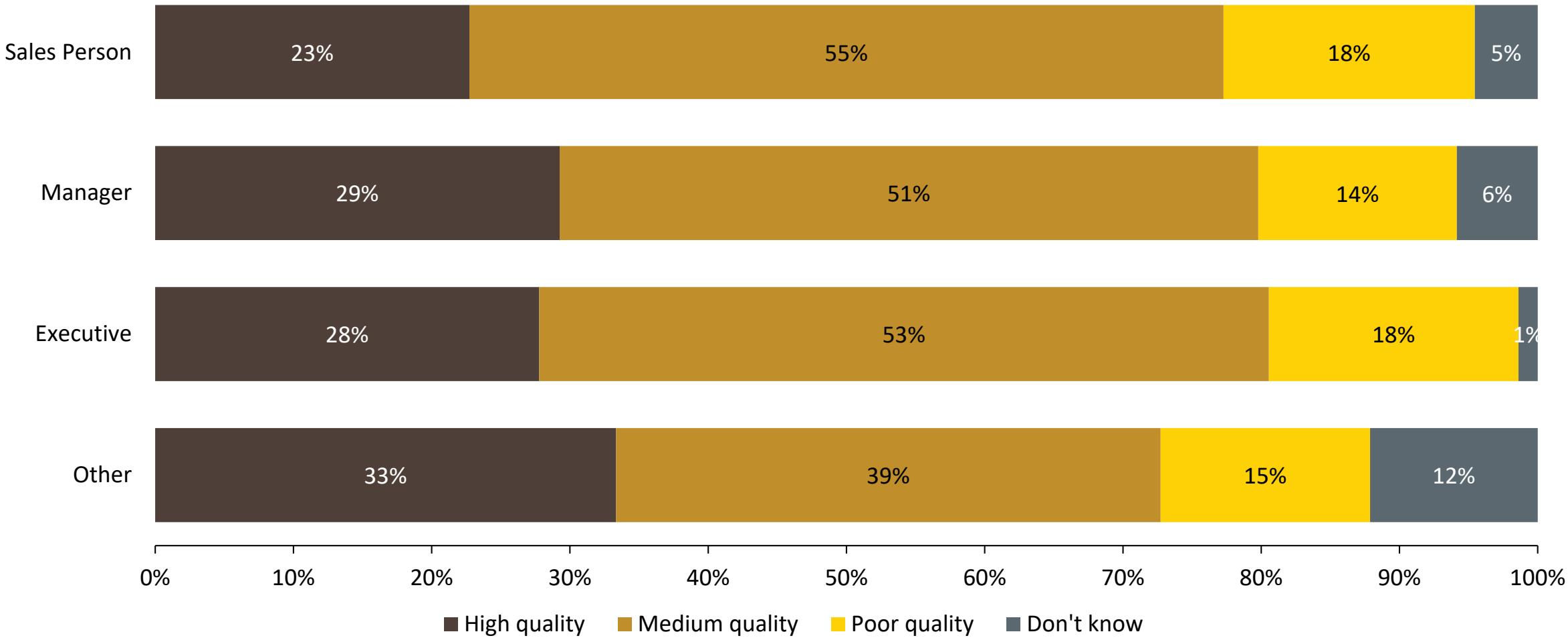
Data Quality by Role - Operations



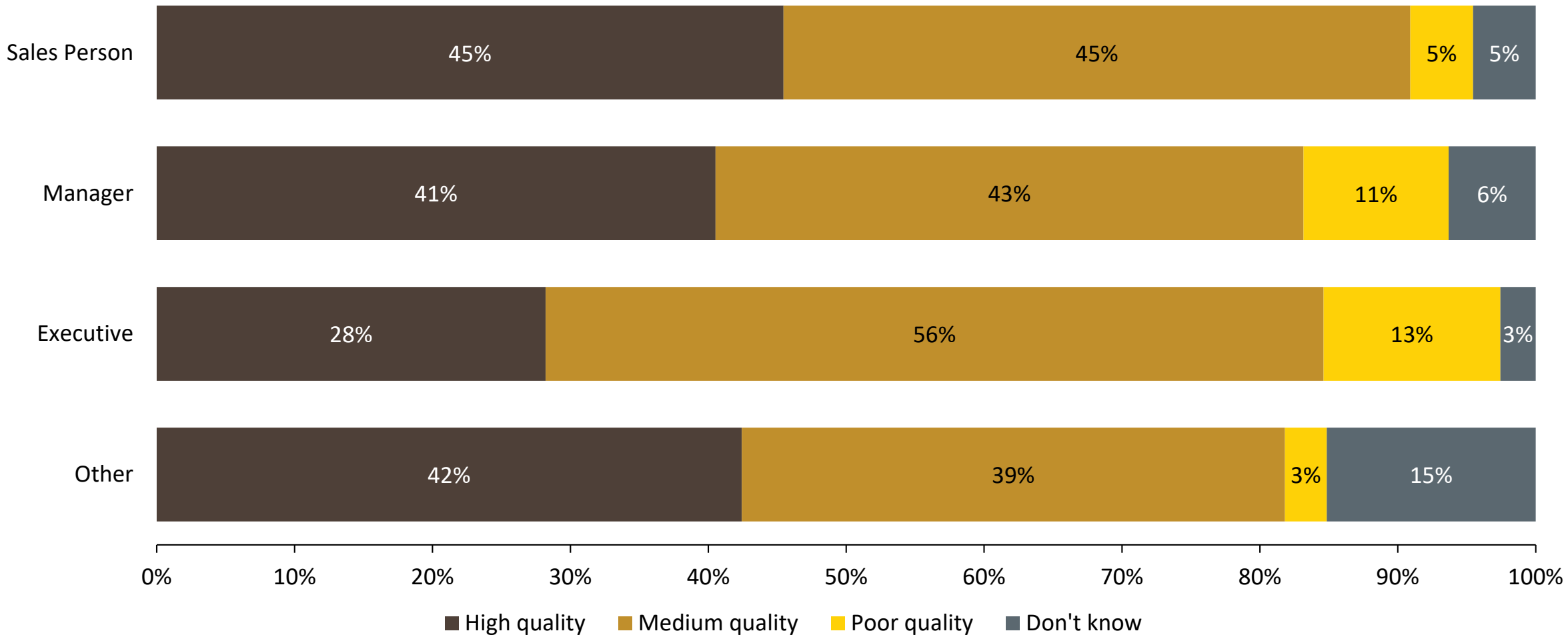
Data Quality by Role – Outbound Logistics



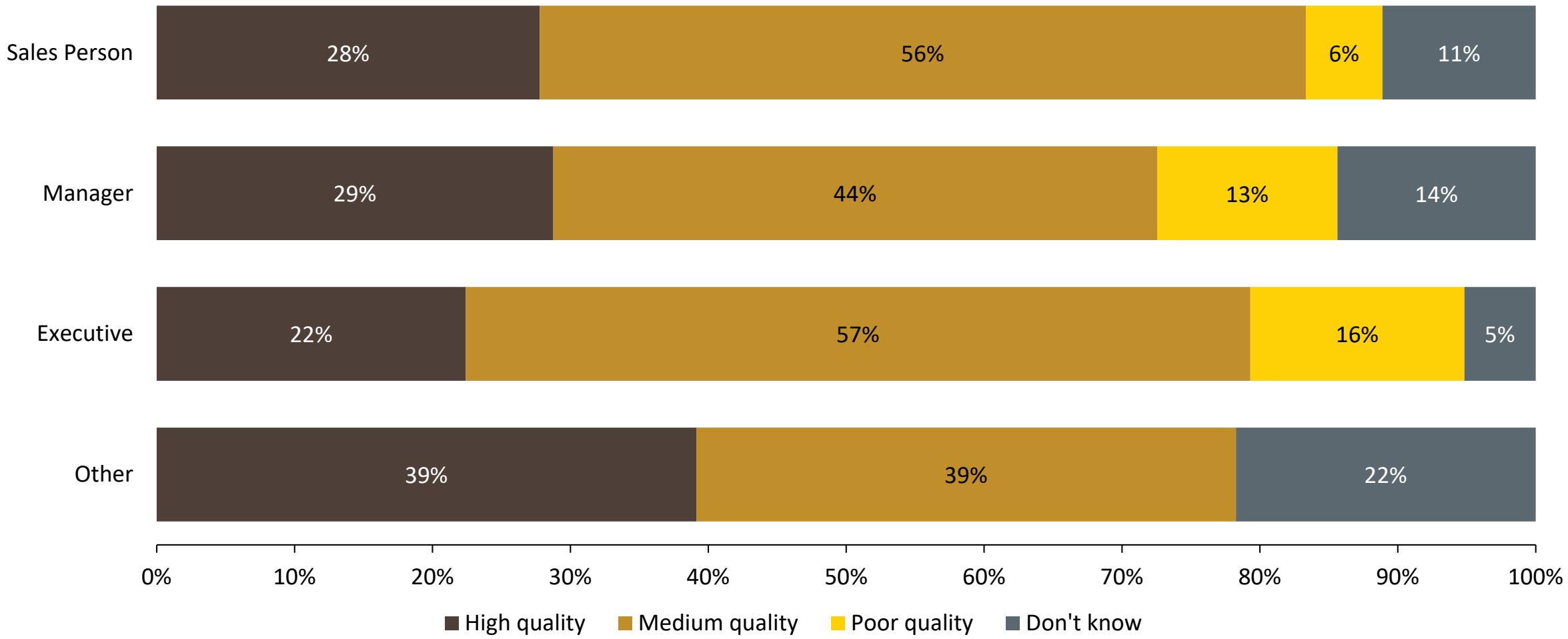
Data Quality by Role – Marketing



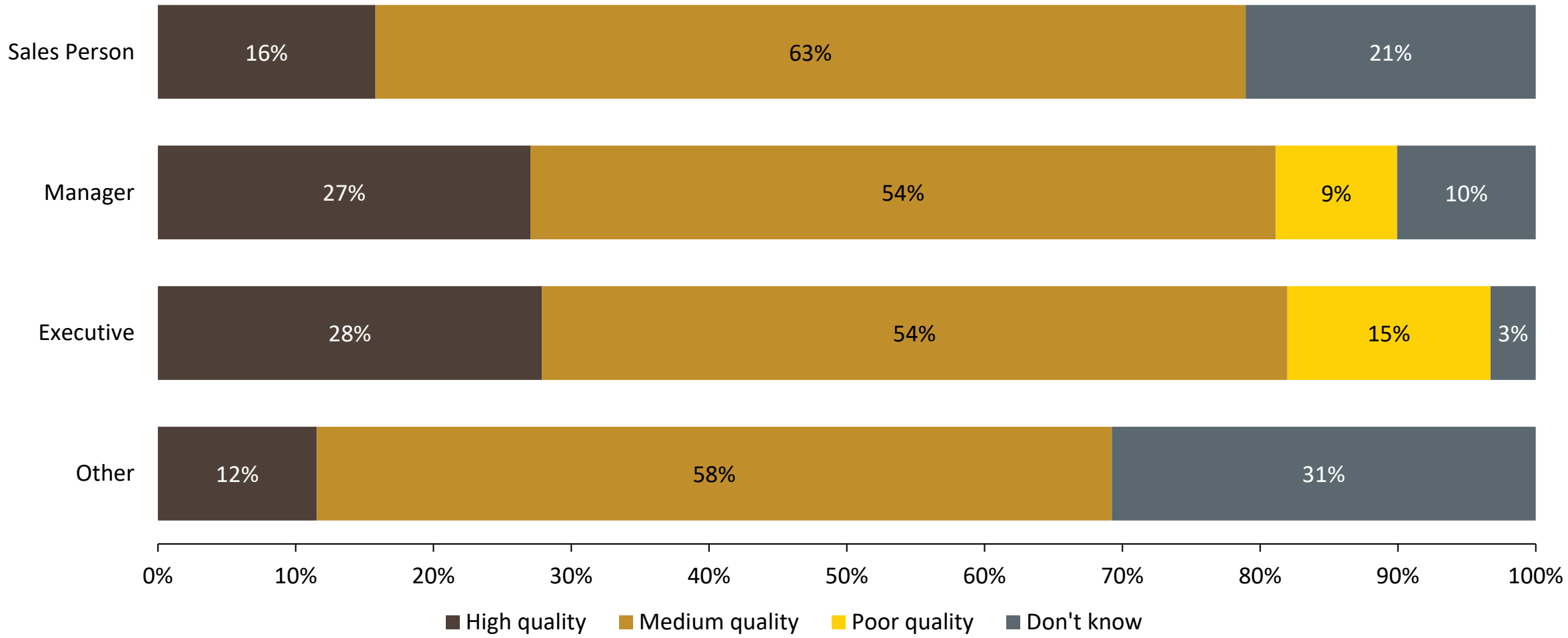
Data Quality by Role – Sales



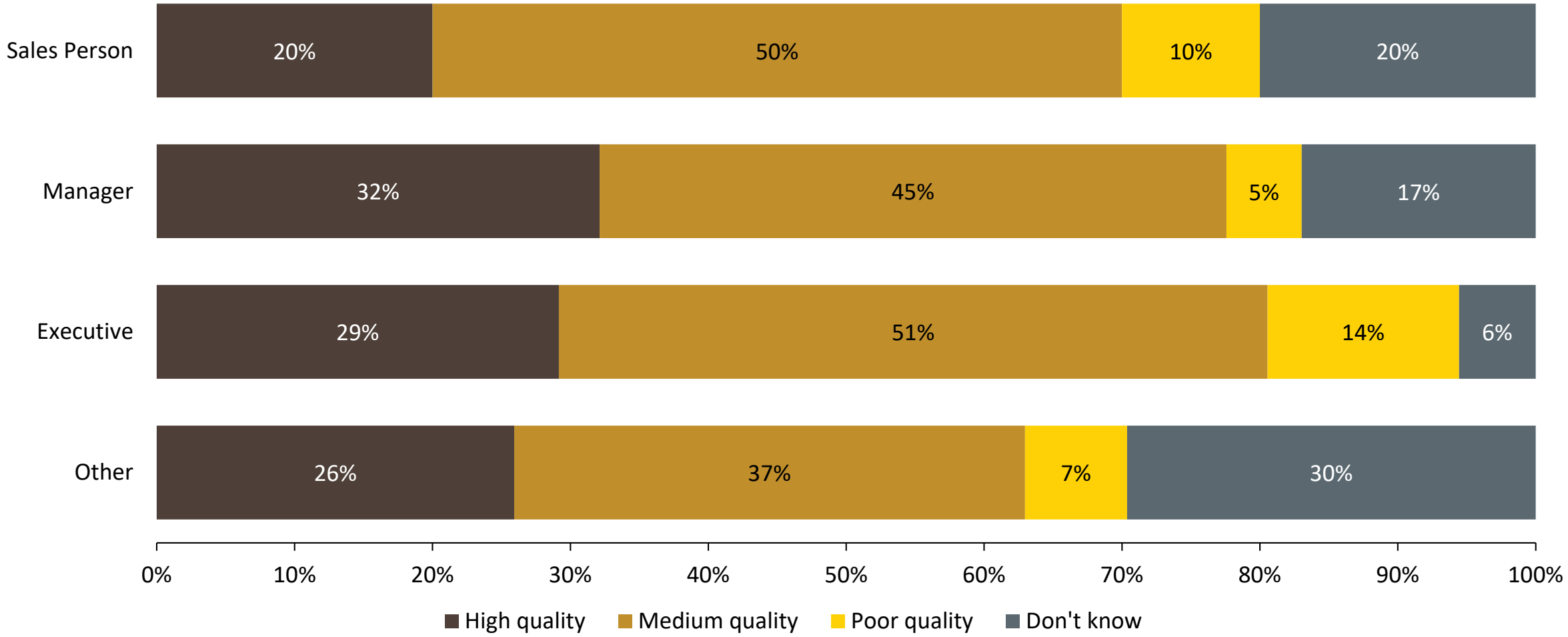
Data Quality by Role - Service



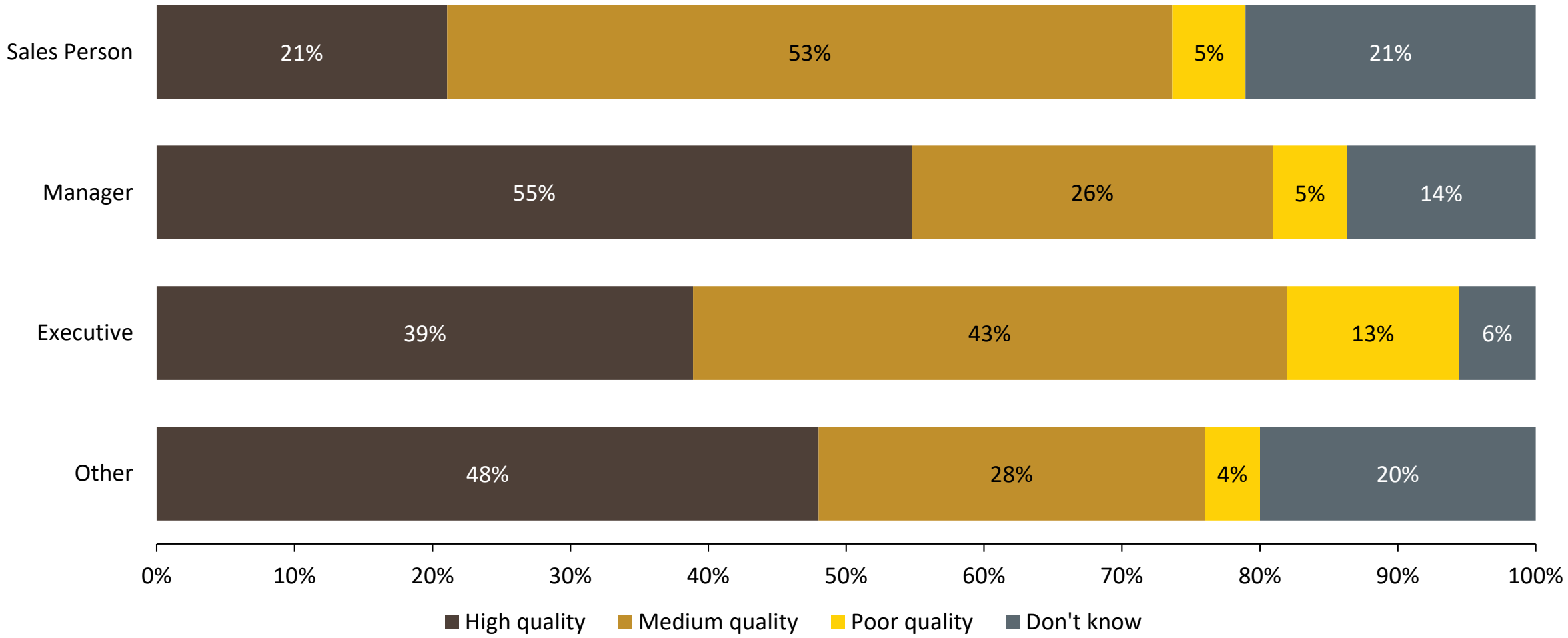
Data Quality by Role – HR Management



Data Quality by Role – Procurement



Data Quality by Role – Regulatory Compliance

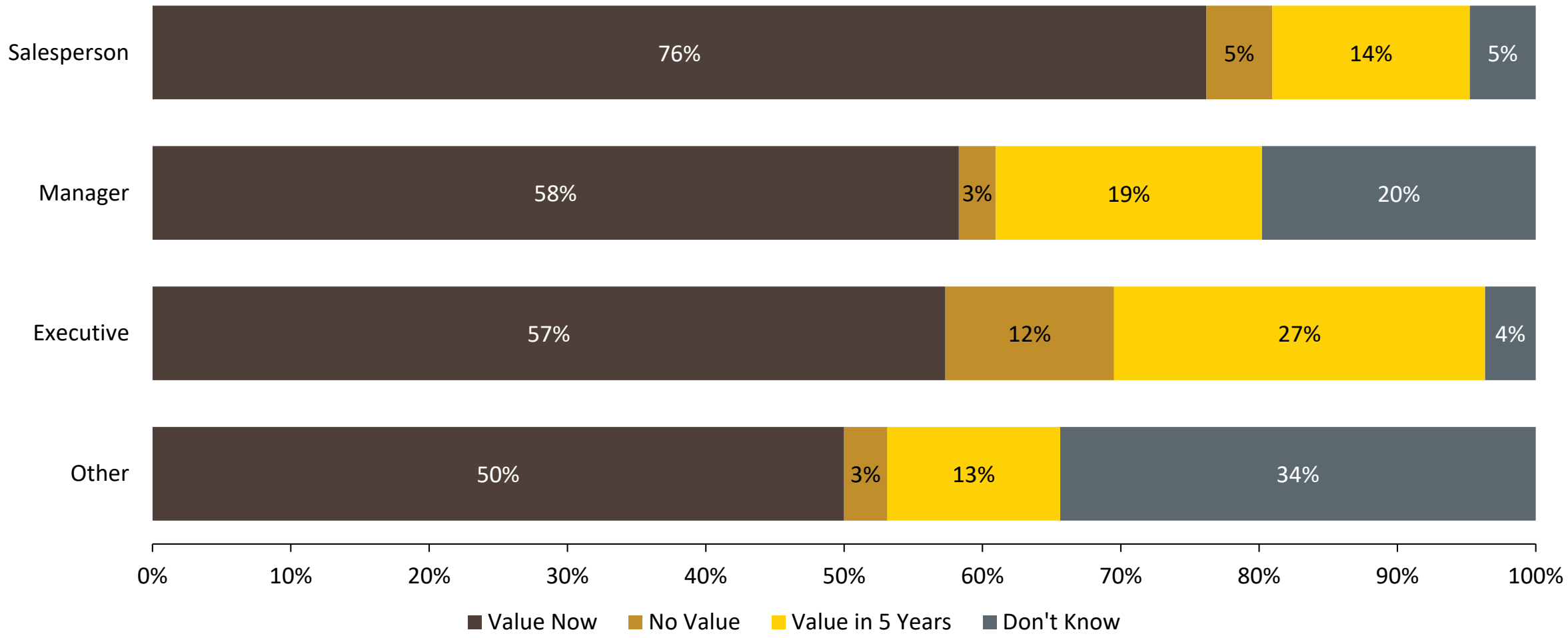


Value Creation by Role

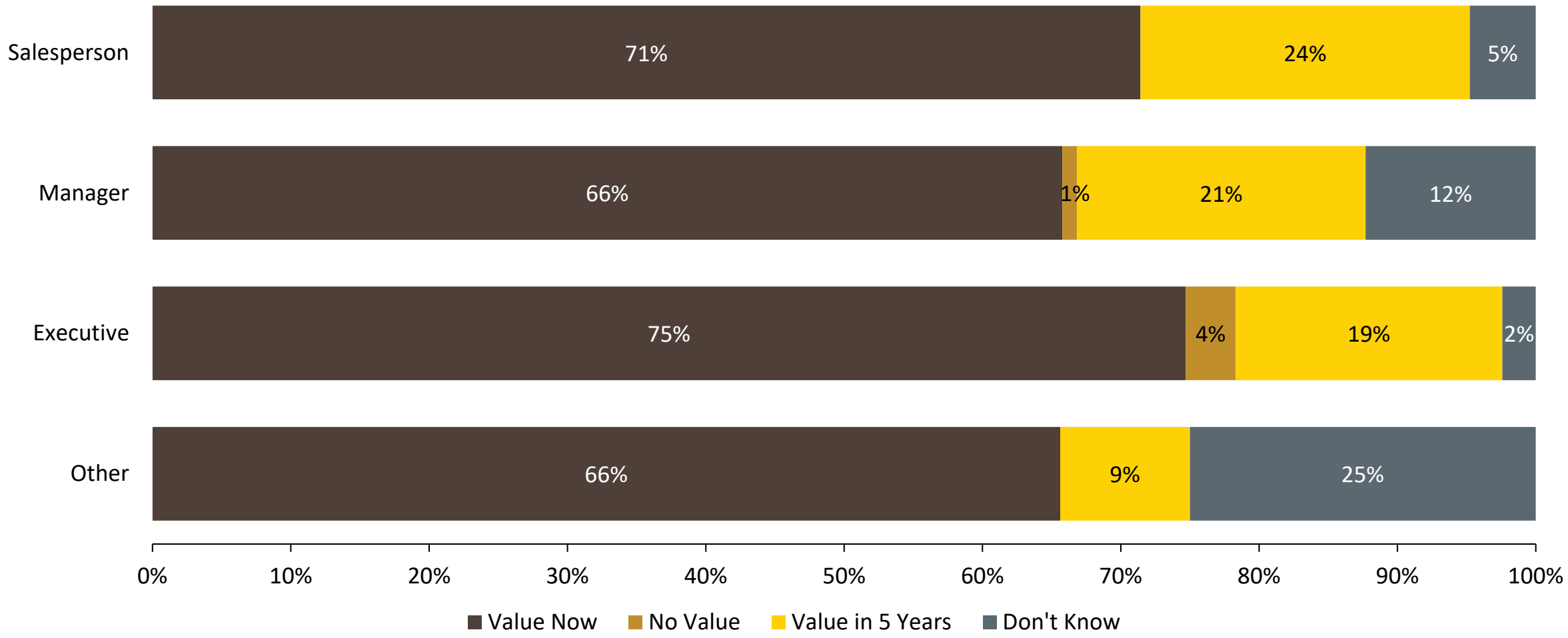
Does **data analytics** create, or is it expected to create, **value** in the following business functions of your organization?

	Creates Value **Now**	Expected to Create Value **in 5 Years**	**Does Not** Create Value in This Way	Don't Know
Inbound Logistics (*e.g. ordering/receiving, inventory replenishment*)	○	○	○	○
Operations (*e.g. production volumes, process details, quality control, efficiency measure*)	○	○	○	○
Outbound Logistics (*e.g. ordering/delivery*)	○	○	○	○
Marketing (*e.g. customer data/CRM, product development, product life-cycle, segmentation*)	○	○	○	○
Sales (*e.g. customer orders, referrals, transactional data*)	○	○	○	○
Service (*e.g. application, repair, tech support*)	○	○	○	○
HR Management (*e.g. goal setting and monitoring, compensation, payroll, benefits*)	○	○	○	○
Procurement (*e.g. input costs, SRM*)	○	○	○	○
Regulatory Compliance (*e.g. labor, environmental standard*)	○	○	○	○

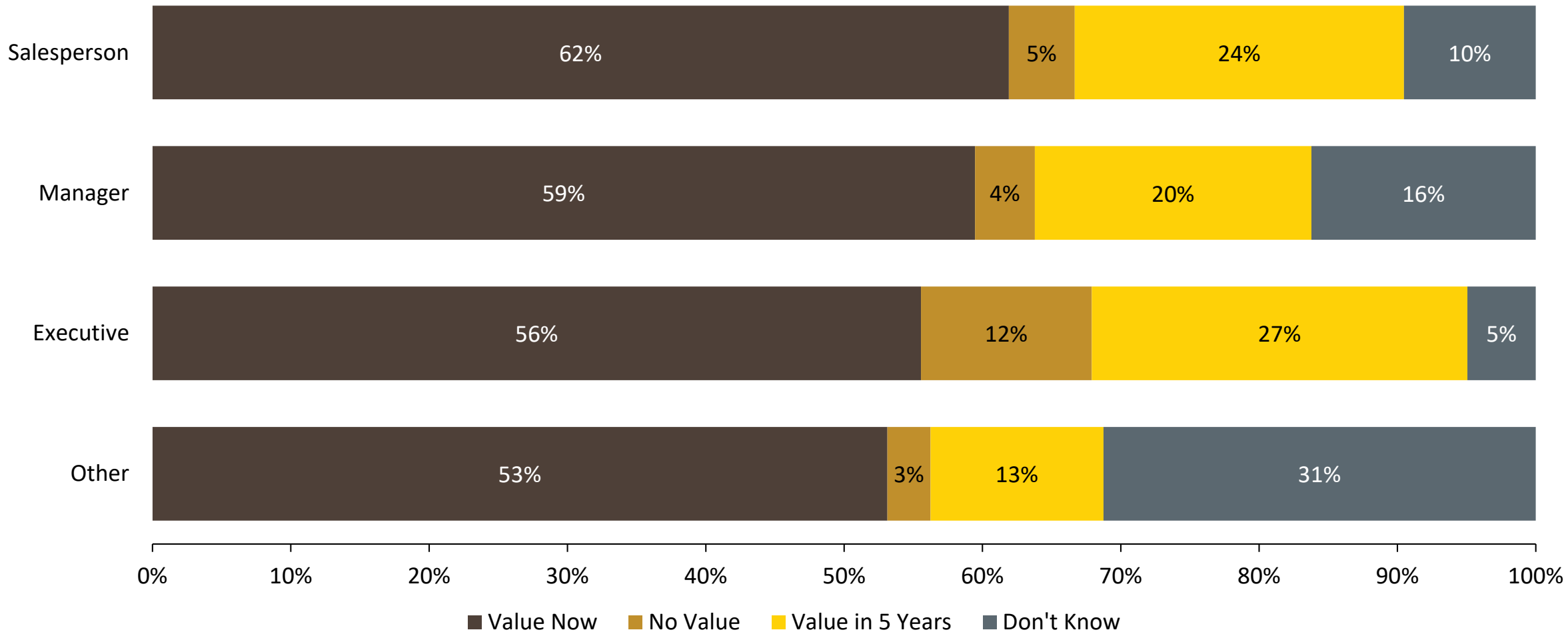
Value Creation by Role – Inbound Logistics



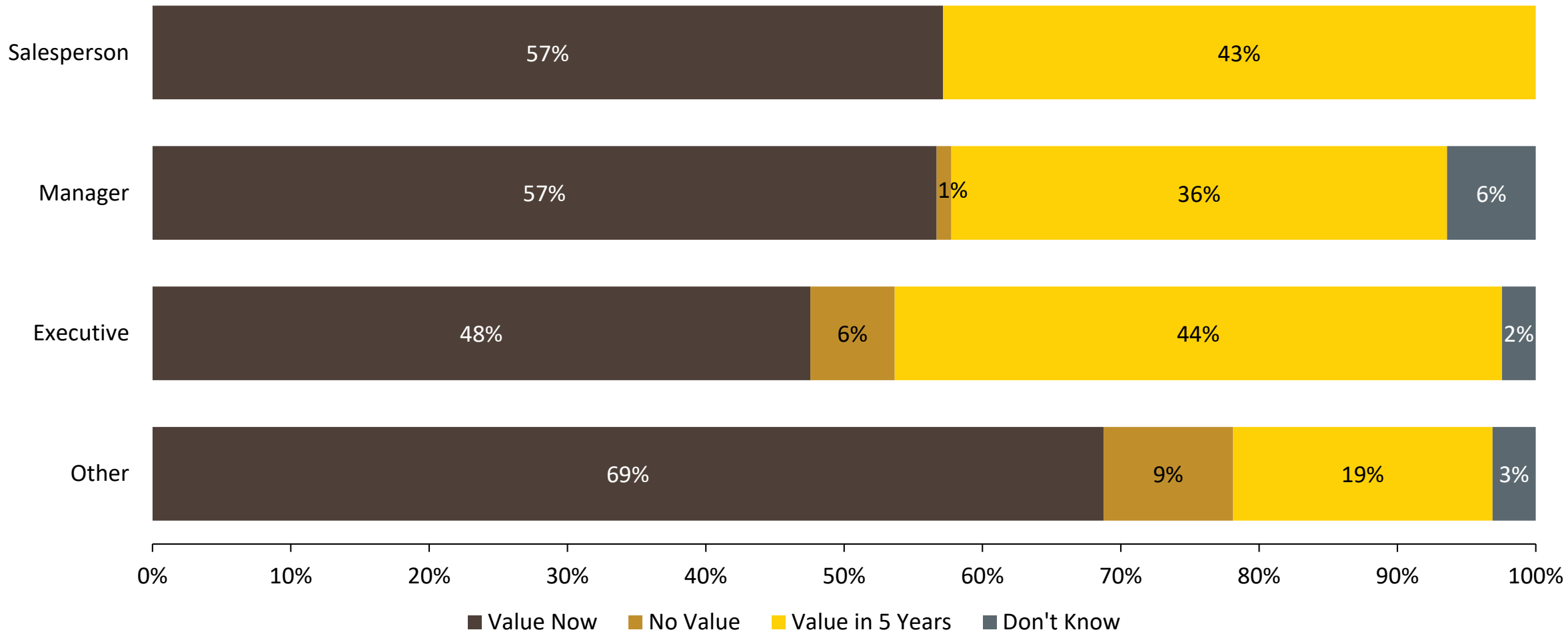
Value Creation by Role – Operations



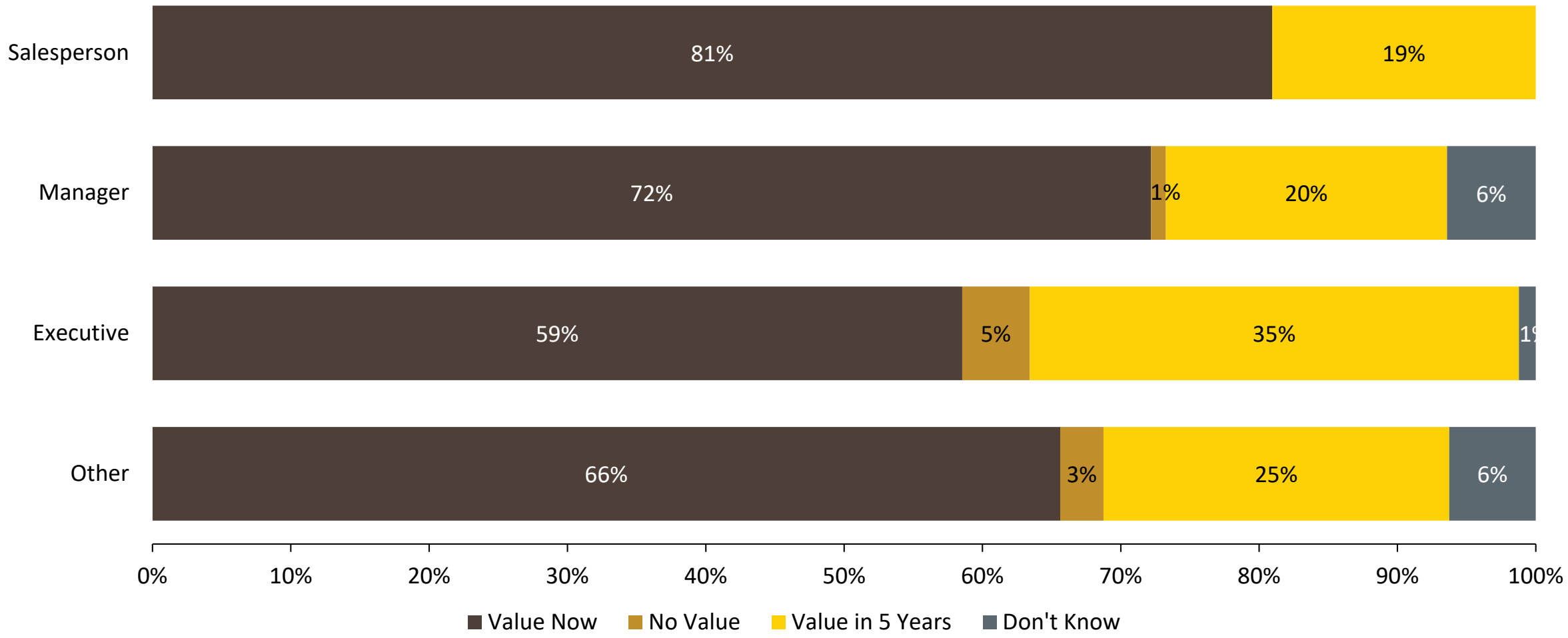
Value Creation by Role – Outbound Logistics



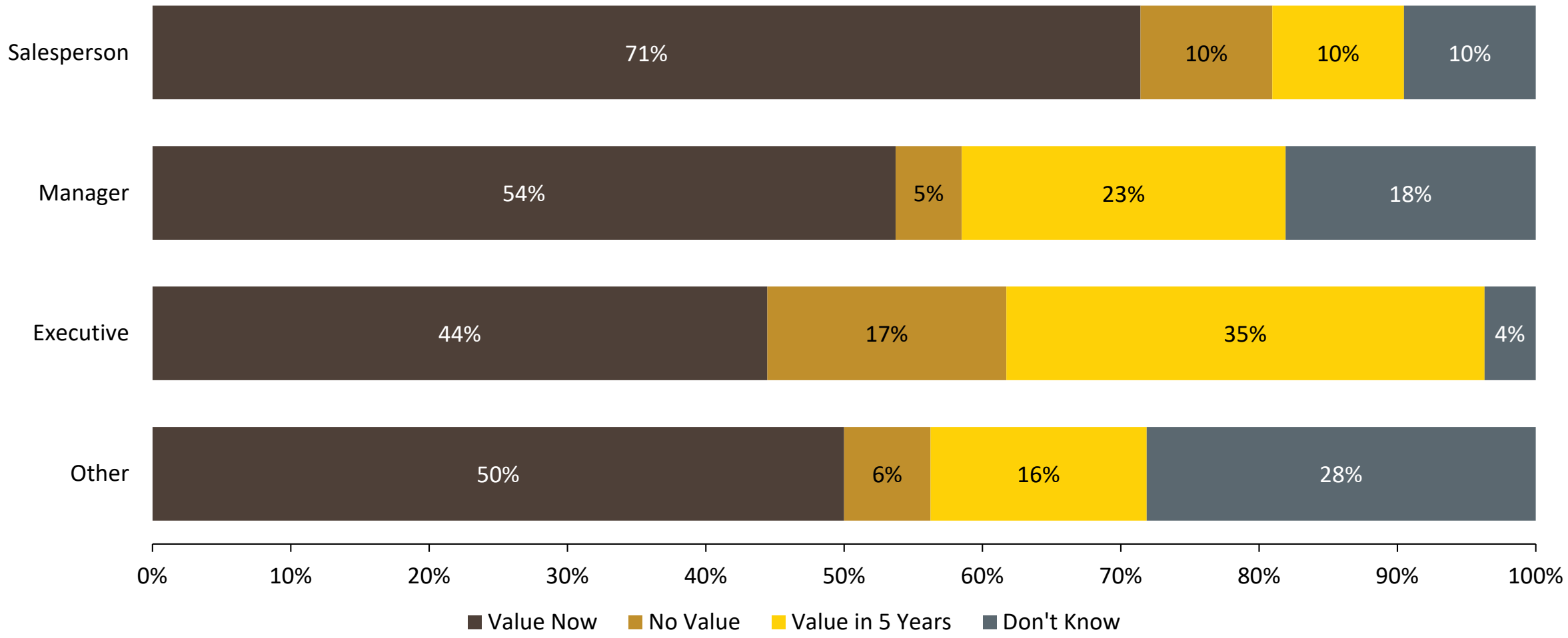
Value Creation by Role – Marketing



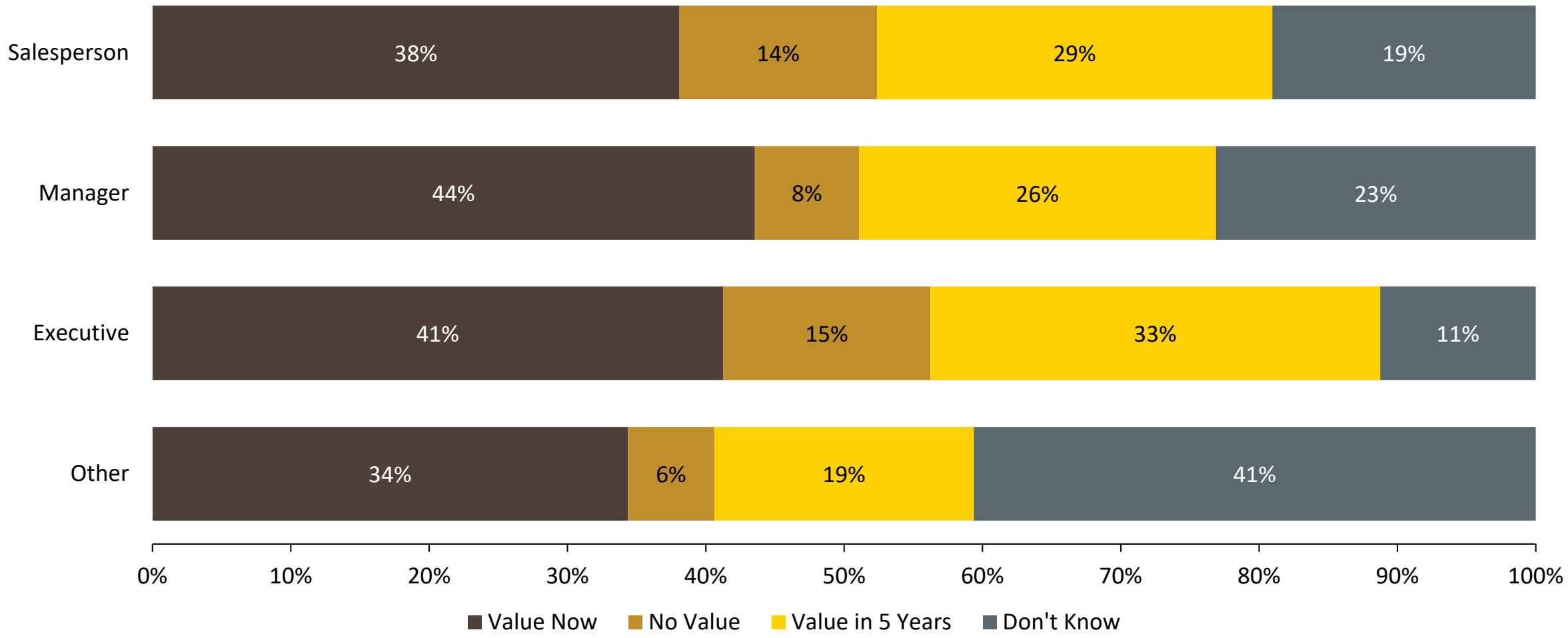
Value Creation by Role – Sales



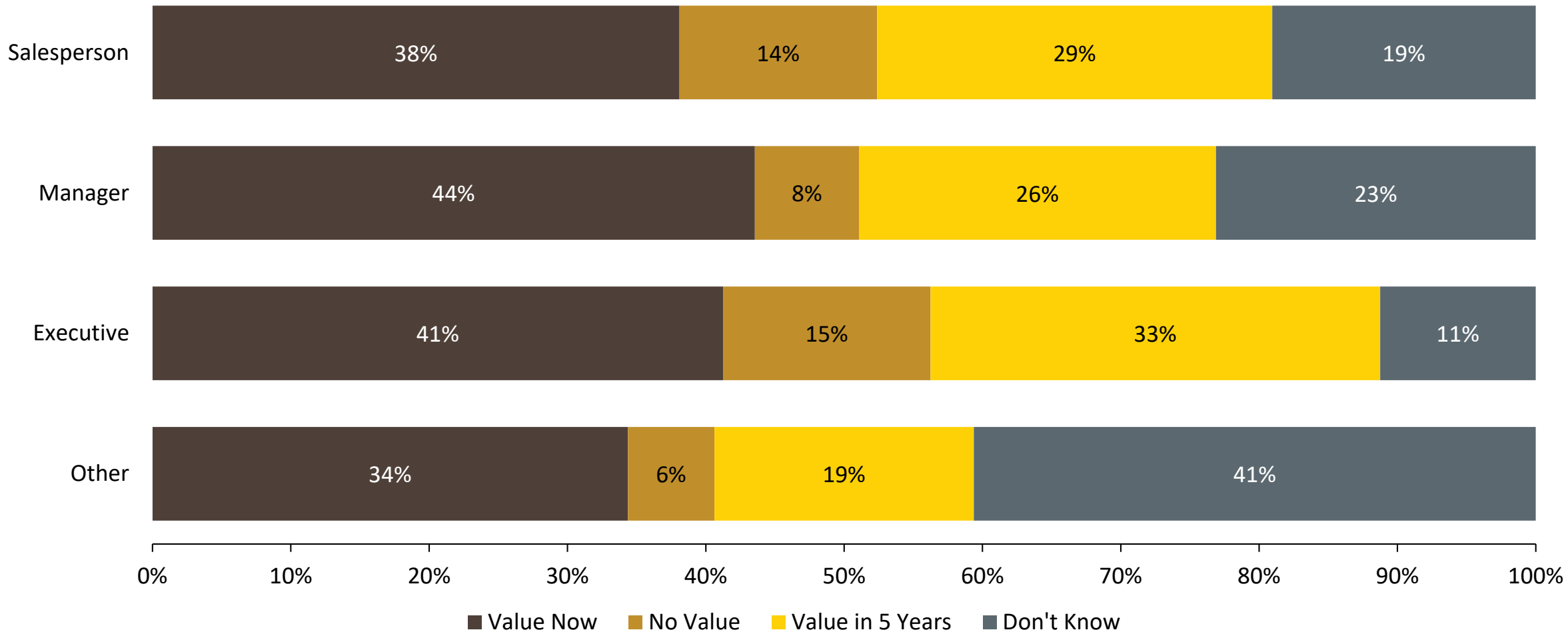
Value Creation by Role – Services



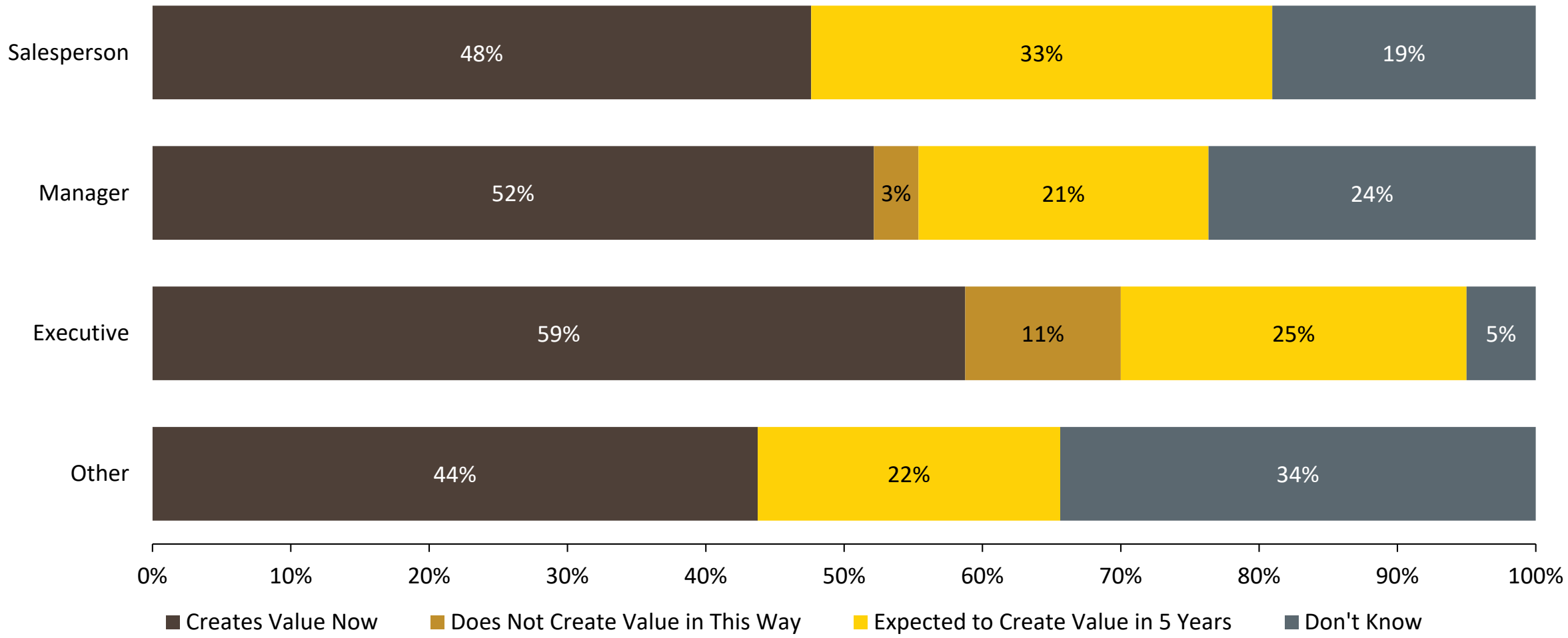
Value Creation by Role – HR Management



Value Creation by Role – Procurement

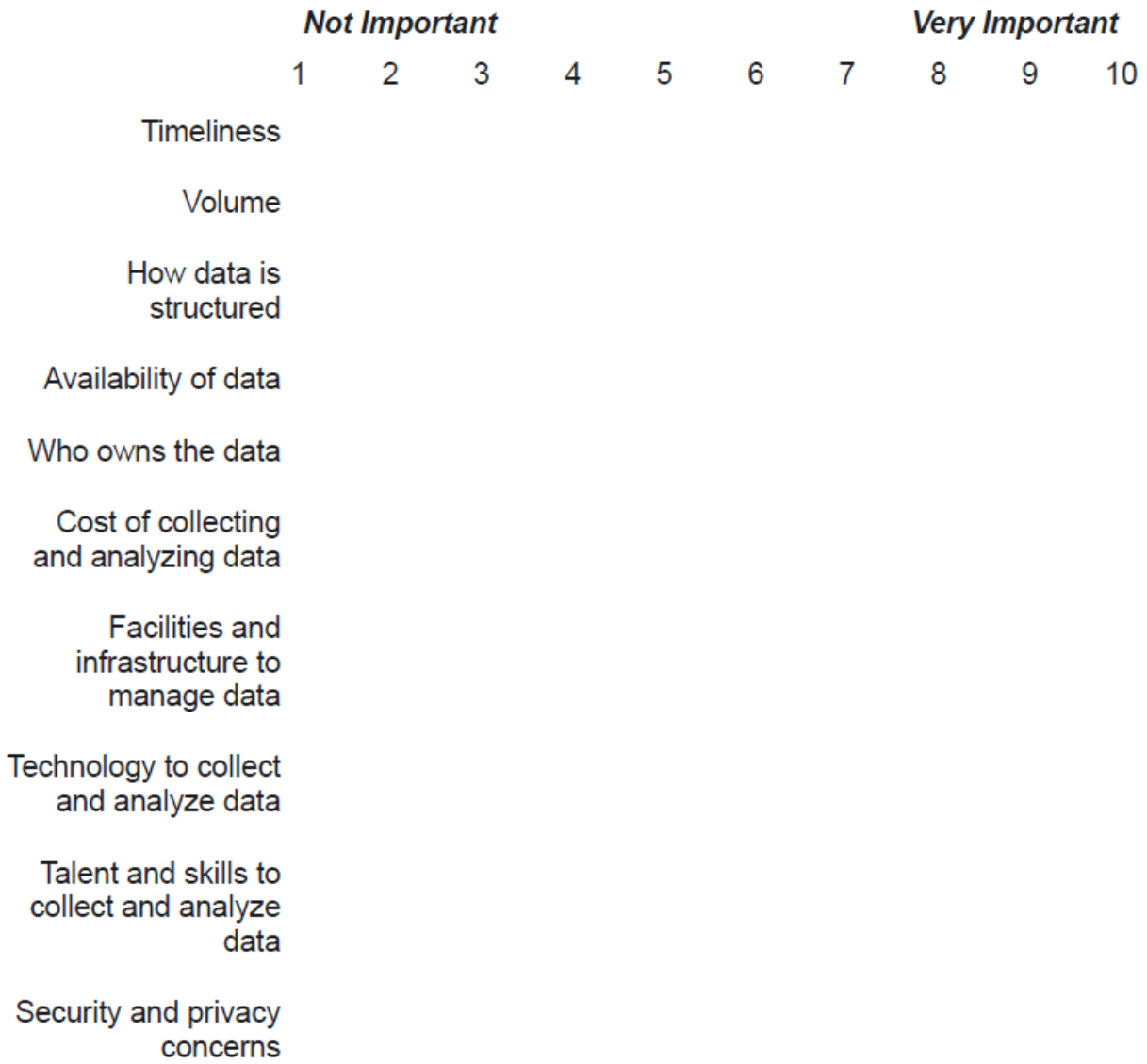


Value Creation by Role – Regulatory Compliance

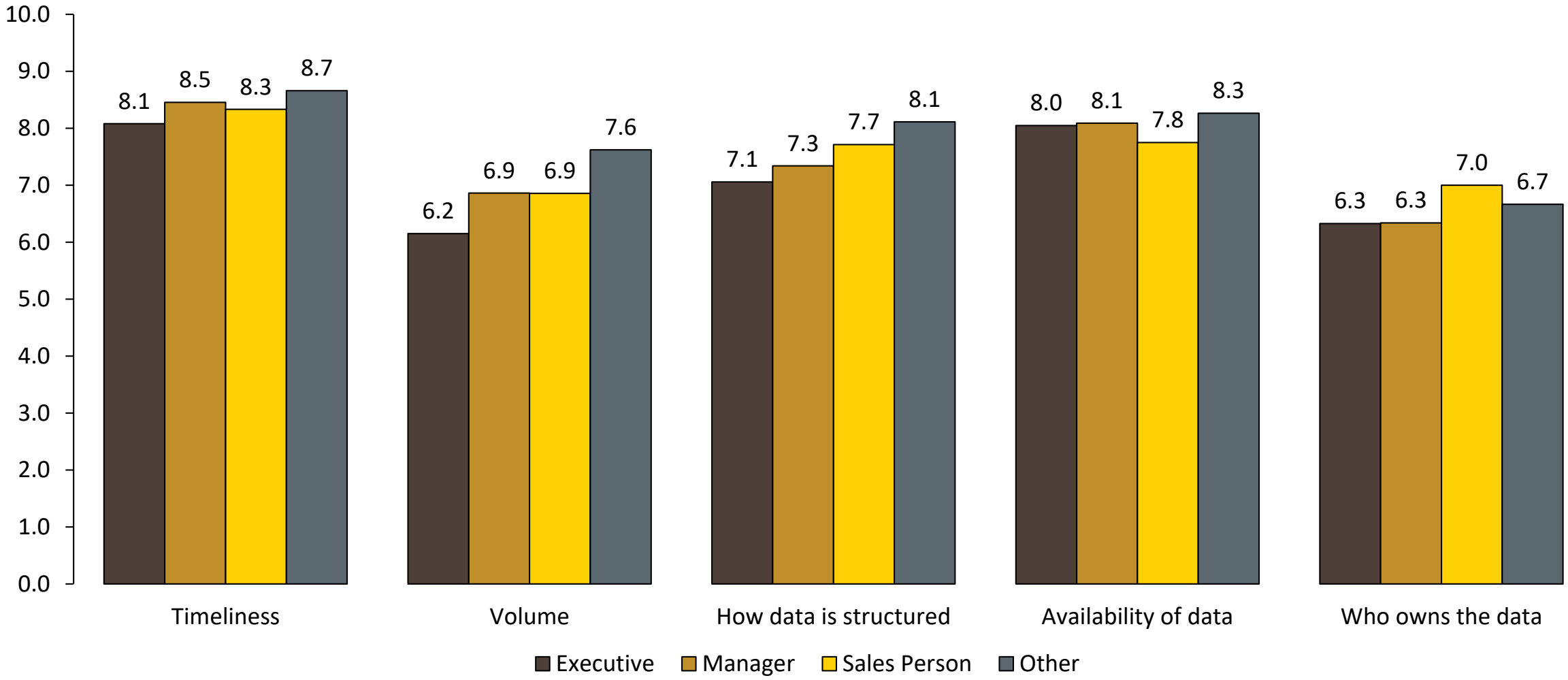


Data Related Challenges by Role

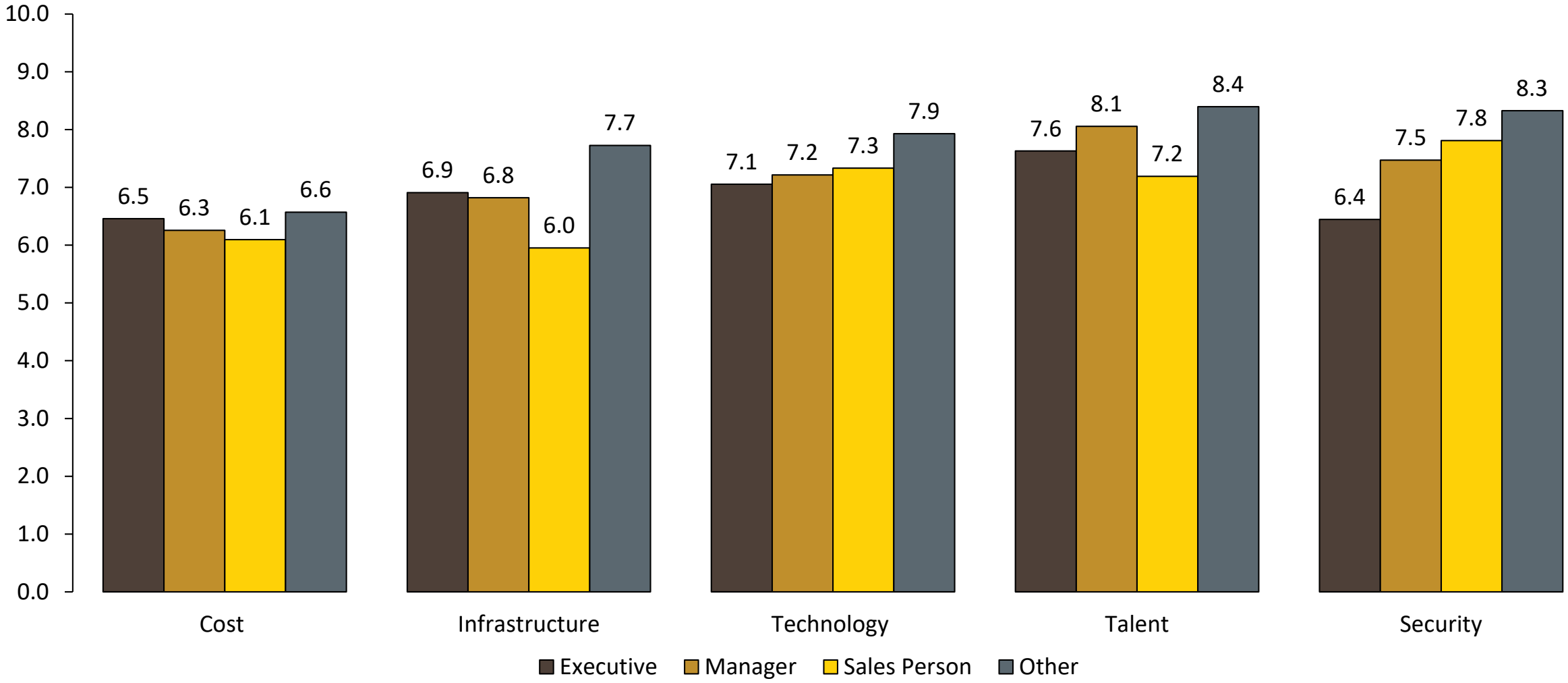
On a scale of 1 to 10, where 1 means ***"not important"*** and 10 means ***"very important"***, please rate the importance of the following data-related challenges in your organization. *(Use the slider to select your rating.)*



Average Rating of the Most Important Data Related Challenges by Role



Average Rating of the Most Important Data Related Challenges by Role



Decision Made on Data Analytics by The Extent Data is Collected

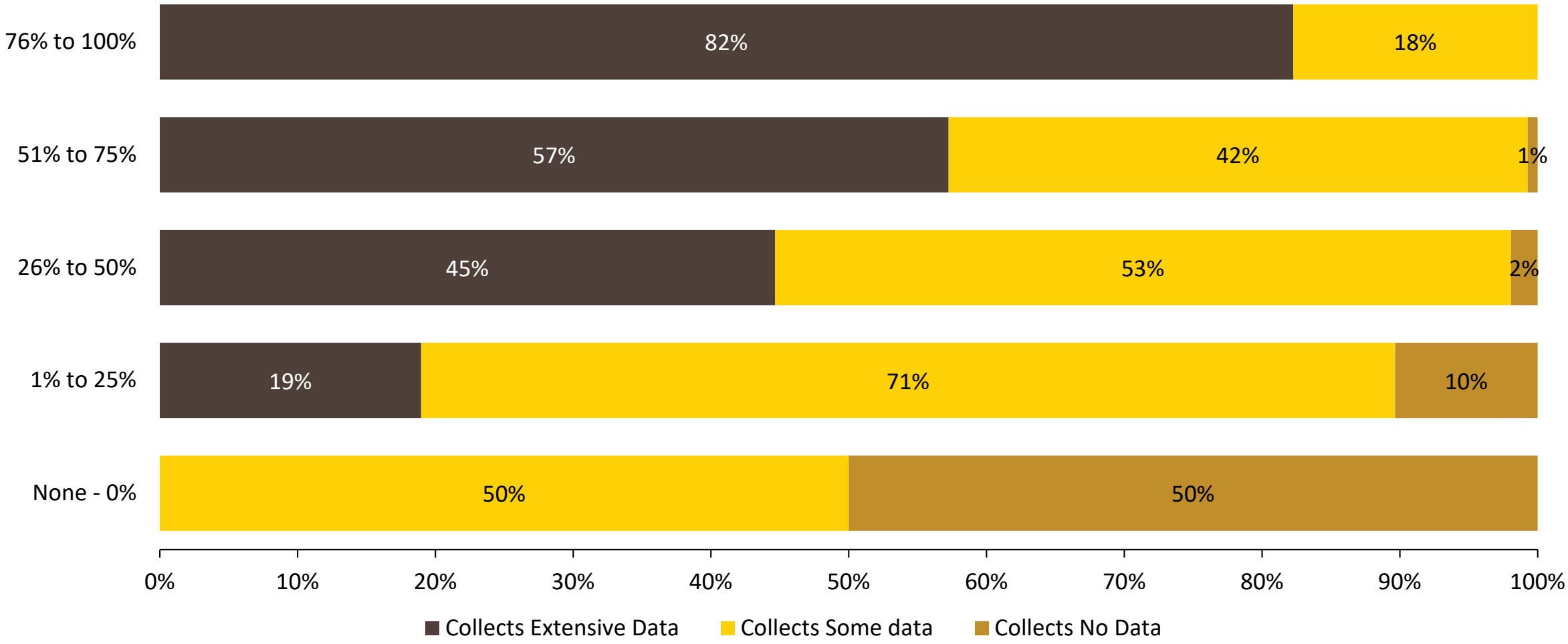
To what extent does your organization **collect data** that is useful?

- ○ Collects No Data
- ○ Collects Some data
- ○ Collects Extensive Data

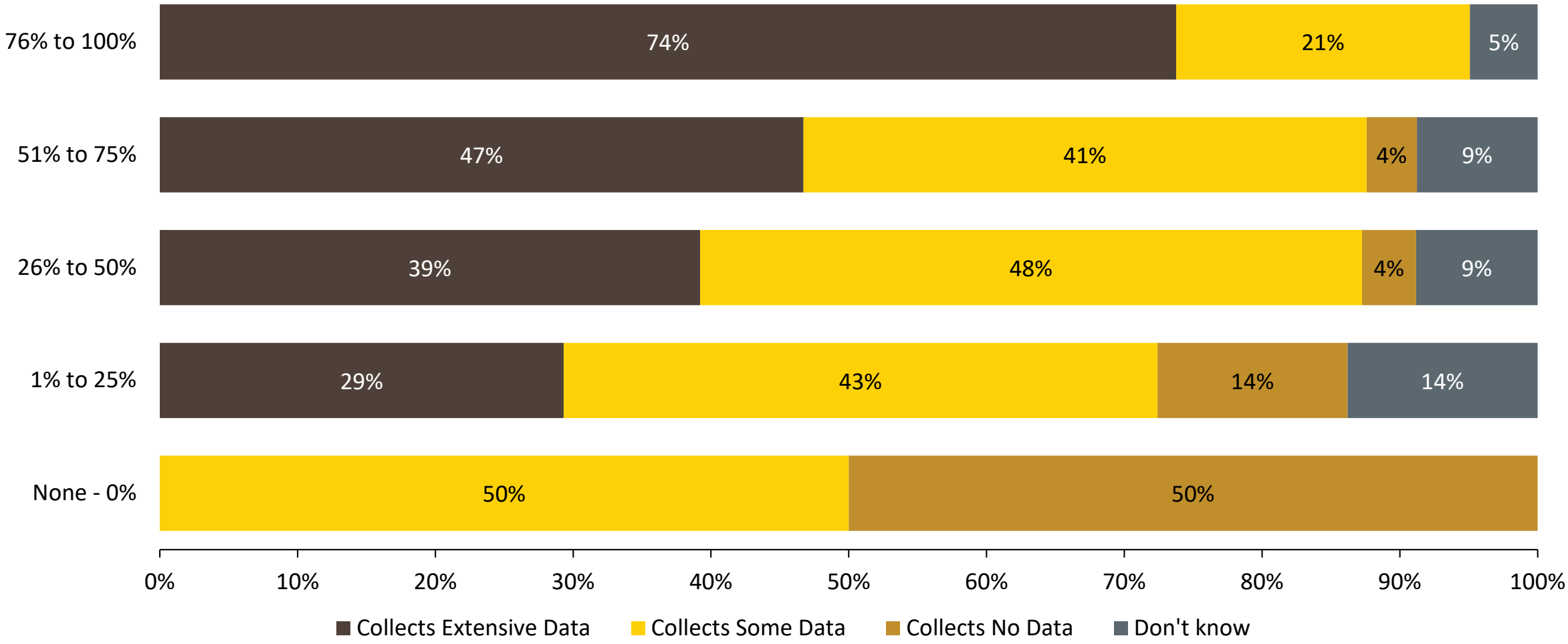
Approximately what percentage of overall decisions are made based on **data analytics** in your organization?

- ○ None - 0%
- ○ 1% to 25%
- ○ 26% to 50%
- ○ 51% to 75%
- ○ 76% to 100%

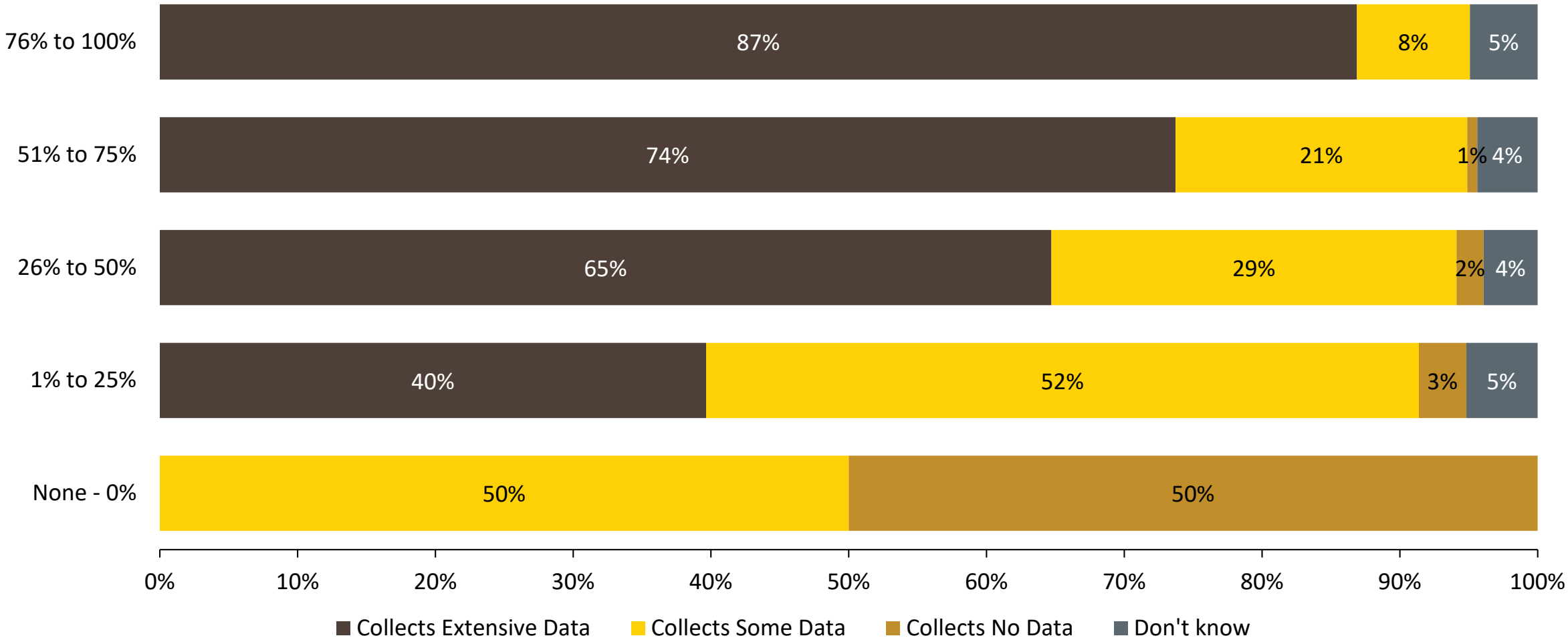
% of Decision Made on Data Analytics by The Extent Data is Collected - Overall



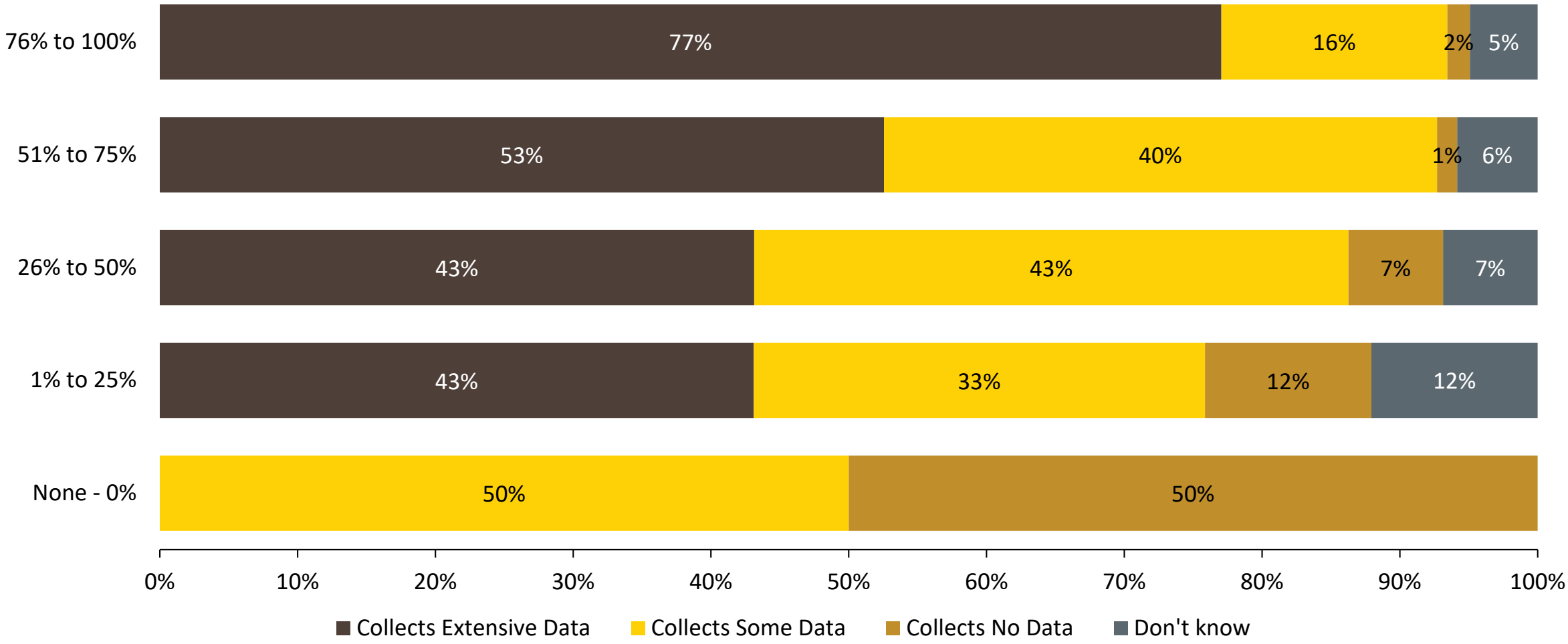
% of Decision Made on Data Analytics by The Extent Data is Collected – Inbound Logistics



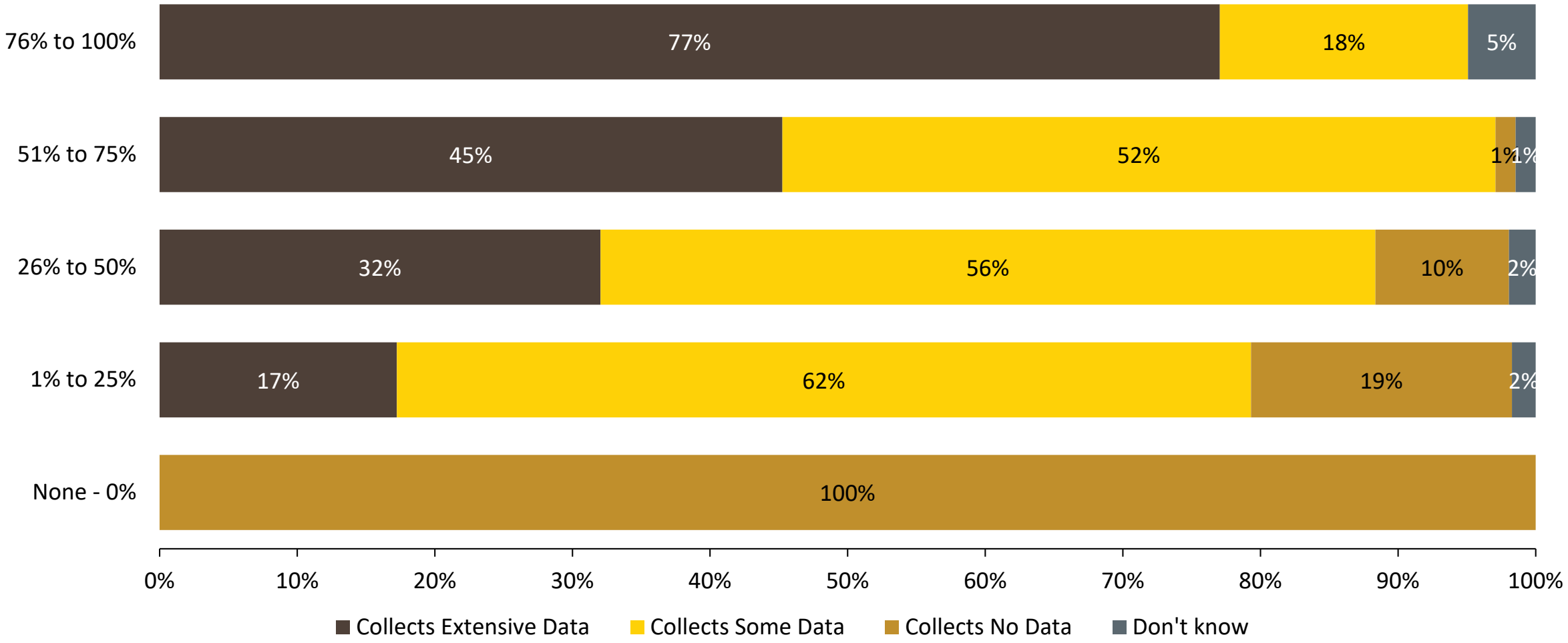
% of Decision Made on Data Analytics by The Extent Data is Collected – Operations



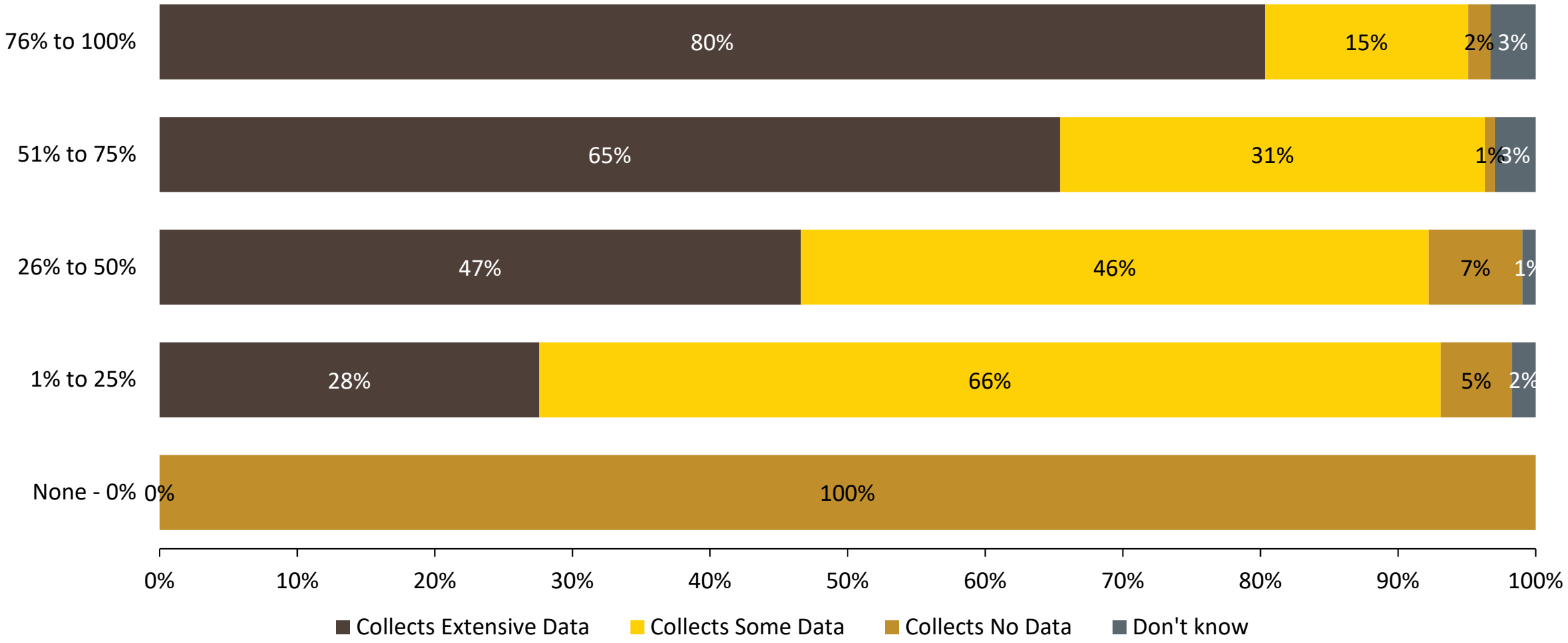
% of Decision Made on Data Analytics by The Extent Data is Collected – Outbound Logistics



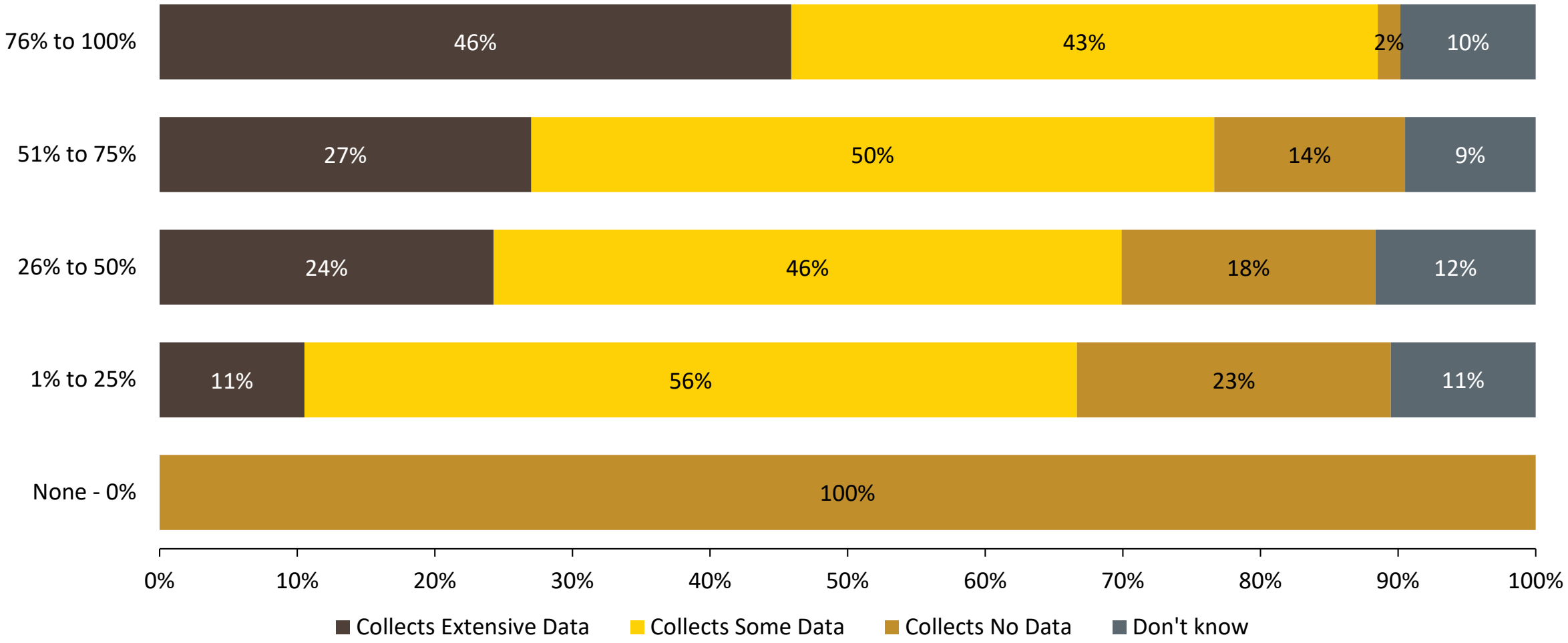
% of Decision Made on Data Analytics by The Extent Data is Collected – Marketing



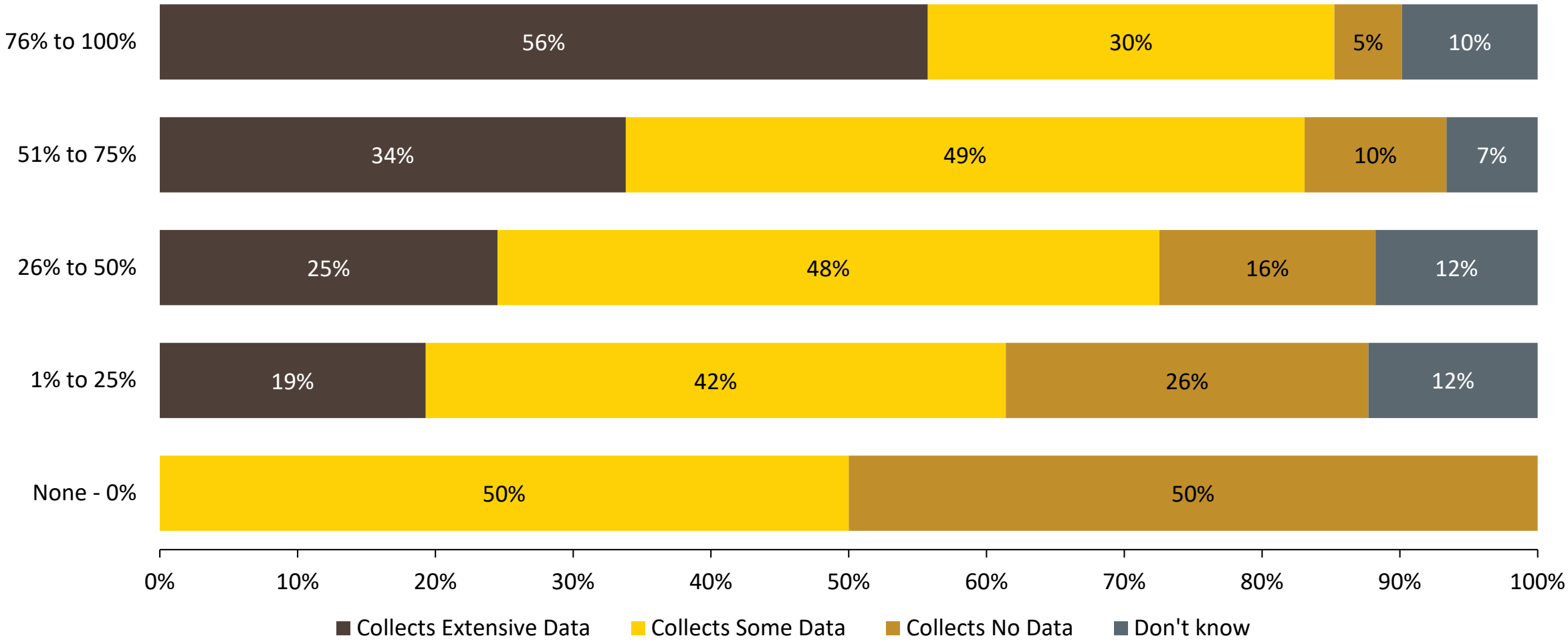
% of Decision Made on Data Analytics by The Extent Data is Collected – Sales



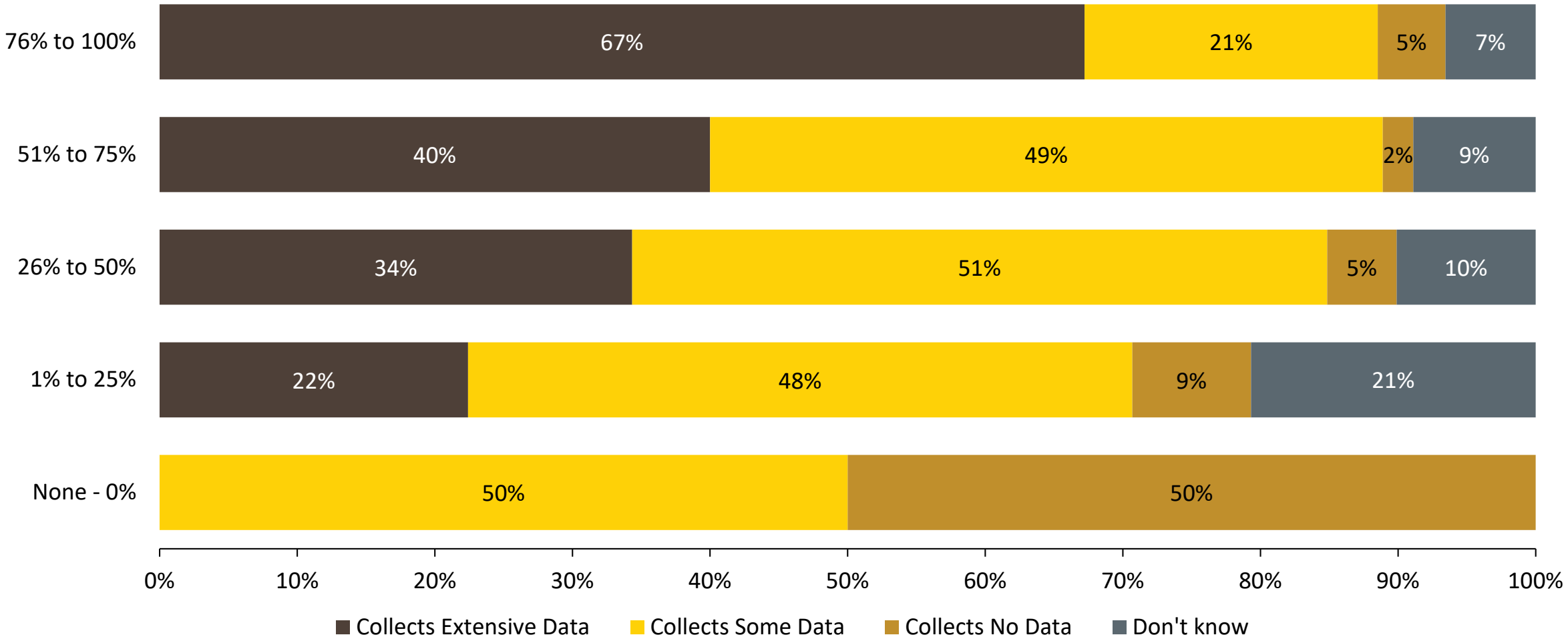
% of Decision Made on Data Analytics by The Extent Data is Collected – Service



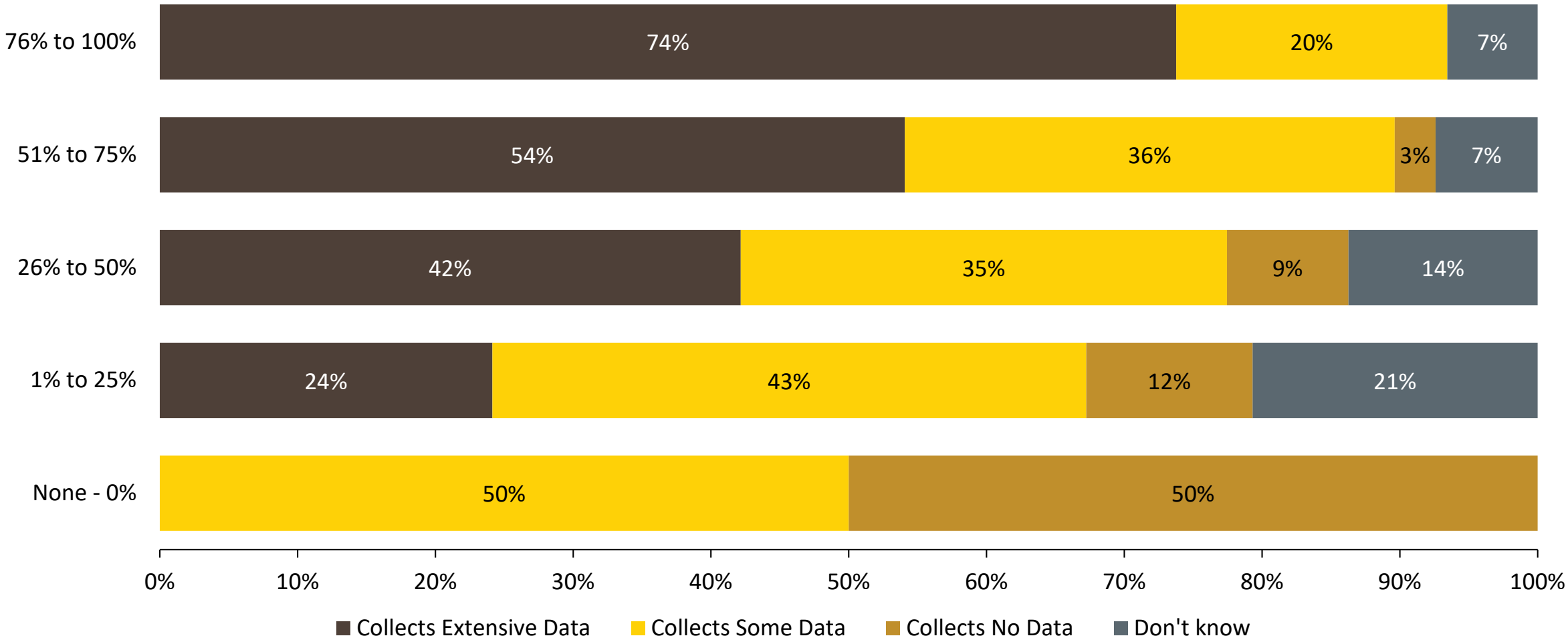
% of Decision Made on Data Analytics by The Extent Data is Collected – HR Management



% of Decision Made on Data Analytics by The Extent Data is Collected – Procurement



% of Decision Made on Data Analytics by The Extent Data is Collected – Regulatory Compliance



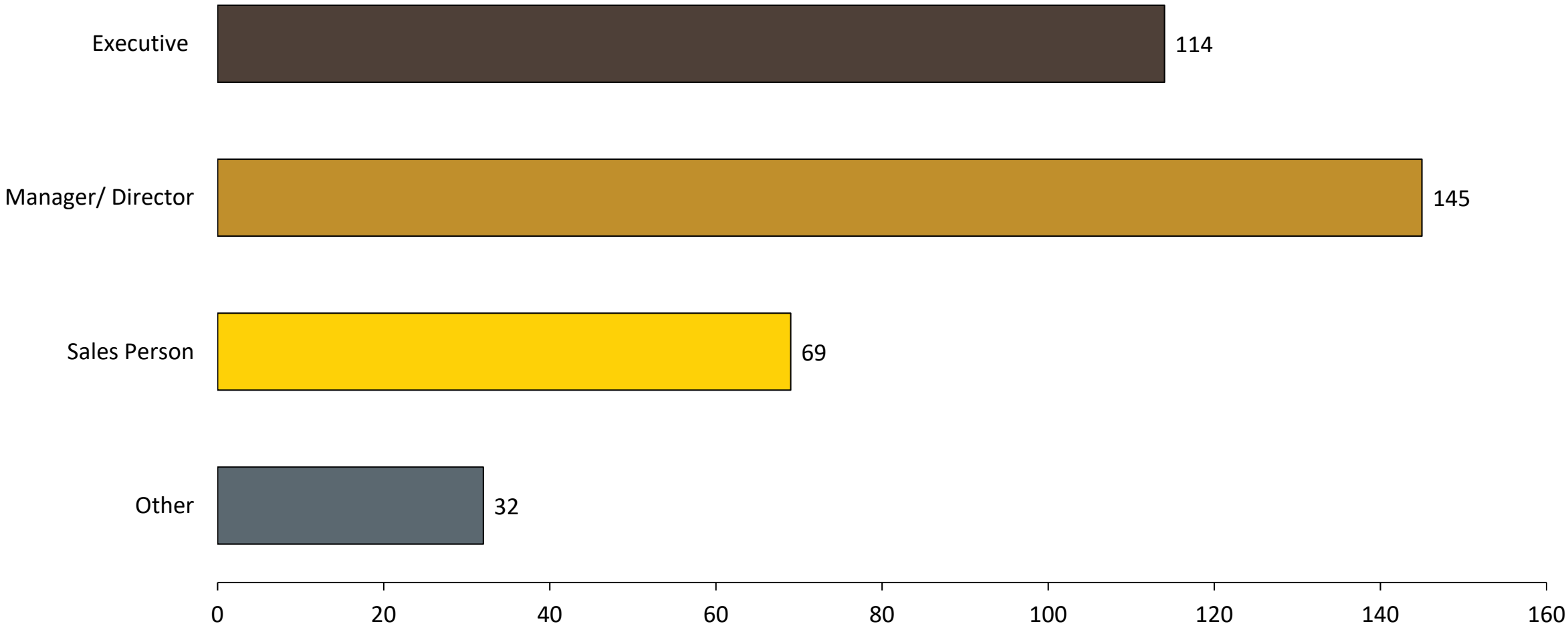
More Data Breakdown - Ag Input Retailers

PURDUE UNIVERSITY

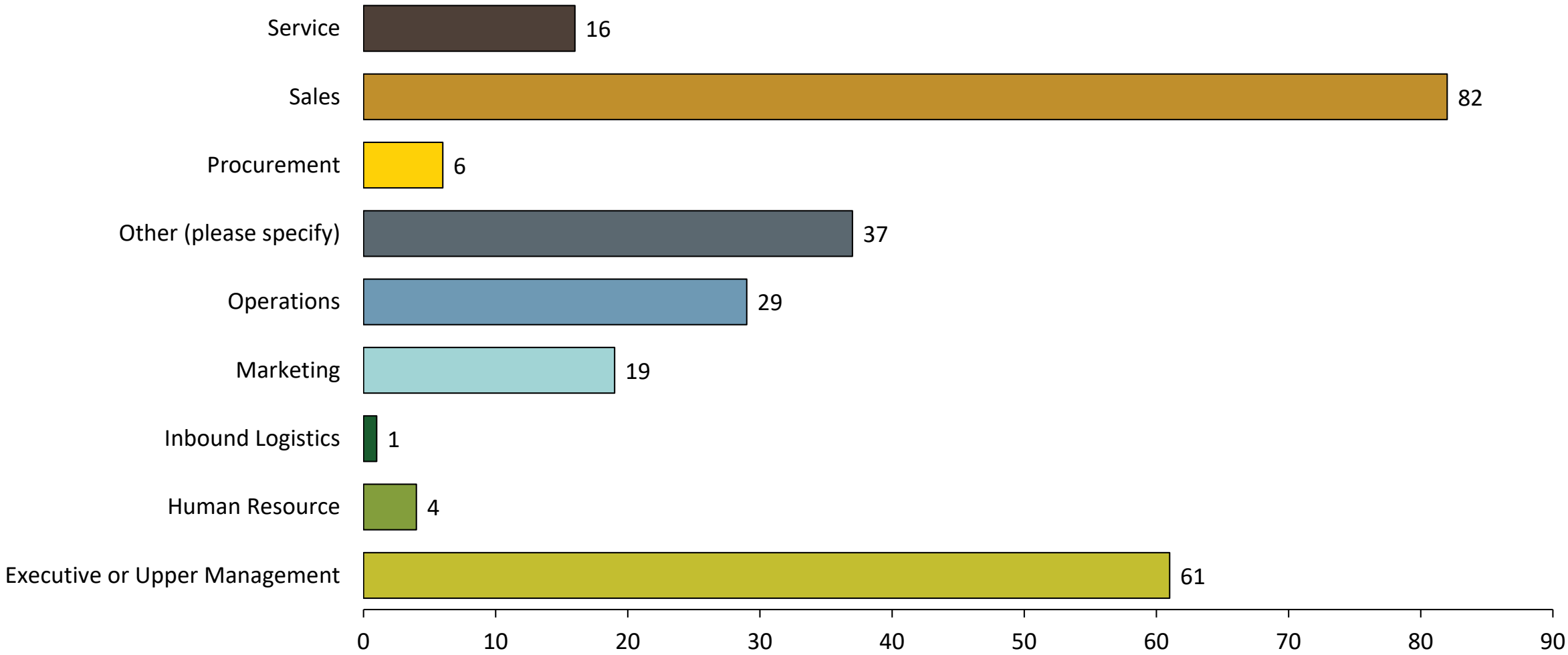
Center for Food and Agricultural Business
COLLEGE OF AGRICULTURE

Demographics

Respondents by Role – Ag Input Retailers



Respondents by Business Function – Ag Input Retailers

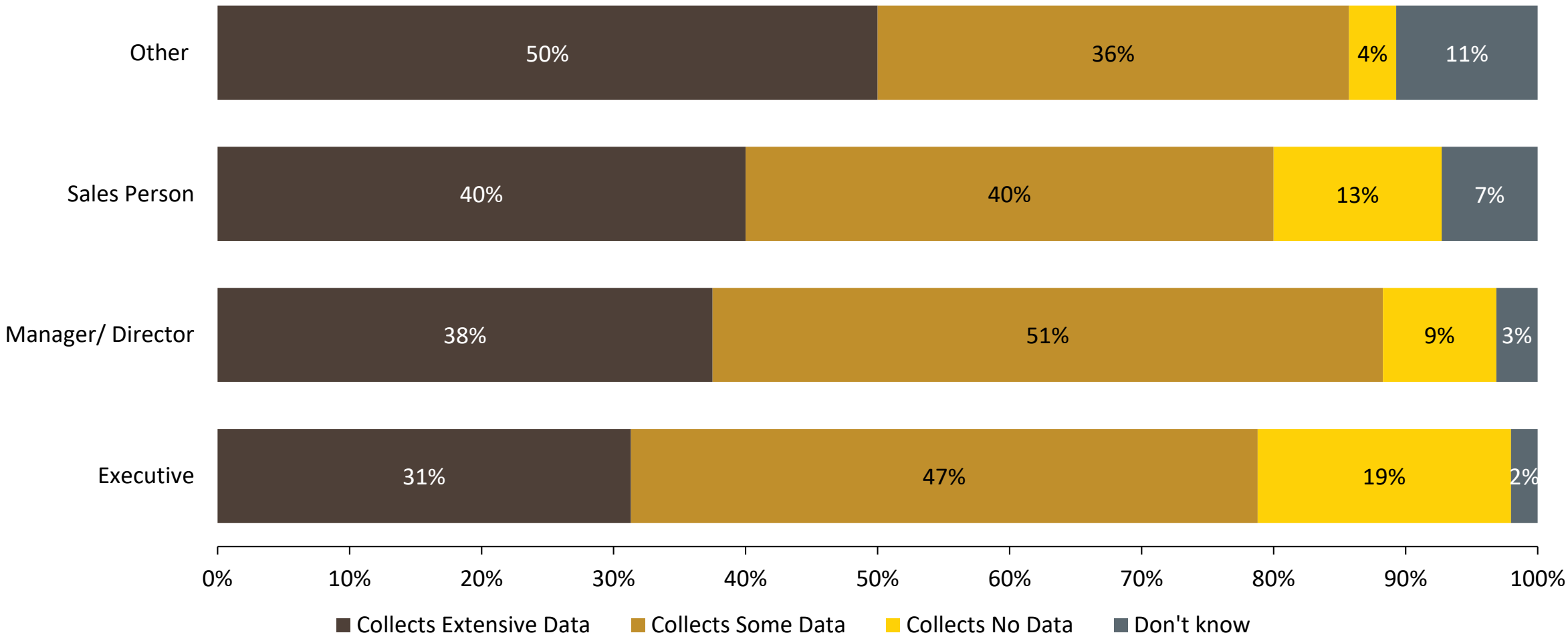


The Extent Data is Collected - by Role

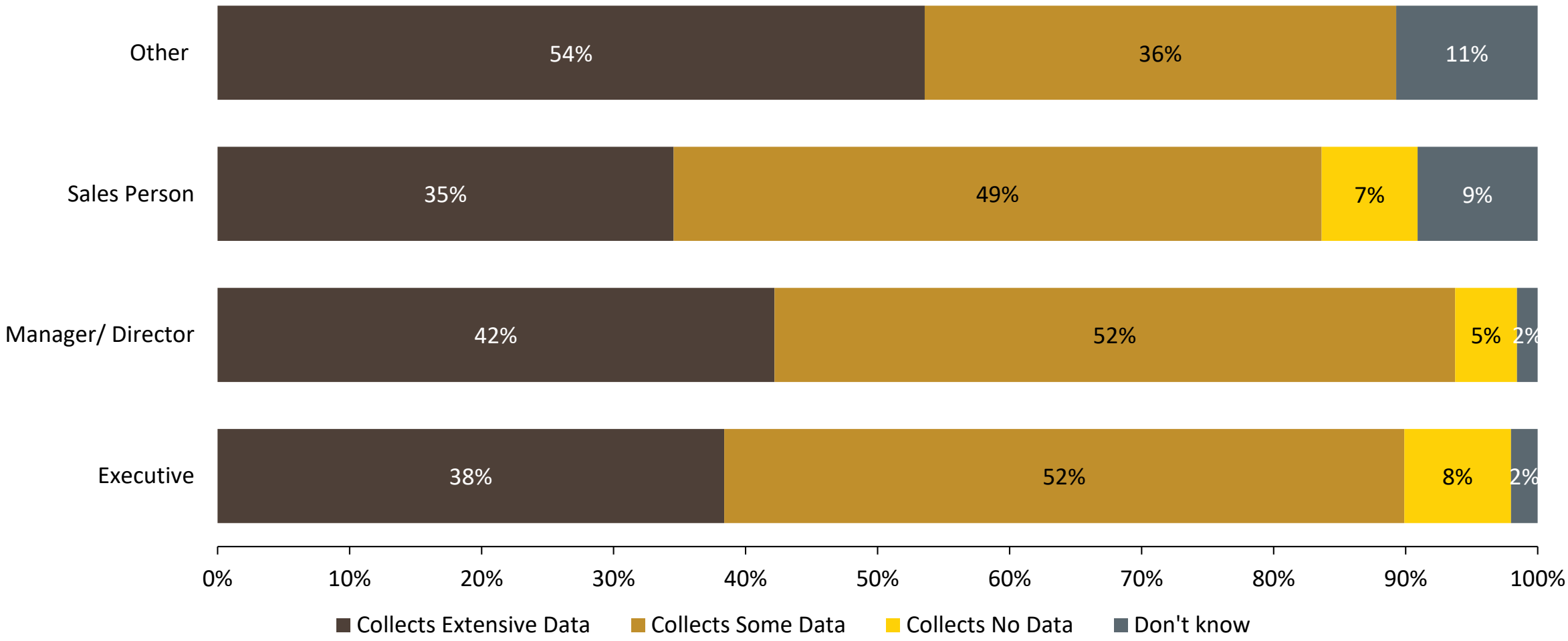
To what extent does your organization **collect data** for the following business functions?

	Don't know	Collects **No** Data	Collects **Some** Data	Collects **Extensive** Data
Inbound Logistics (*e.g. ordering/receiving, inventory replenishment*)	○	○	○	○
Operations (*e.g. production volumes, process details, quality control, efficiency measure*)	○	○	○	○
Outbound Logistics (*e.g. ordering/delivery*)	○	○	○	○
Marketing (*e.g. customer data/CRM, product development, product life-cycle, segmentation*)	○	○	○	○
Sales (*e.g. customer orders, referrals, transactional data*)	○	○	○	○
Service (*e.g. application, repair, tech support*)	○	○	○	○
HR Management (*e.g. goal setting and monitoring, compensation, payroll, benefits*)	○	○	○	○
Procurement (*e.g. input costs, SRM*)	○	○	○	○
Regulatory Compliance (*e.g. labor, environmental standard*)	○	○	○	○

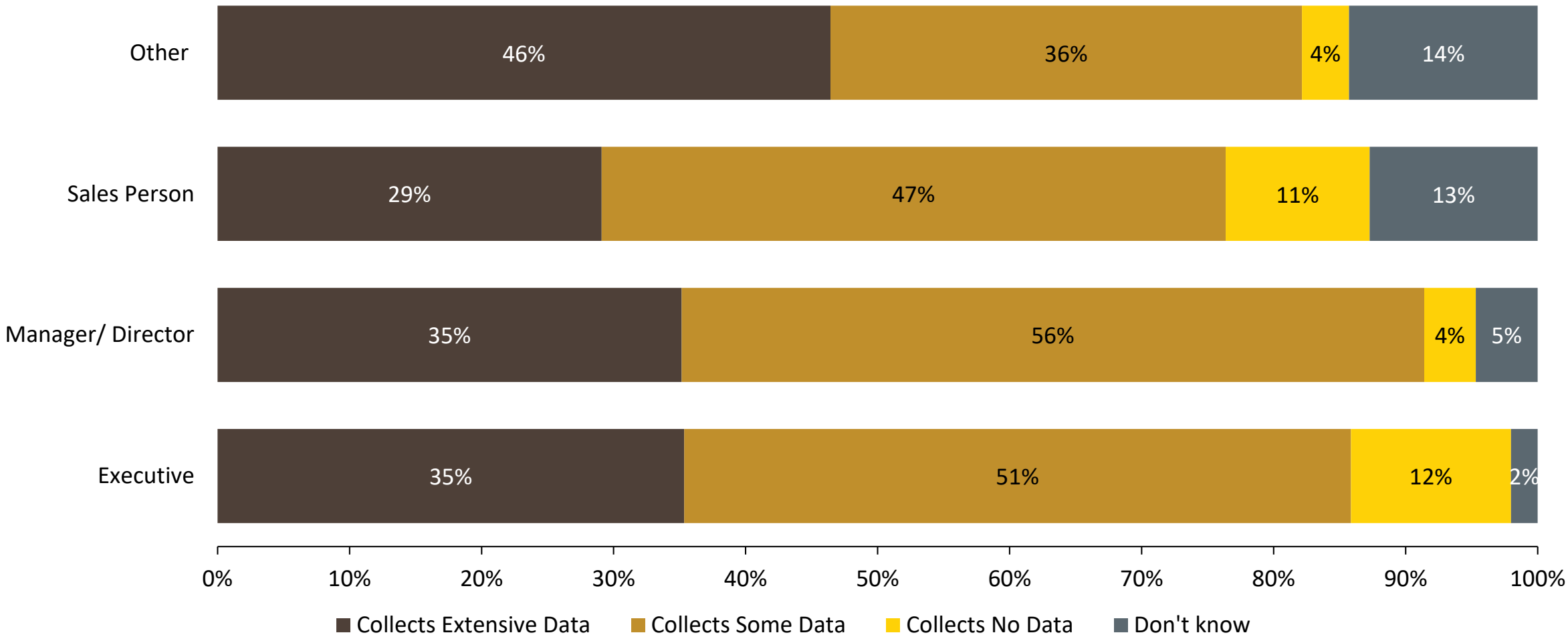
The Extent Data is Collected by Role - Inbound Logistics



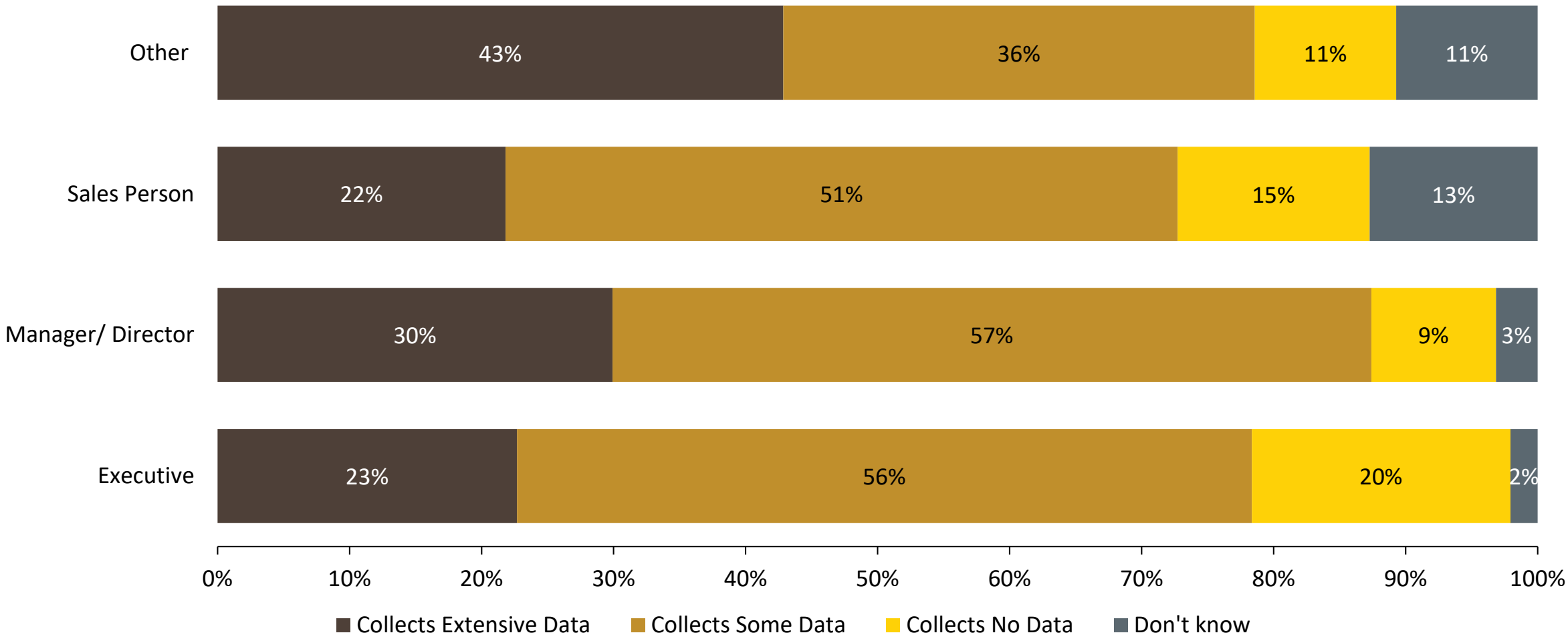
The Extent Data is Collected by Role - Operations



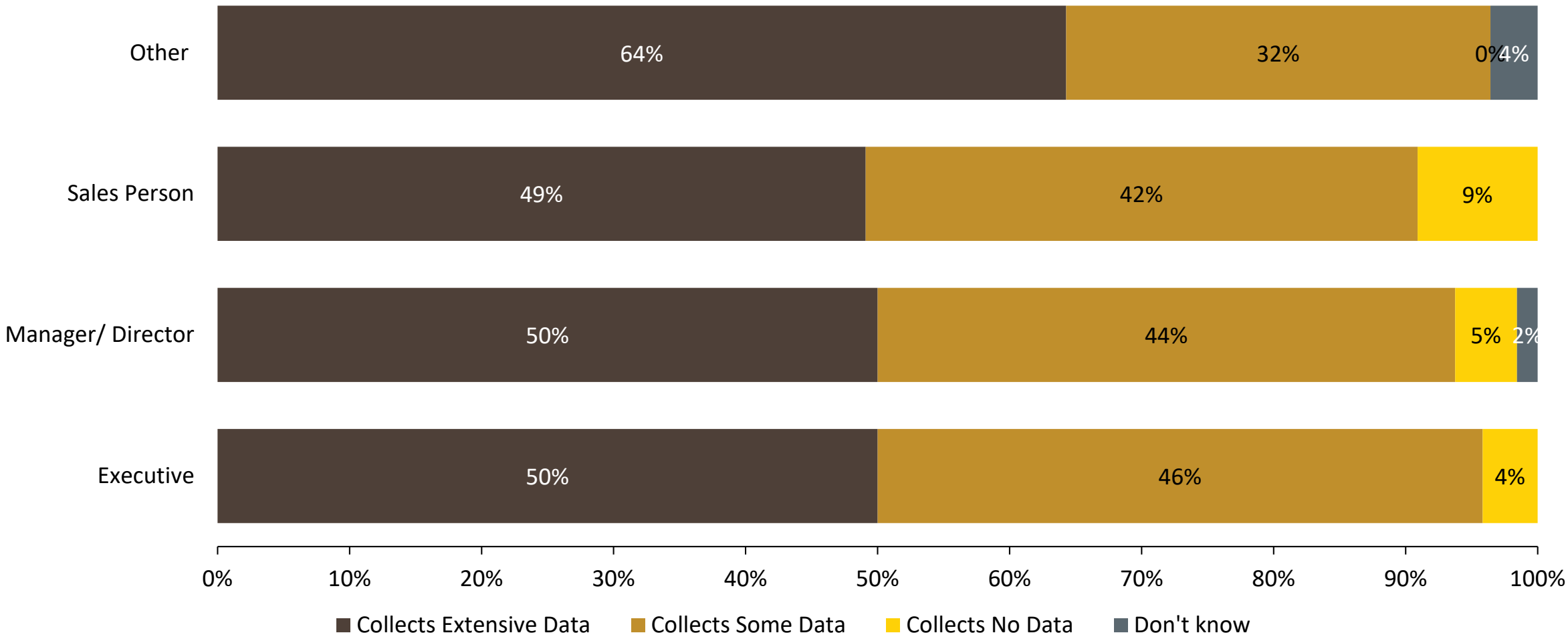
The Extent Data is Collected by Role - Outbound Logistics



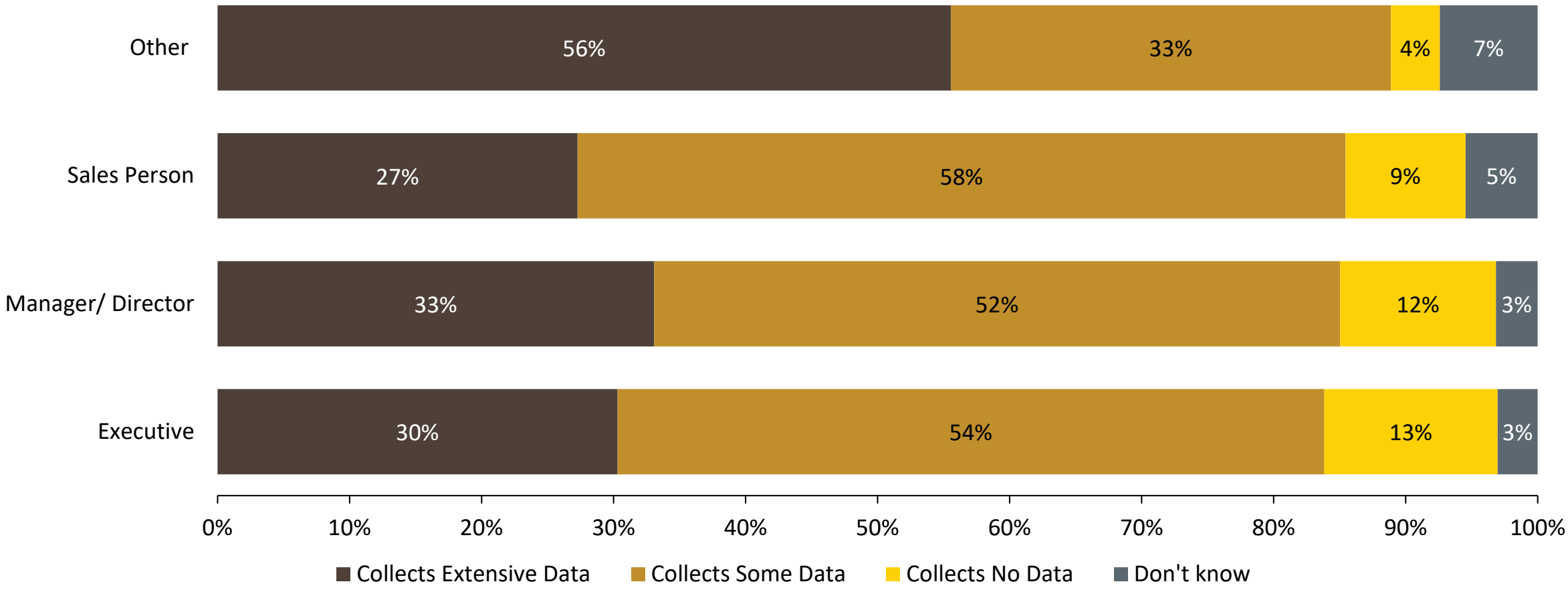
The Extent Data is Collected by Role - Marketing



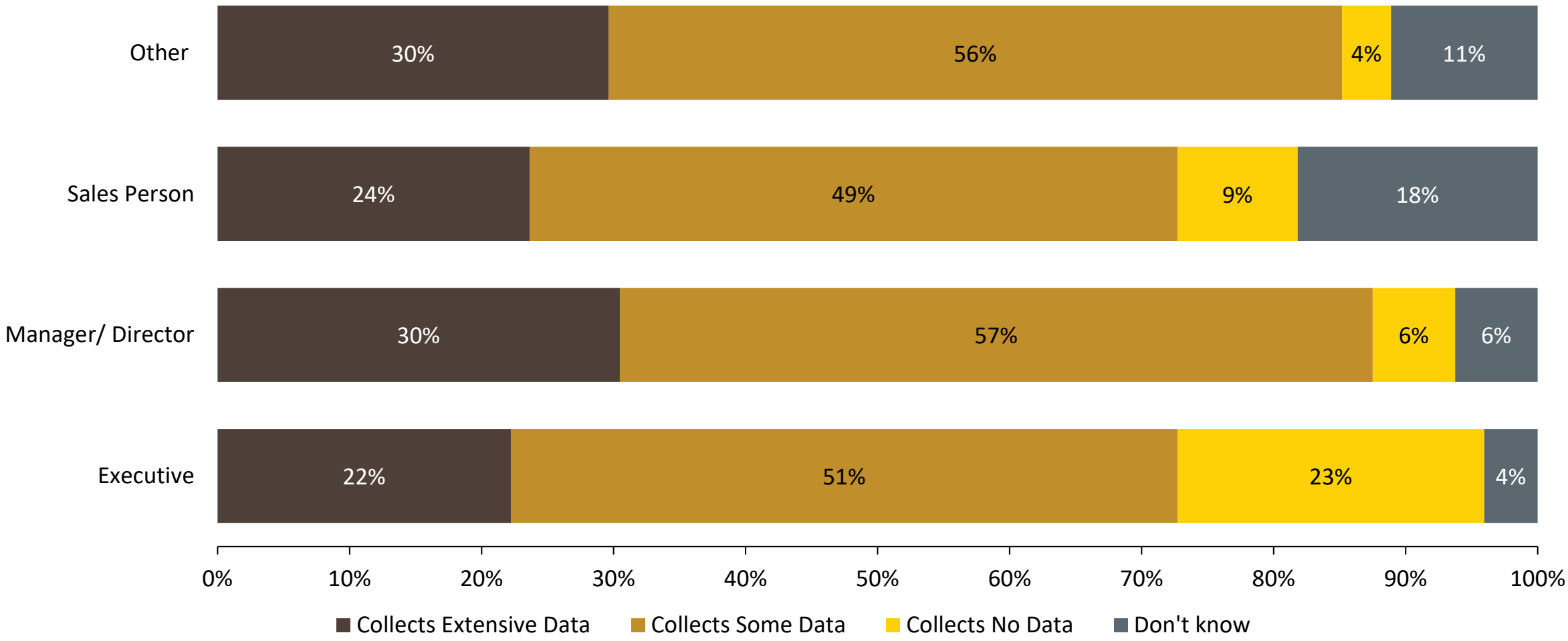
The Extent Data is Collected by Role - Sales



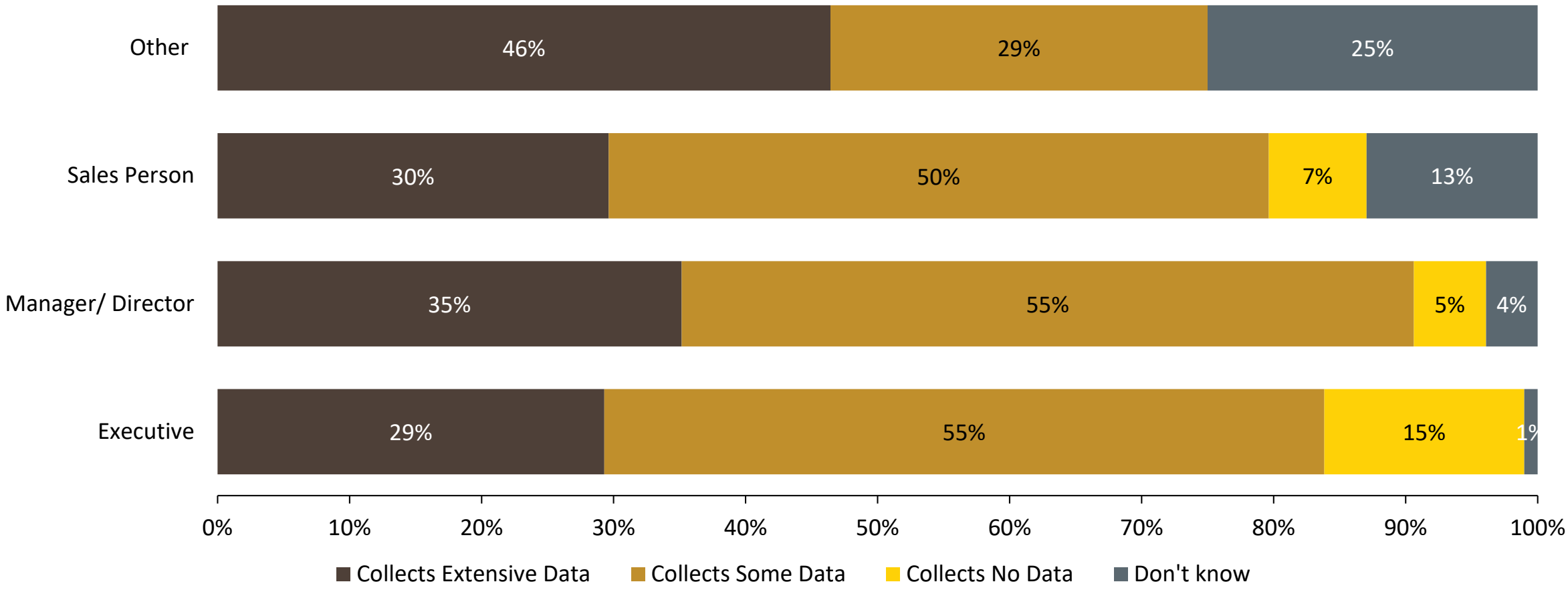
The Extent Data is Collected by Role - Service



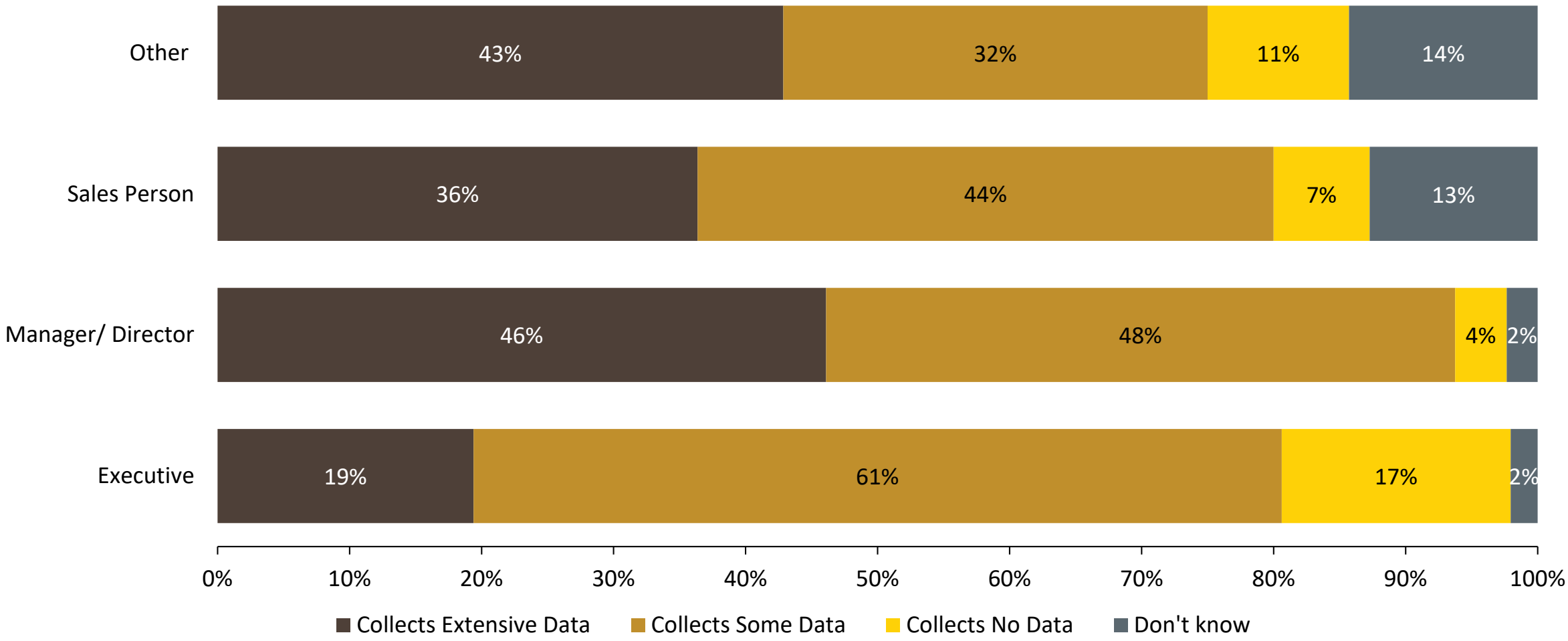
The Extent Data is Collected by Role - HR Management



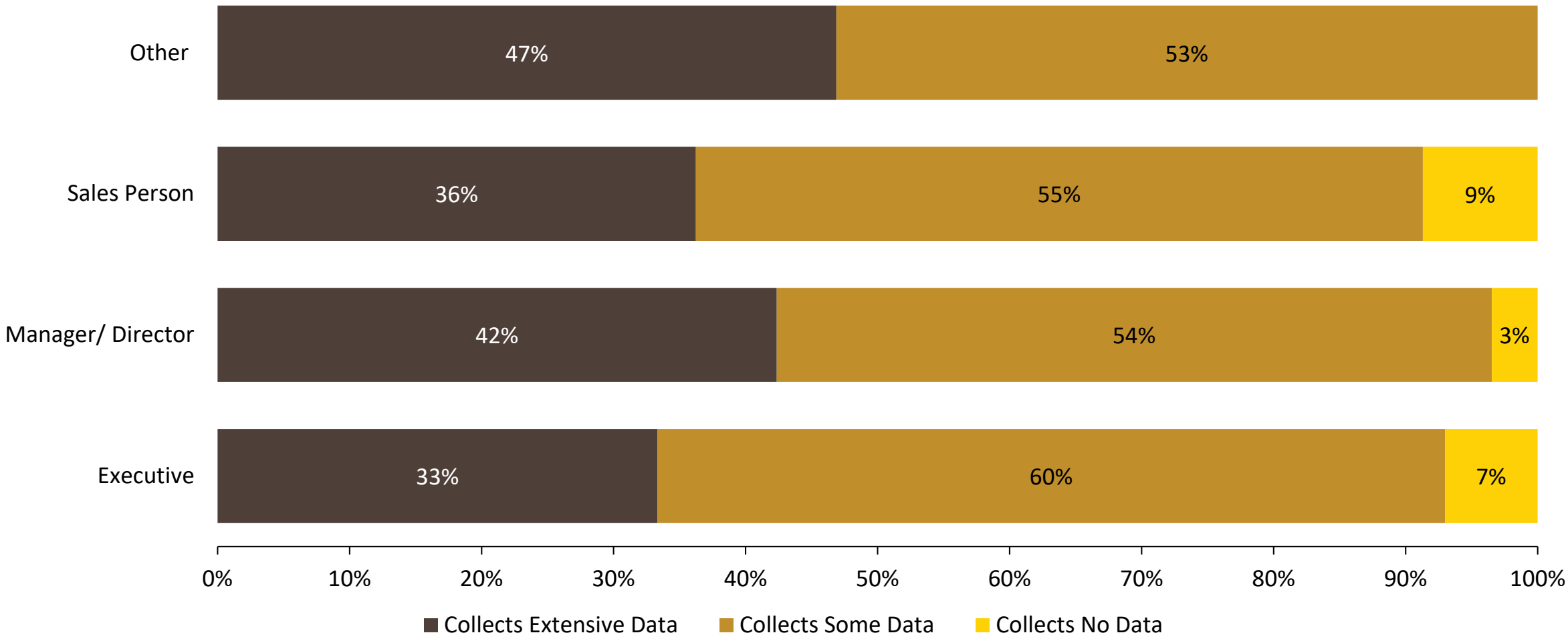
The Extent Data is Collected by Role - Procurement



The Extent Data is Collected by Role - Regulatory Compliance



The Extent Data is Collected by Role - Overall

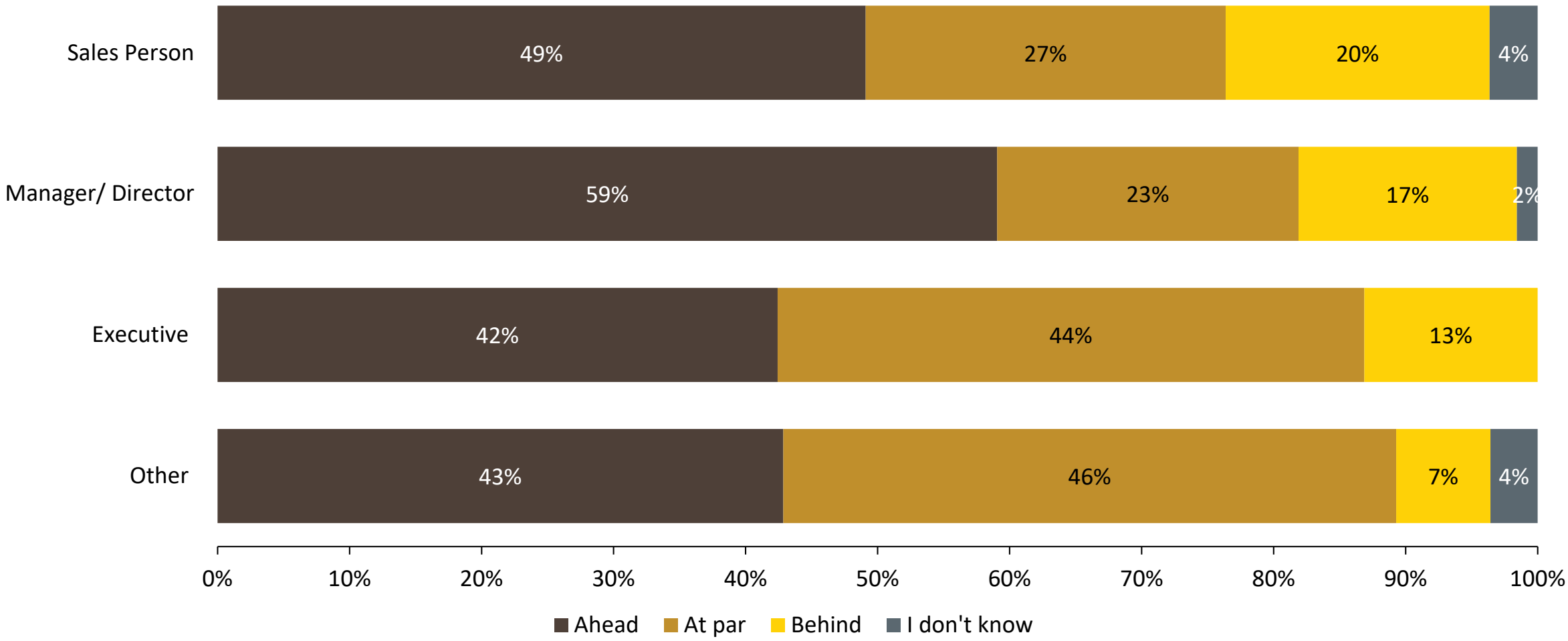


Data Collection and Analytics Compared to Competitors – by Role

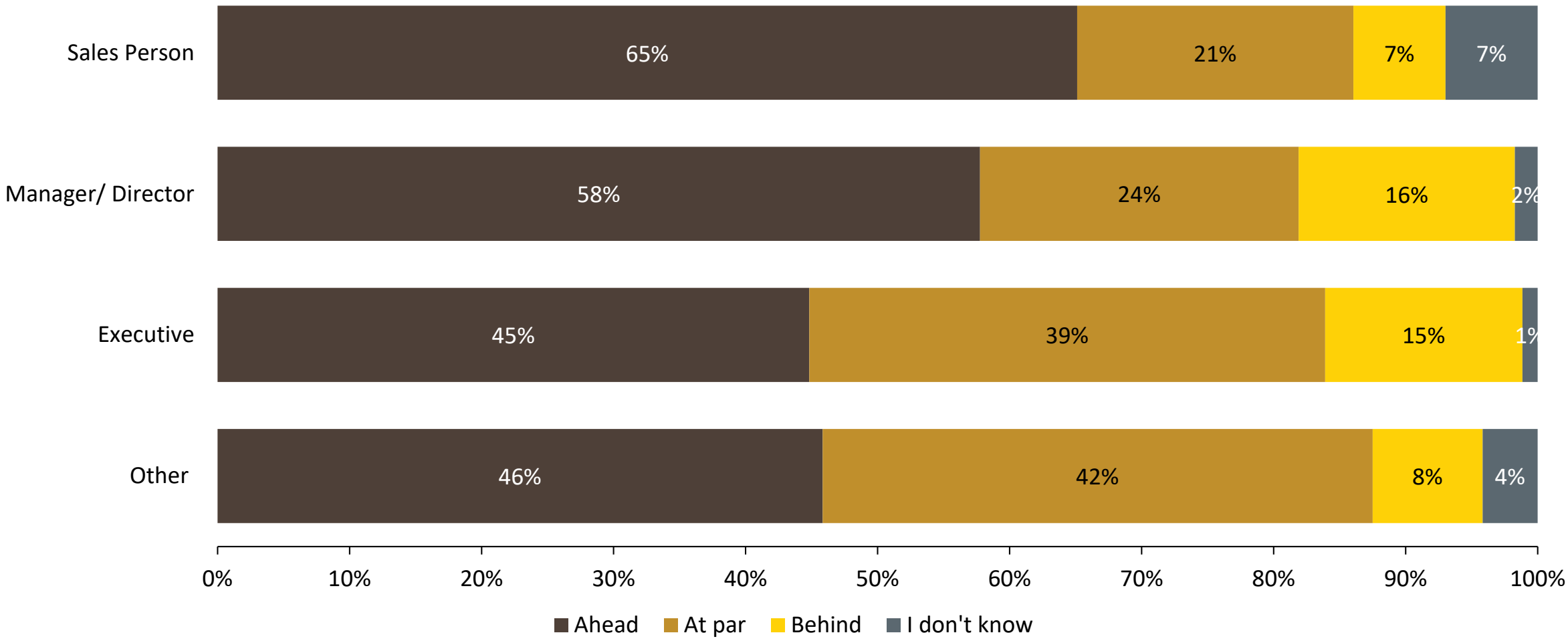
Compared to your competitors, how do you feel about **data collection** in your organization?

- ○ Far ahead
- ○ Somewhat ahead
- ○ At par
- ○ Somewhat behind
- ○ Far behind
- ○ I don't know

Data Collection Compared to Competitors by Role



Data Analytics Compared to Competitors by Role

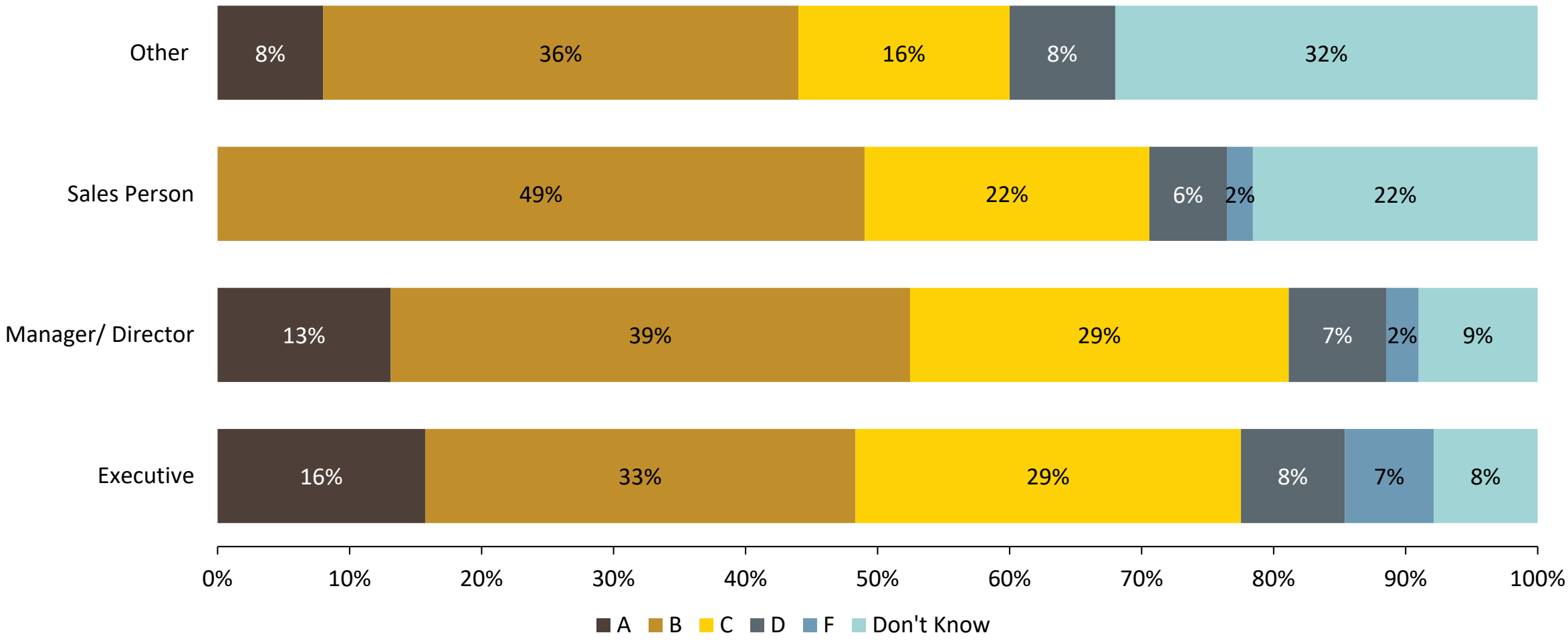


Organization Grade on Data Analytics

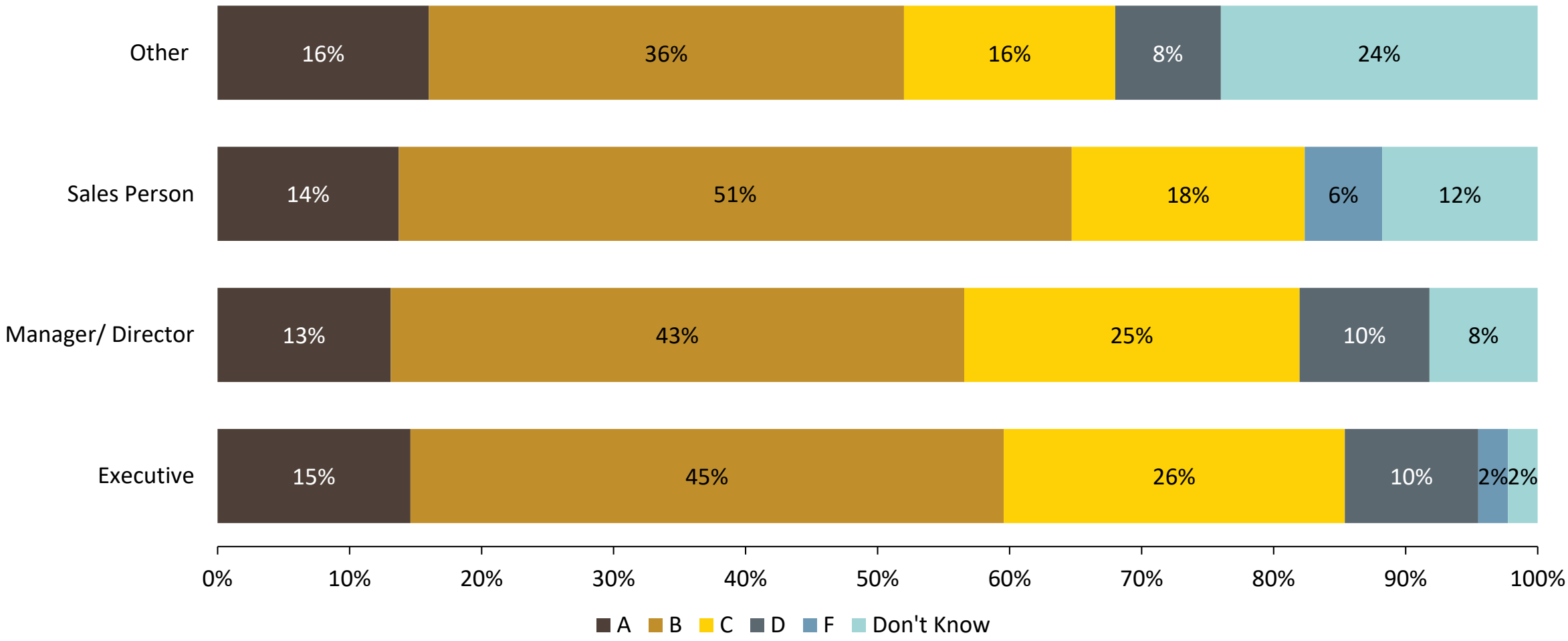
If you were to give your organization a "grade" based on using **data analytics** on decision making, what grade would you give for the following business functions?

	A	B	C	D	F	Don't Know
Inbound Logistics (*e.g. ordering/receiving, inventory replenishment*)	○	○	○	○	○	○
Operations (*e.g. production volumes, process details, quality control, efficiency measure*)	○	○	○	○	○	○
Outbound Logistics (*e.g. ordering/delivery*)	○	○	○	○	○	○
Marketing (*e.g. customer data/CRM, product development, product life-cycle, segmentation*)	○	○	○	○	○	○
Sales (*e.g. customer orders, referrals, transactional data*)	○	○	○	○	○	○
Service (*e.g. application, repair, tech support*)	○	○	○	○	○	○
HR Management (*e.g. goal setting and monitoring, compensation, payroll, benefits*)	○	○	○	○	○	○
Procurement (*e.g. input costs, SRM*)	○	○	○	○	○	○
Regulatory Compliance (*e.g. labor, environmental standard*)	○	○	○	○	○	○
Overall	○	○	○	○	○	○

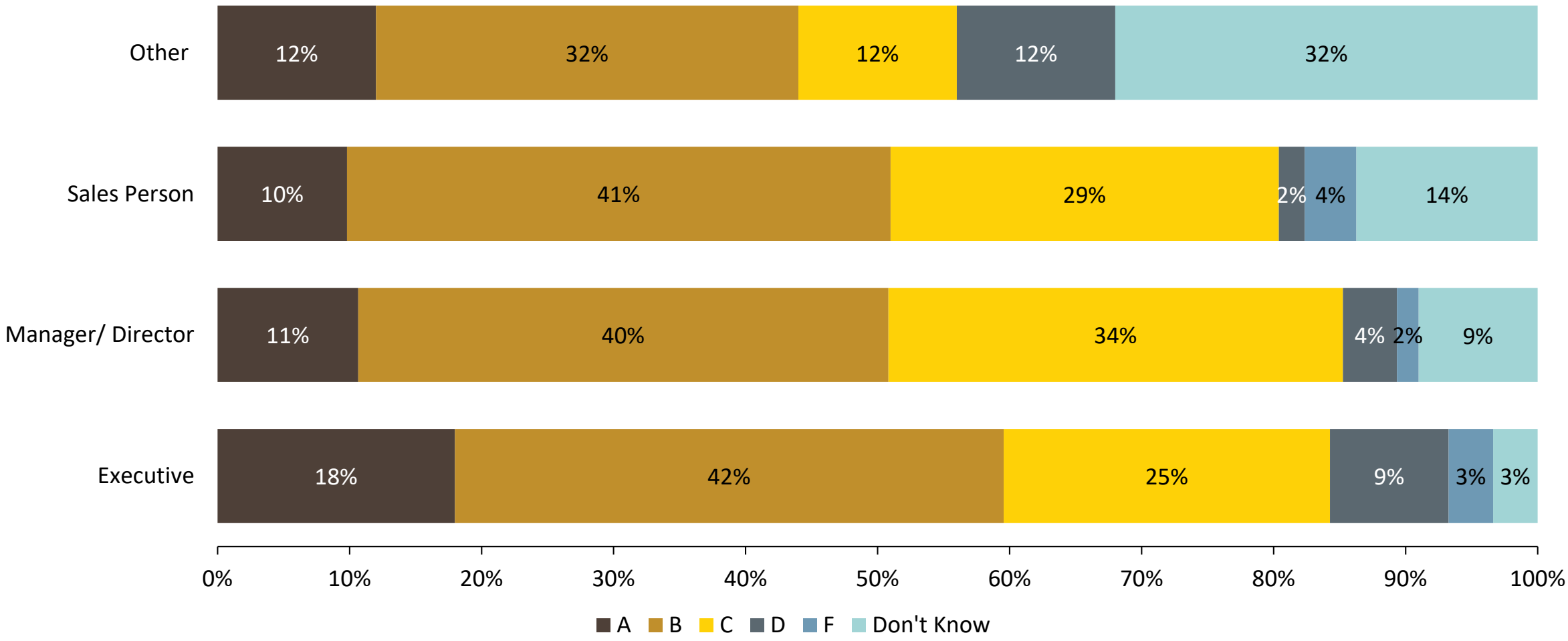
Organization Grade on Data Analytics by Role – Inbound Logistics



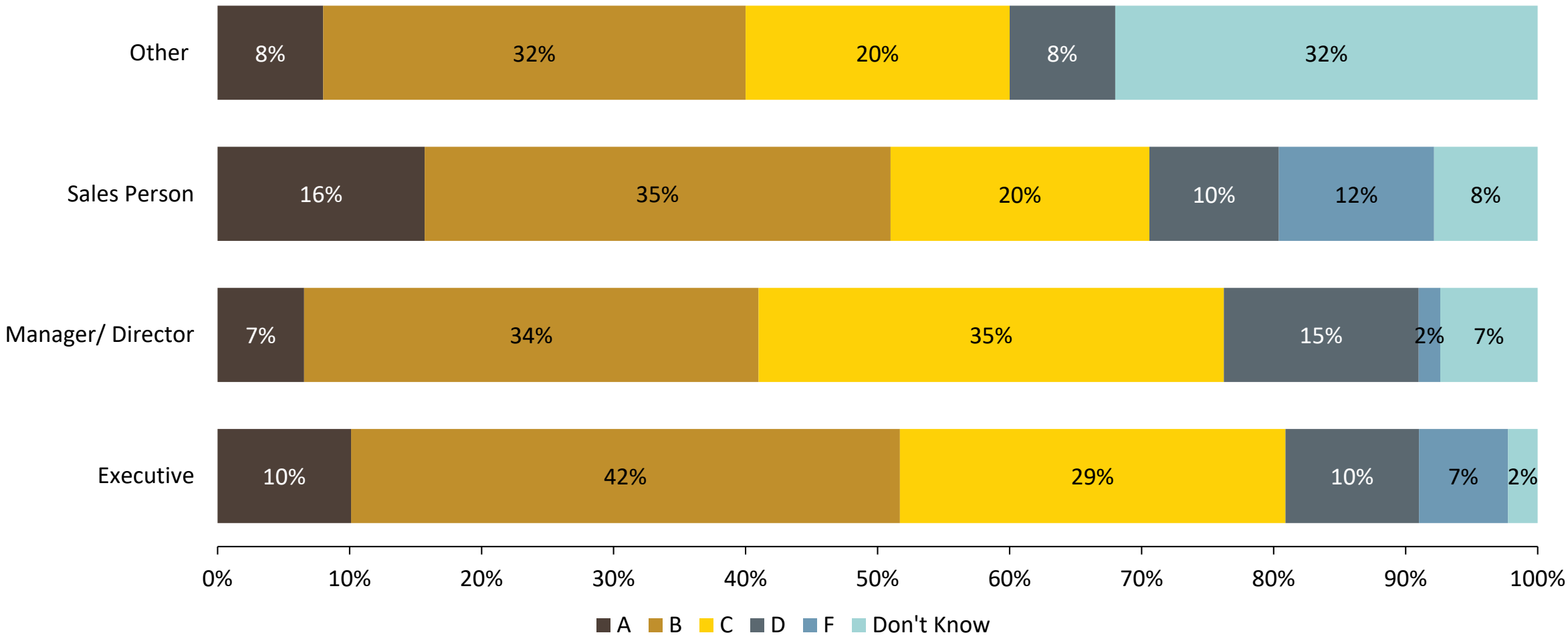
Organization Grade on Data Analytics by Role – Operations



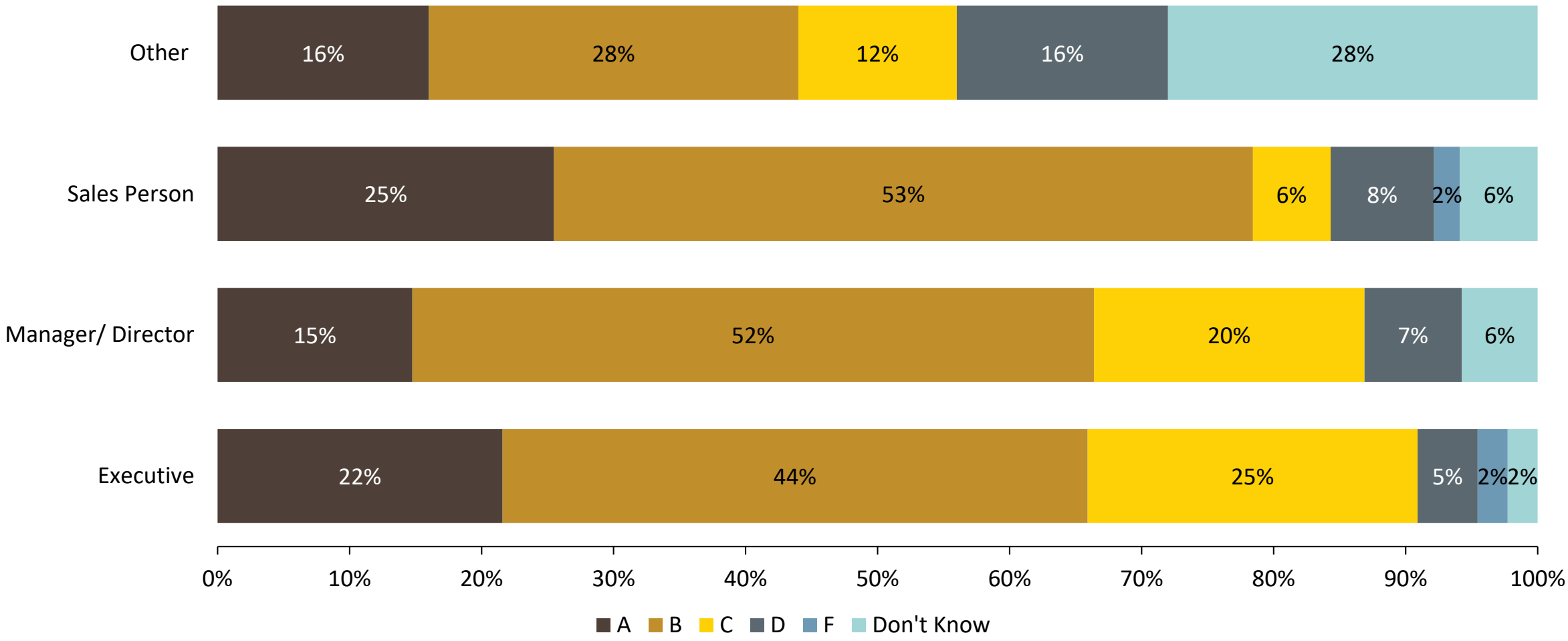
Organization Grade on Data Analytics by Role – Outbound Logistics



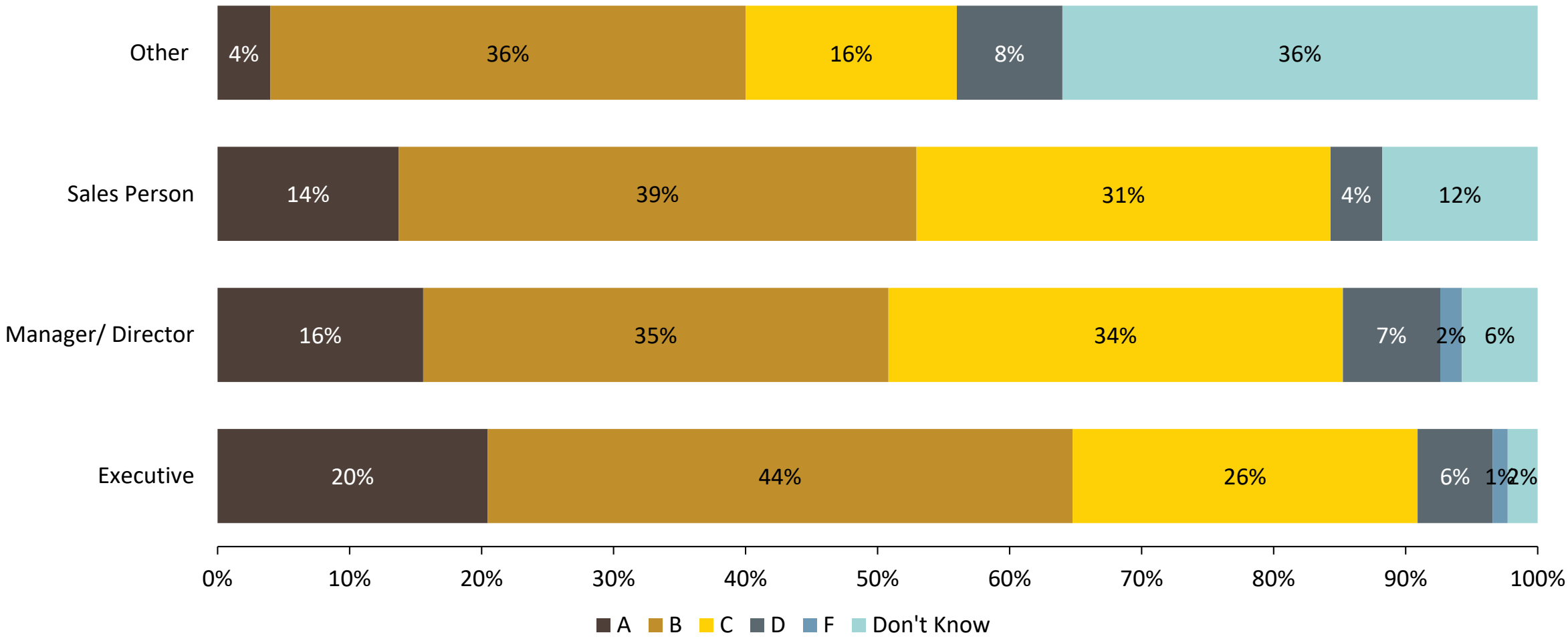
Organization Grade on Data Analytics by Role – Marketing



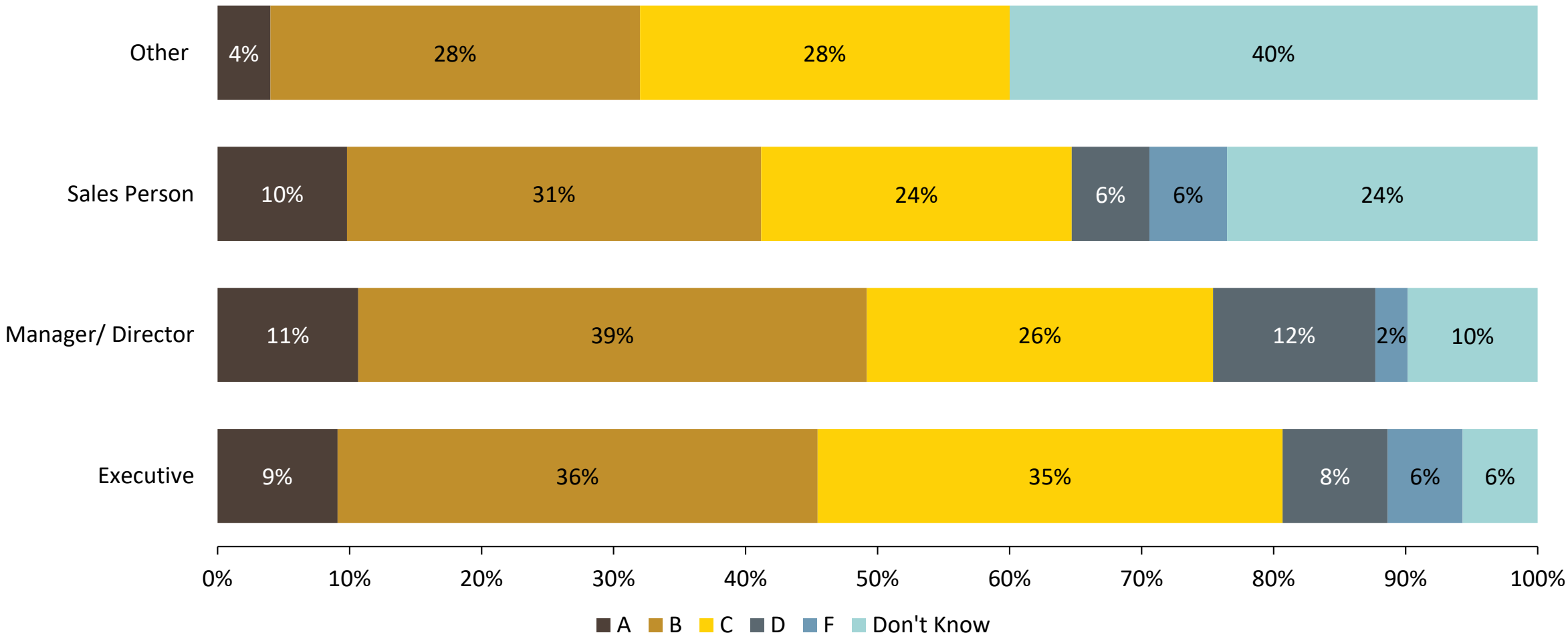
Organization Grade on Data Analytics by Role – Sales



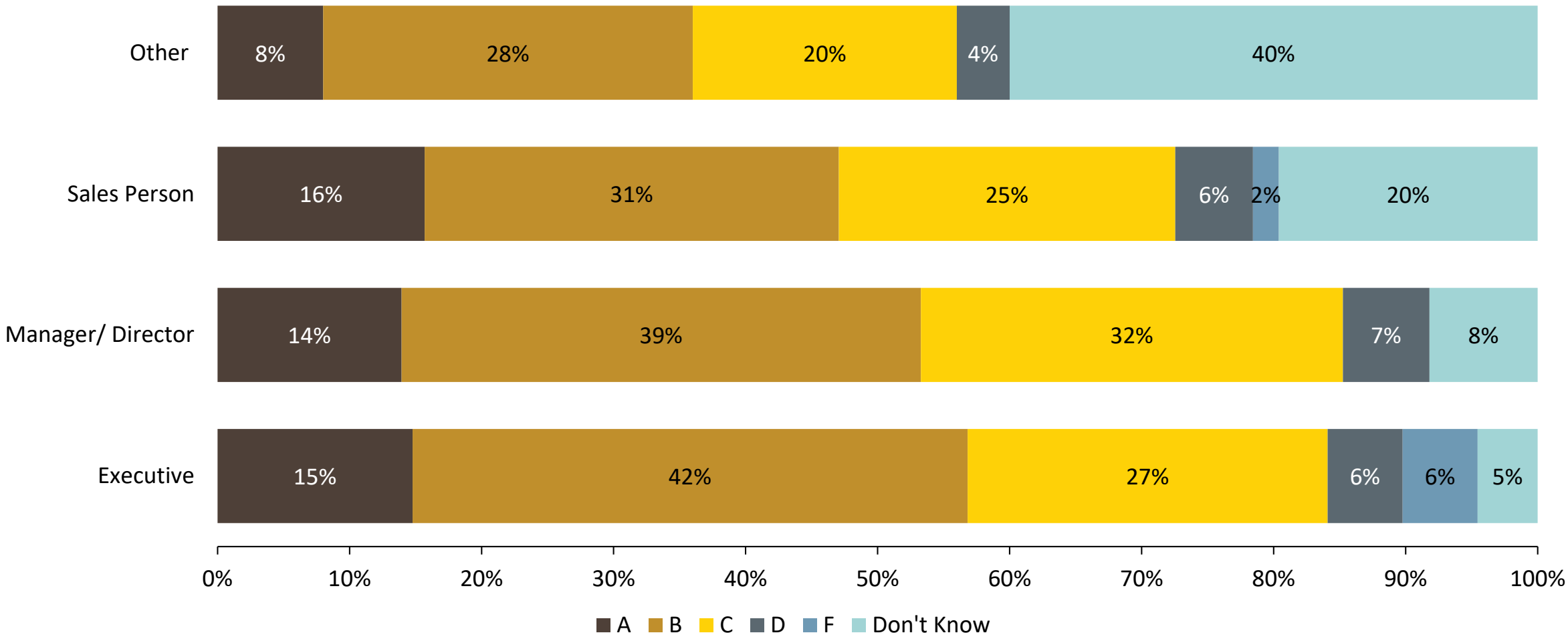
Organization Grade on Data Analytics by Role – Service



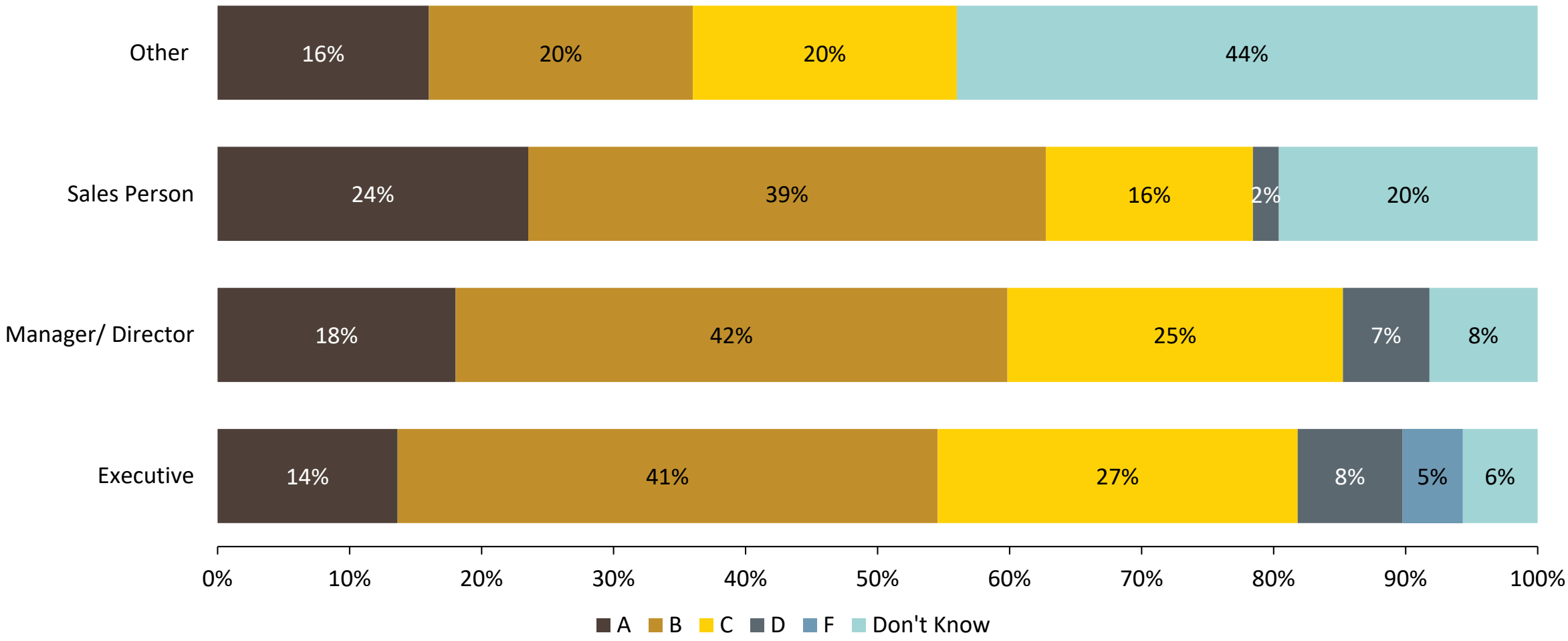
Organization Grade on Data Analytics by Role – HR Management



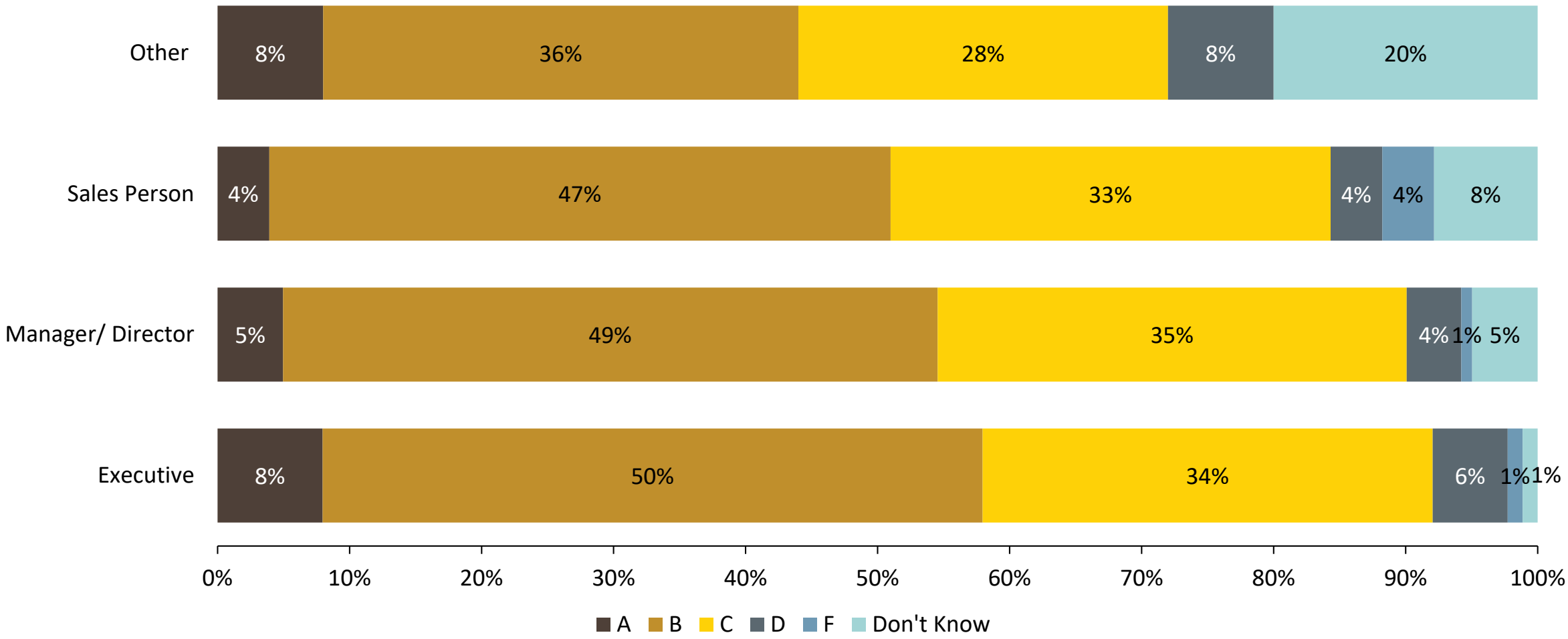
Organization Grade on Data Analytics by Role – Procurement



Organization Grade on Data Analytics by Role – Regulatory Compliance



Organization Grade on Data Analytics by Role – Overall



Most Important Benefits of Data Analytics by Role

What do you see as the most important benefit of data analytics? Please rank the following statements from 1 to 6, where 1 is ***"the most important benefit"*** and 6 is ***"the least important benefit"***. *(Drag each term and drop it to desired rank)*

Improved decision-making

Improved customer satisfaction

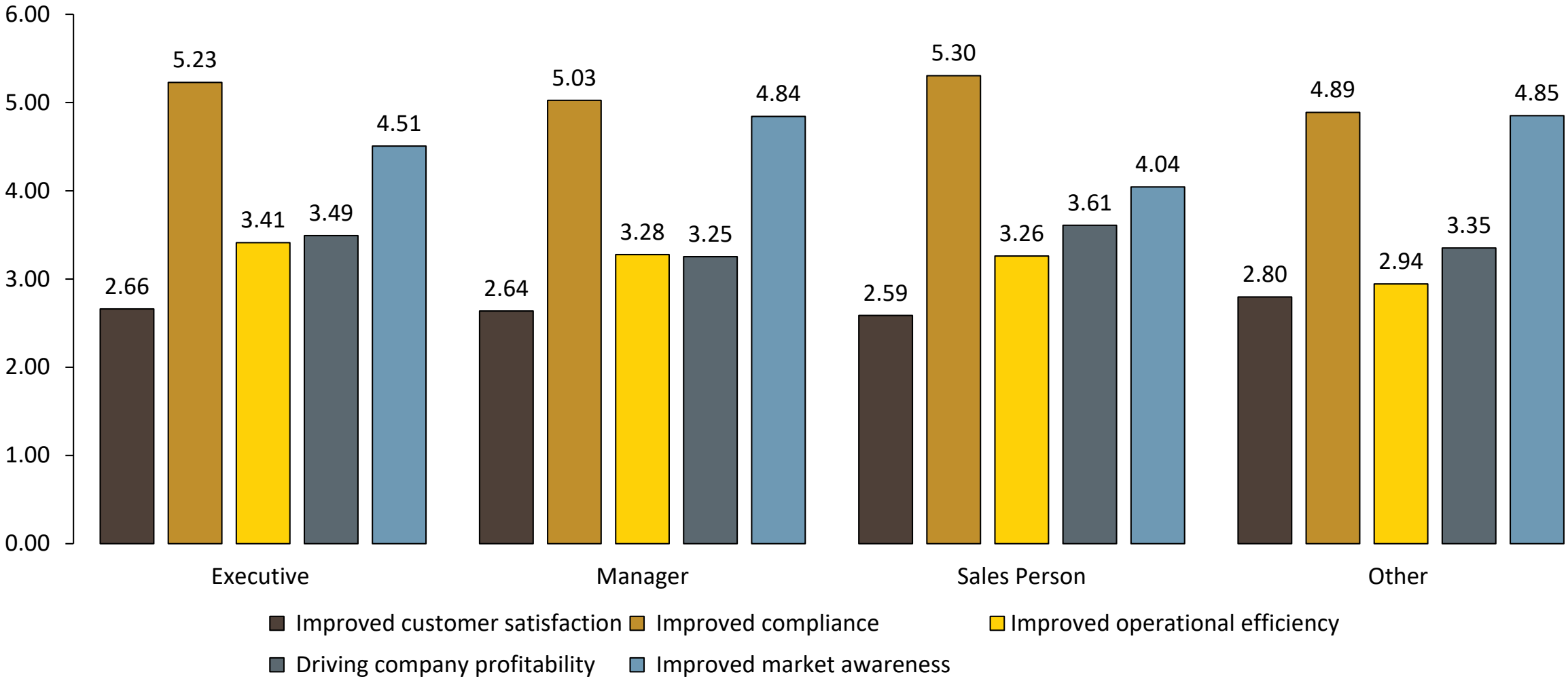
Improved compliance with data protection and privacy regulations

Improved operational efficiency

Driving company profitability

Improved market awareness

Most Important Benefits of Data Analytics by Role



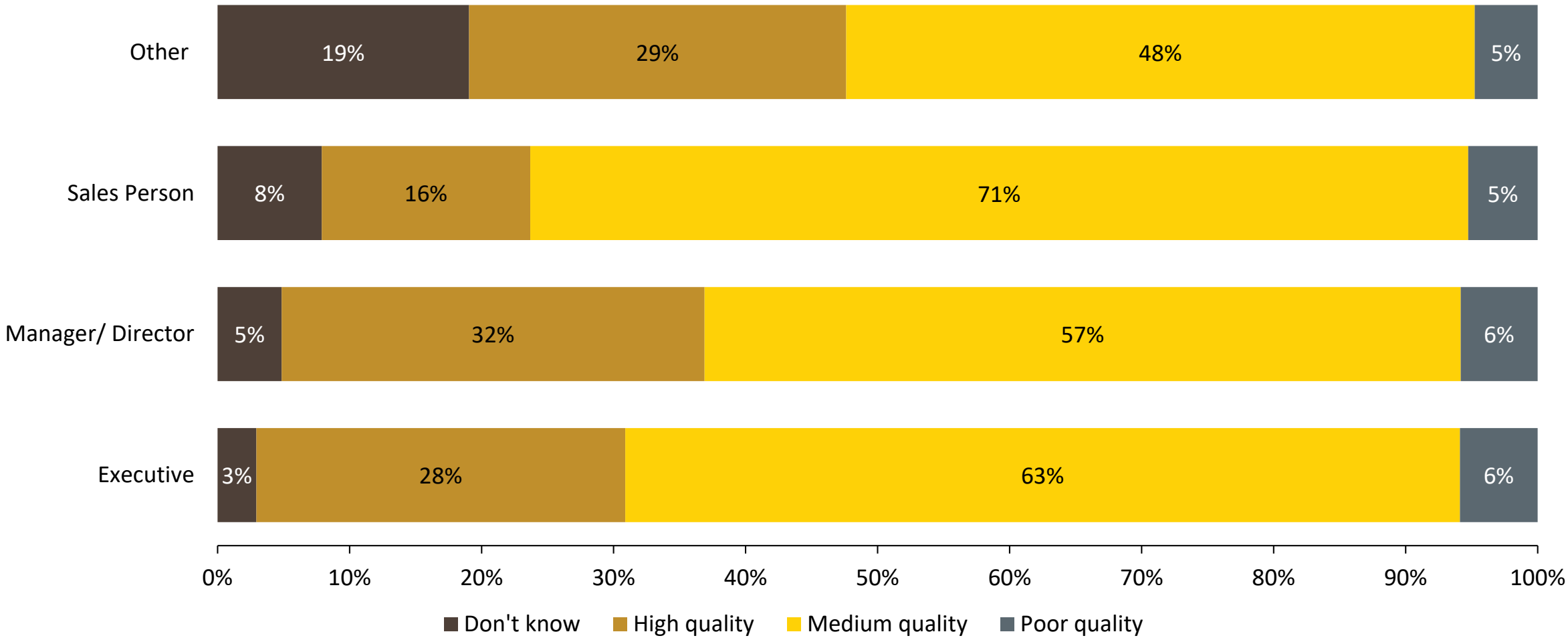
Data Quality by Role

How would you rate your organization on the **quality** of collected data in the following business functions?

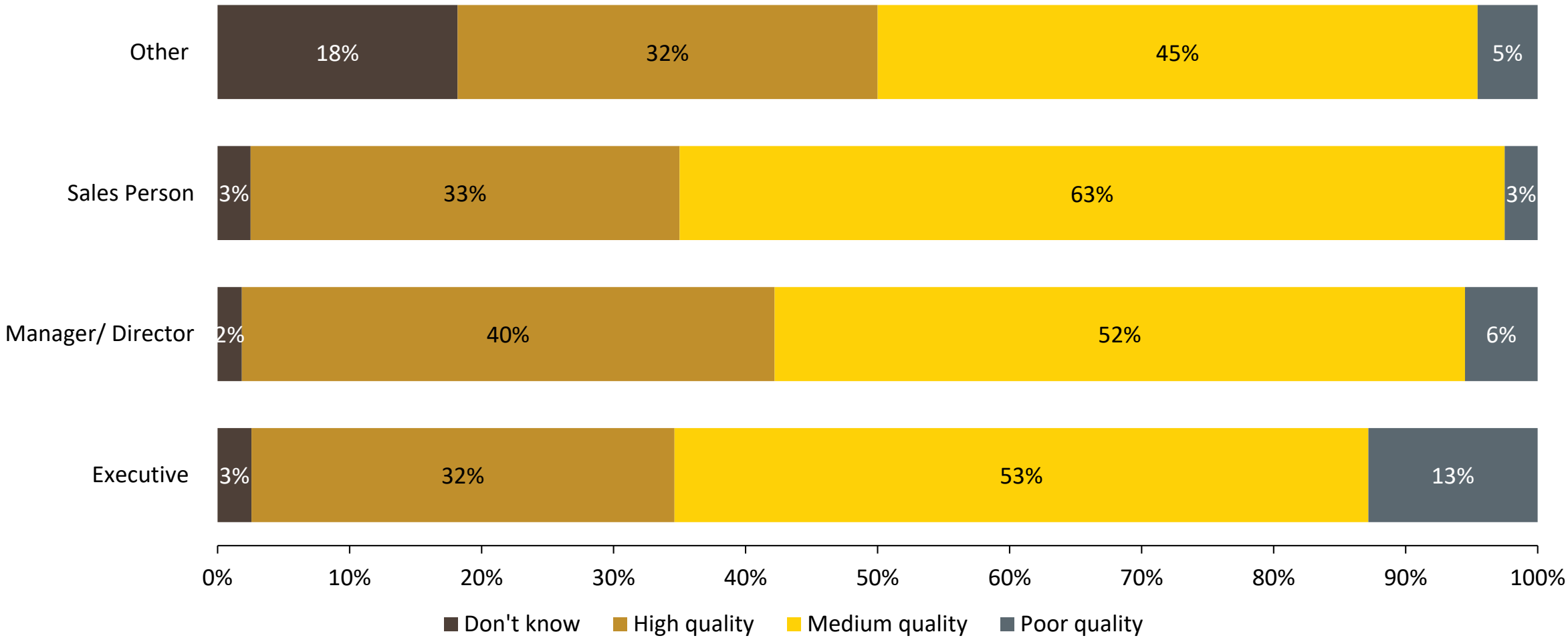
*(**Quality** refers to completeness, validity, consistency, timeliness and accuracy that makes data appropriate for a specific use.)*

	Poor quality	Medium quality	High quality	Don't know
Inbound Logistics (*e.g. ordering/receiving, inventory replenishment*)	○	○	○	○
Operations (*e.g. production volumes, process details, quality control, efficiency measure*)	○	○	○	○
Outbound Logistics (*e.g. ordering/delivery*)	○	○	○	○
Marketing (*e.g. customer data/CRM, product development, product life-cycle, segmentation*)	○	○	○	○
Sales (*e.g. customer orders, referrals, transactional data*)	○	○	○	○
Service (*e.g. application, repair, tech support*)	○	○	○	○
HR Management (*e.g. goal setting and monitoring, compensation, payroll, benefits*)	○	○	○	○
Procurement (*e.g. input costs, SRM*)	○	○	○	○
Regulatory Compliance (*e.g. labor, environmental standard*)	○	○	○	○

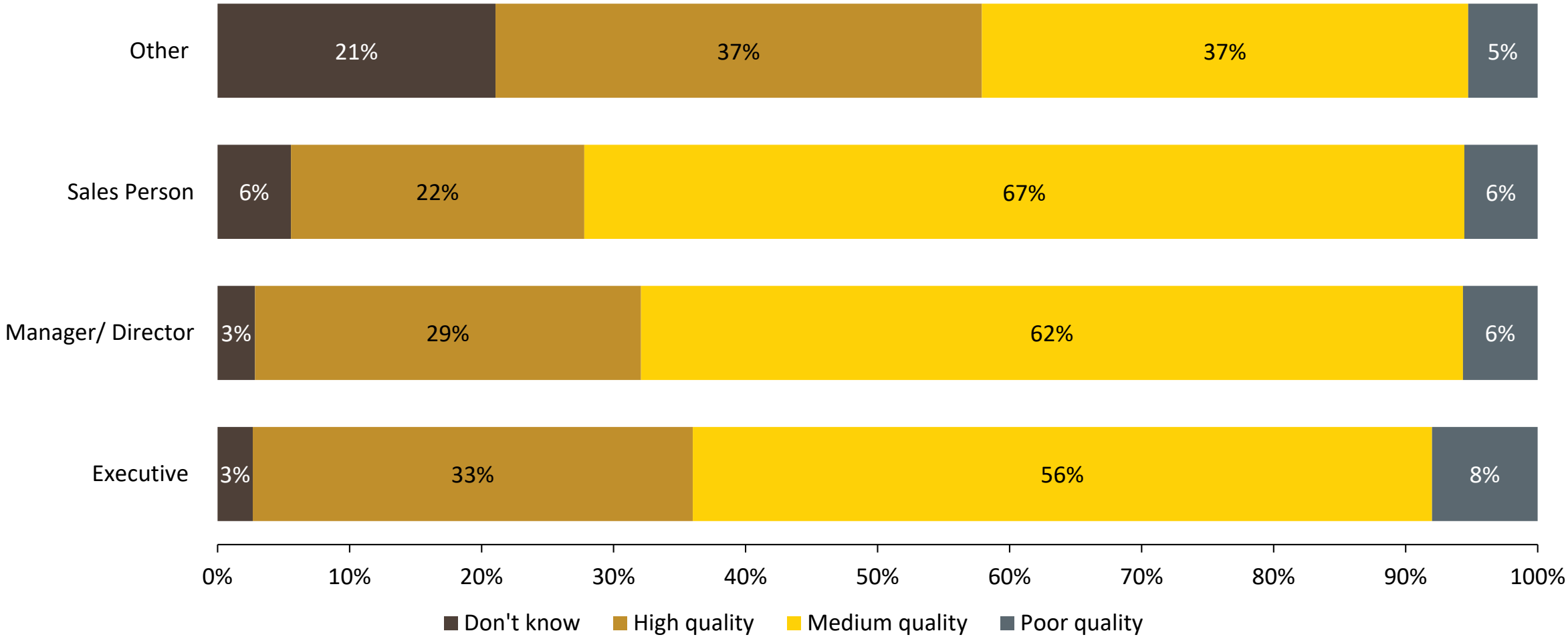
Data Quality by Role - Inbound Logistics



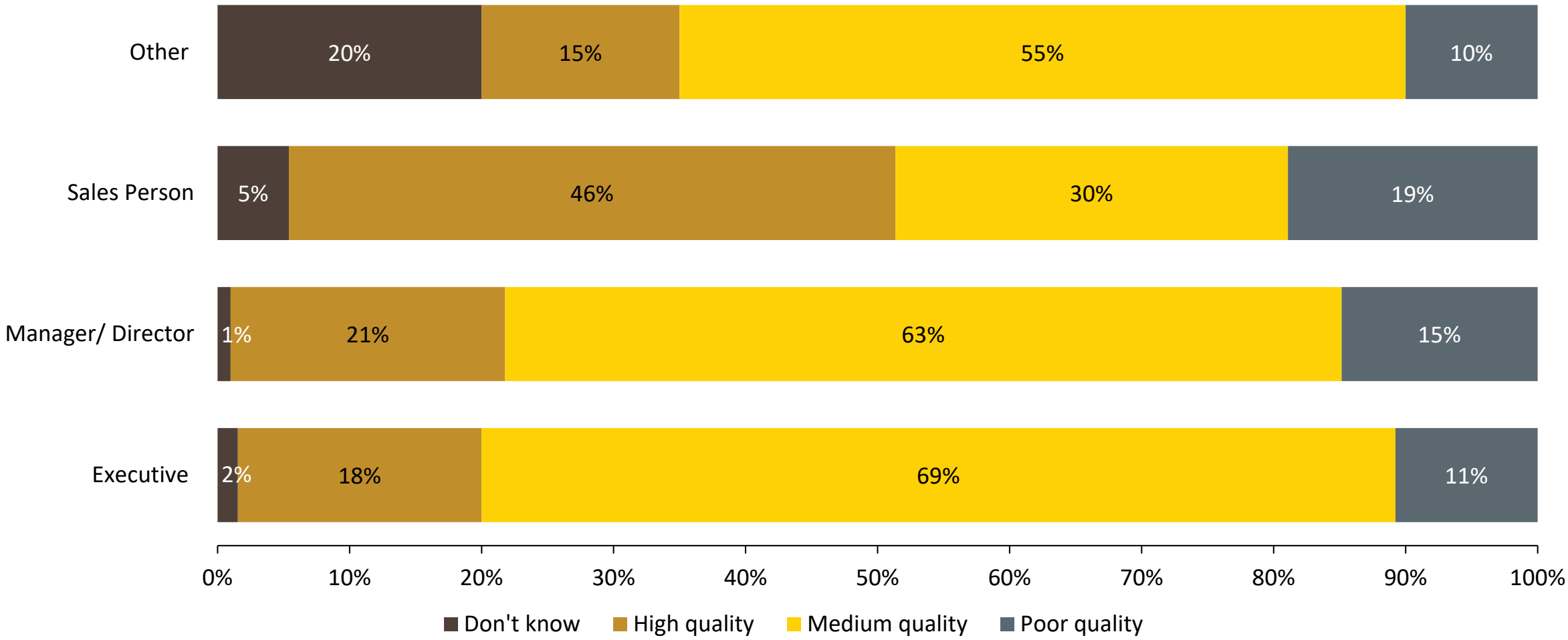
Data Quality by Role - Operations



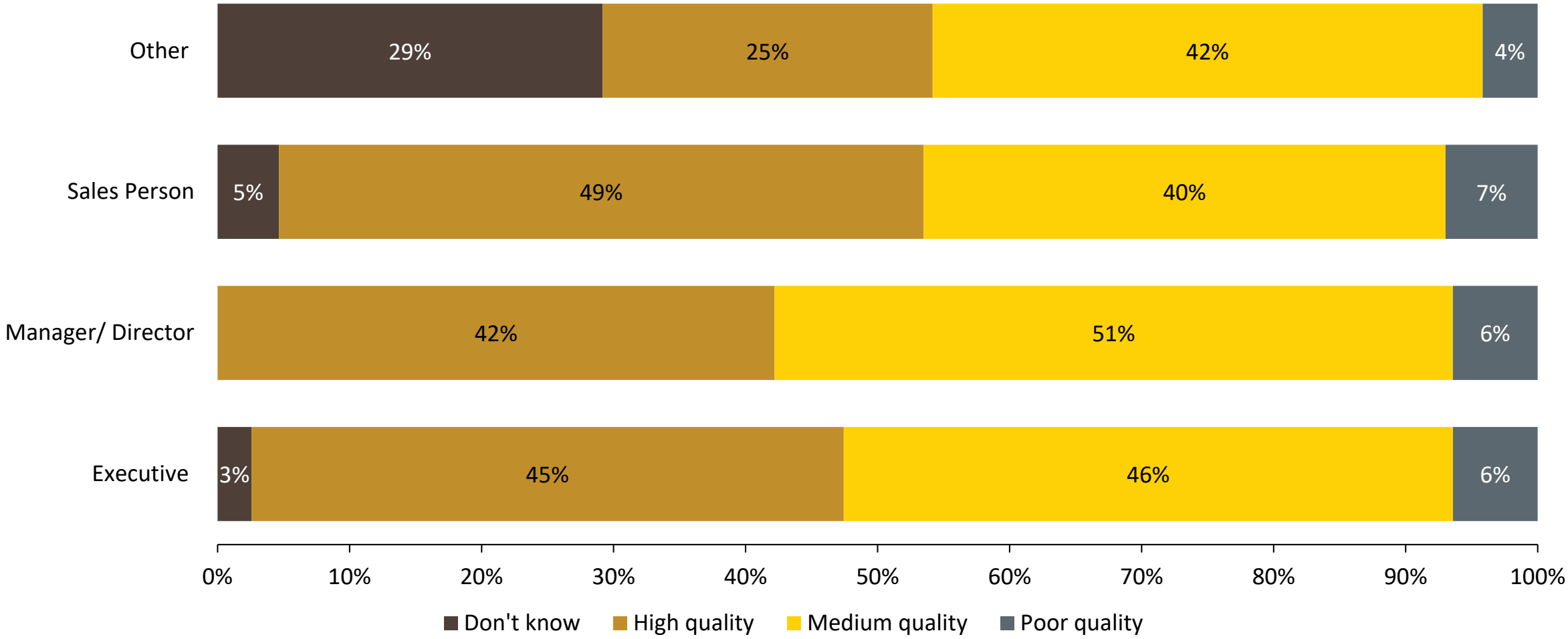
Data Quality by Role – Outbound Logistics



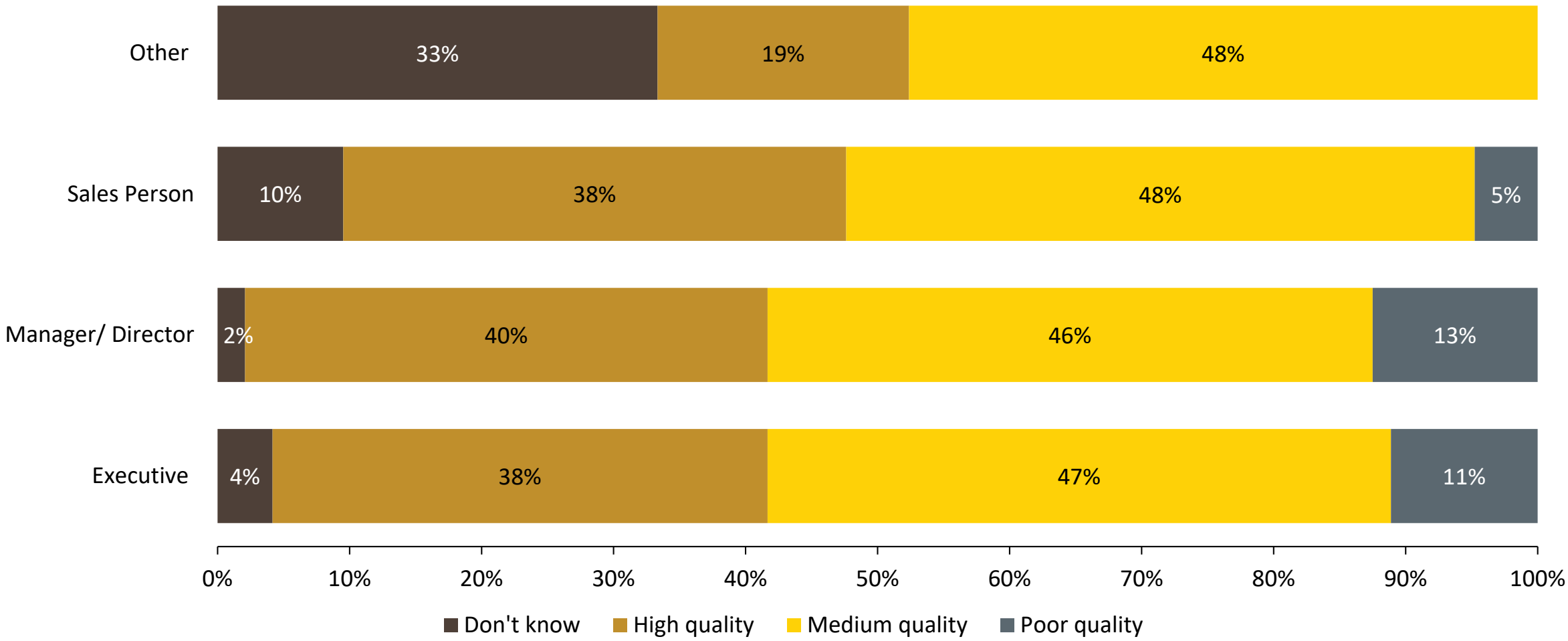
Data Quality by Role - Marketing



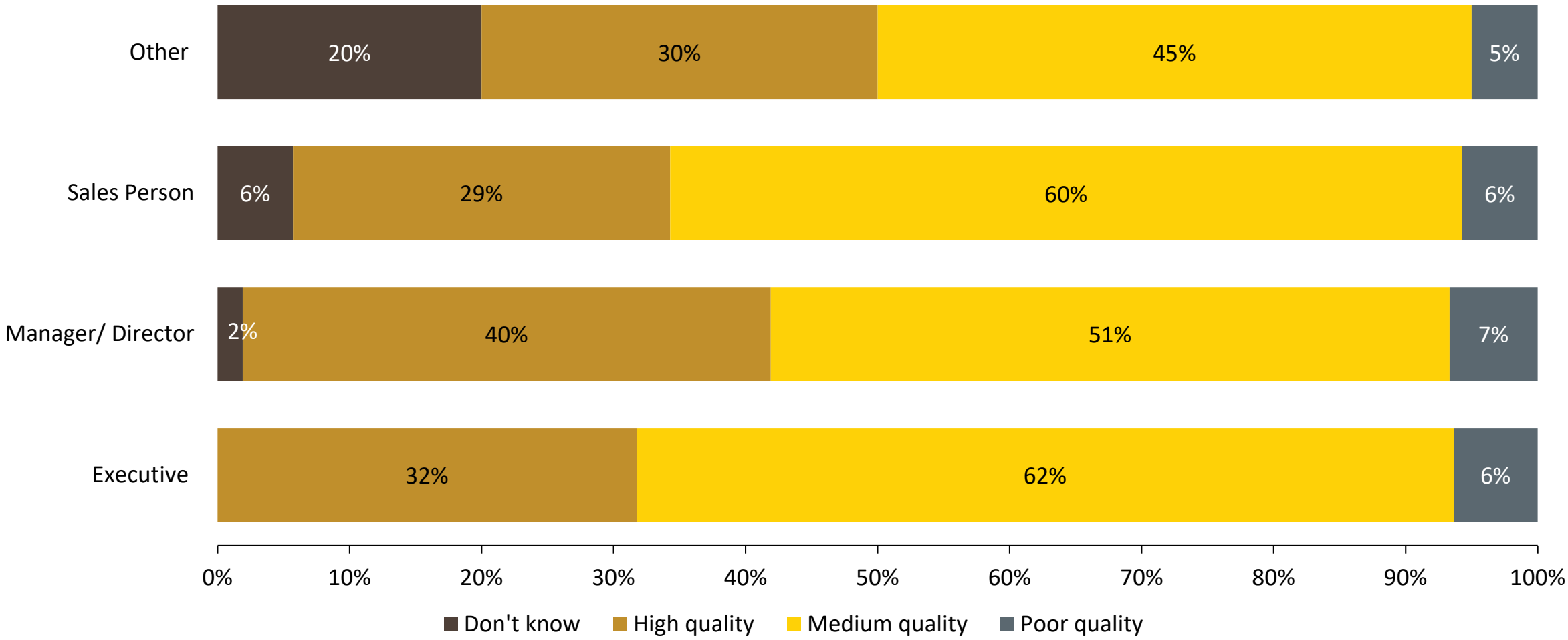
Data Quality by Role - Sales



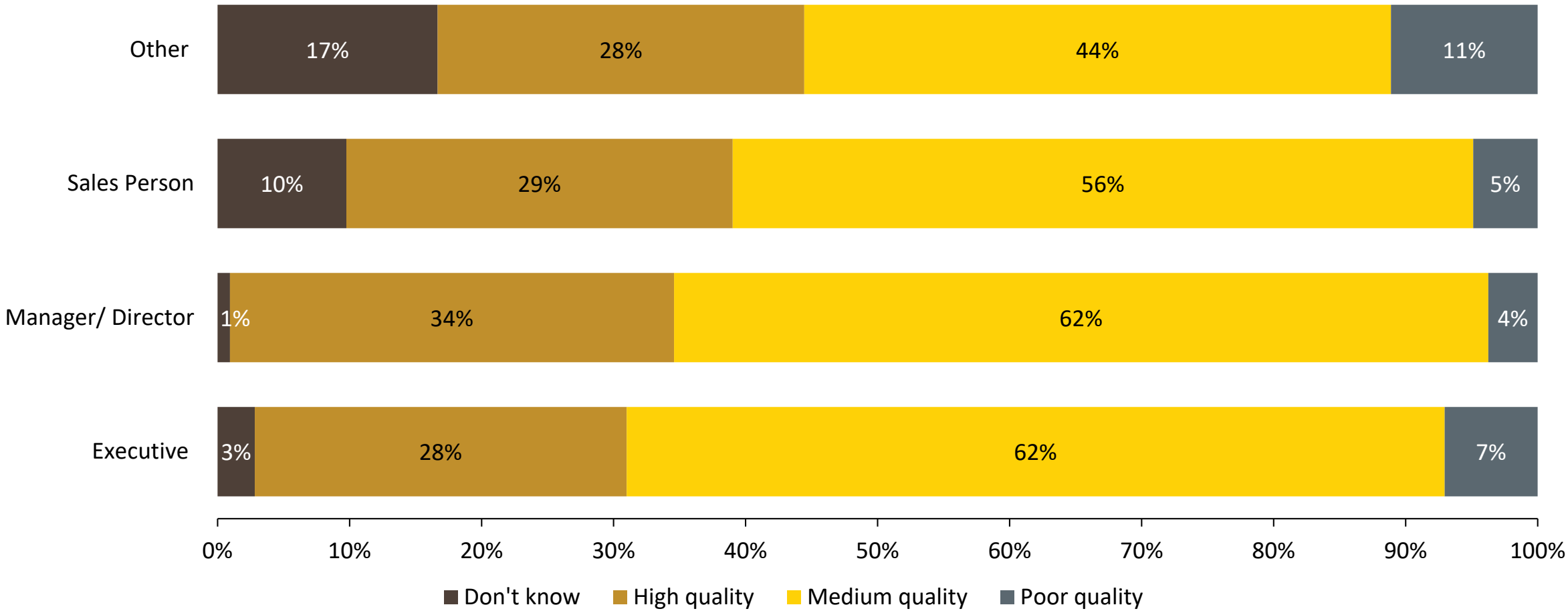
Data Quality by Role - Service



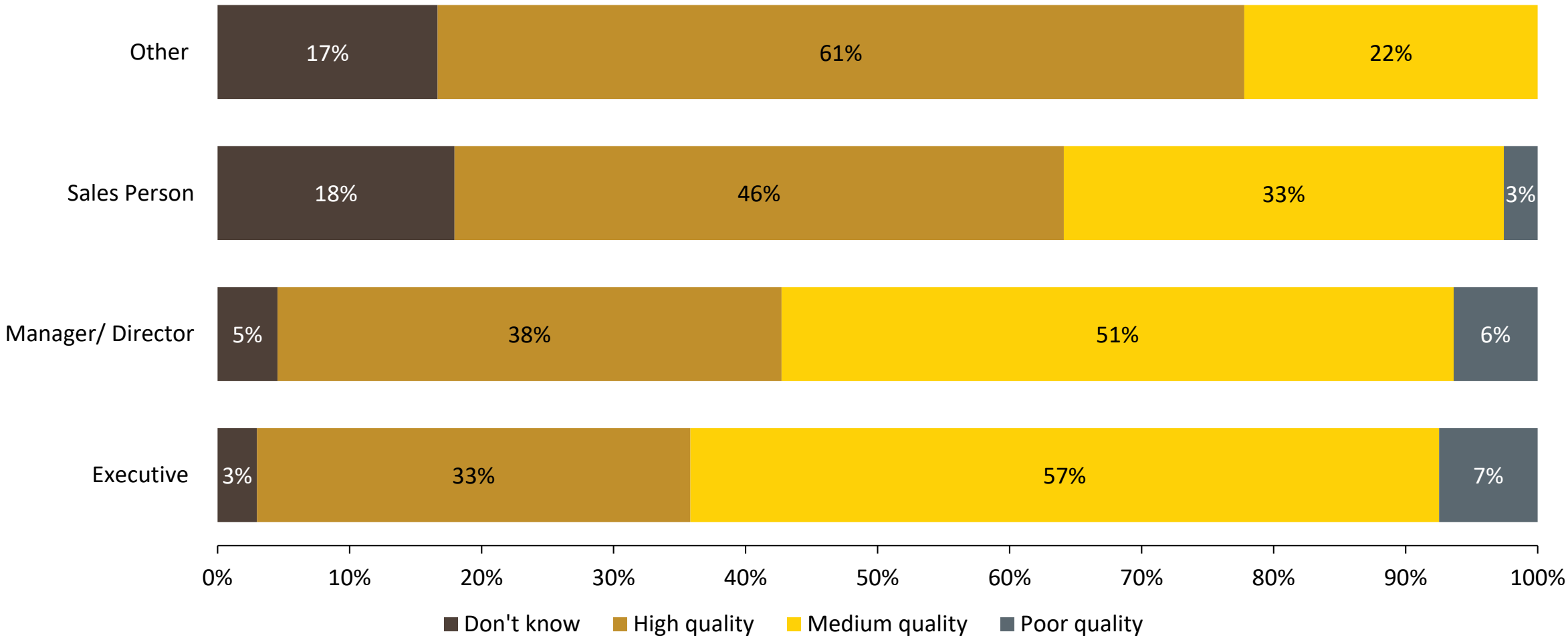
Data Quality by Role - HR Management



Data Quality by Role - Procurement



Data Quality by Role - Regulatory Compliance

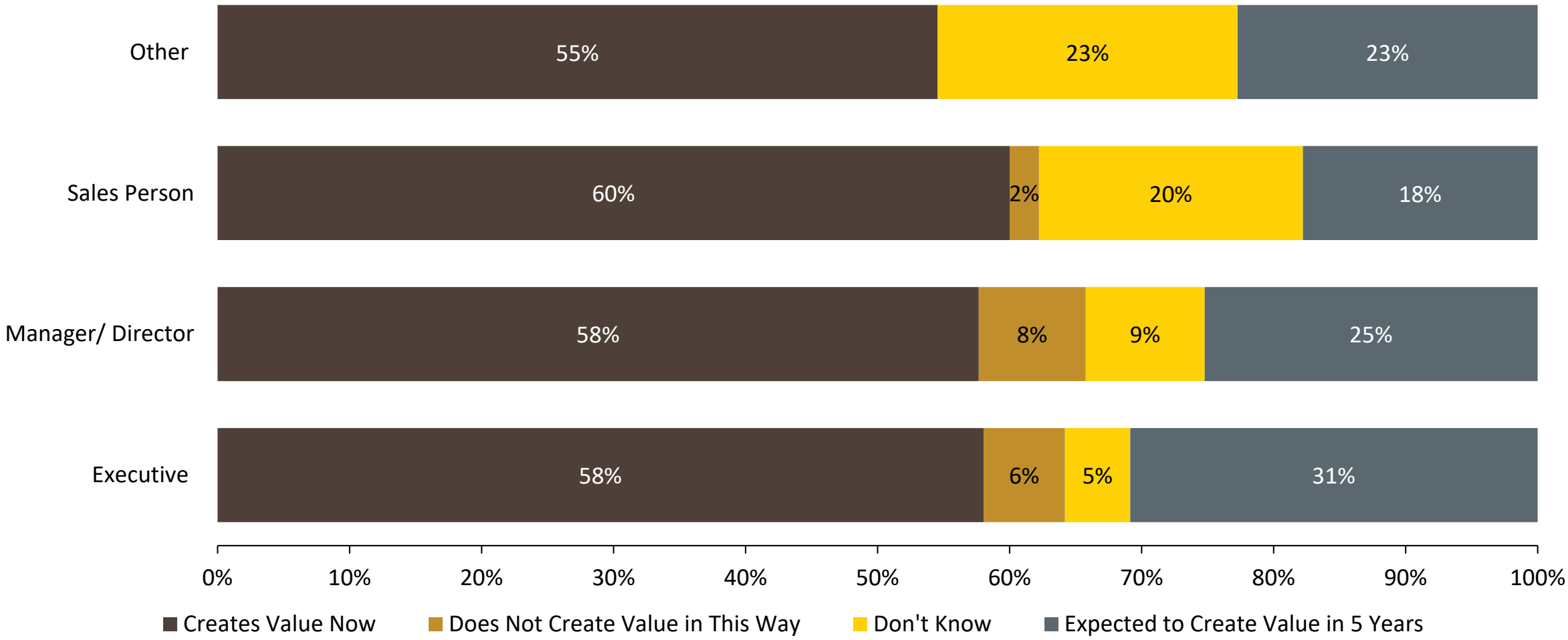


Value Creation by Role

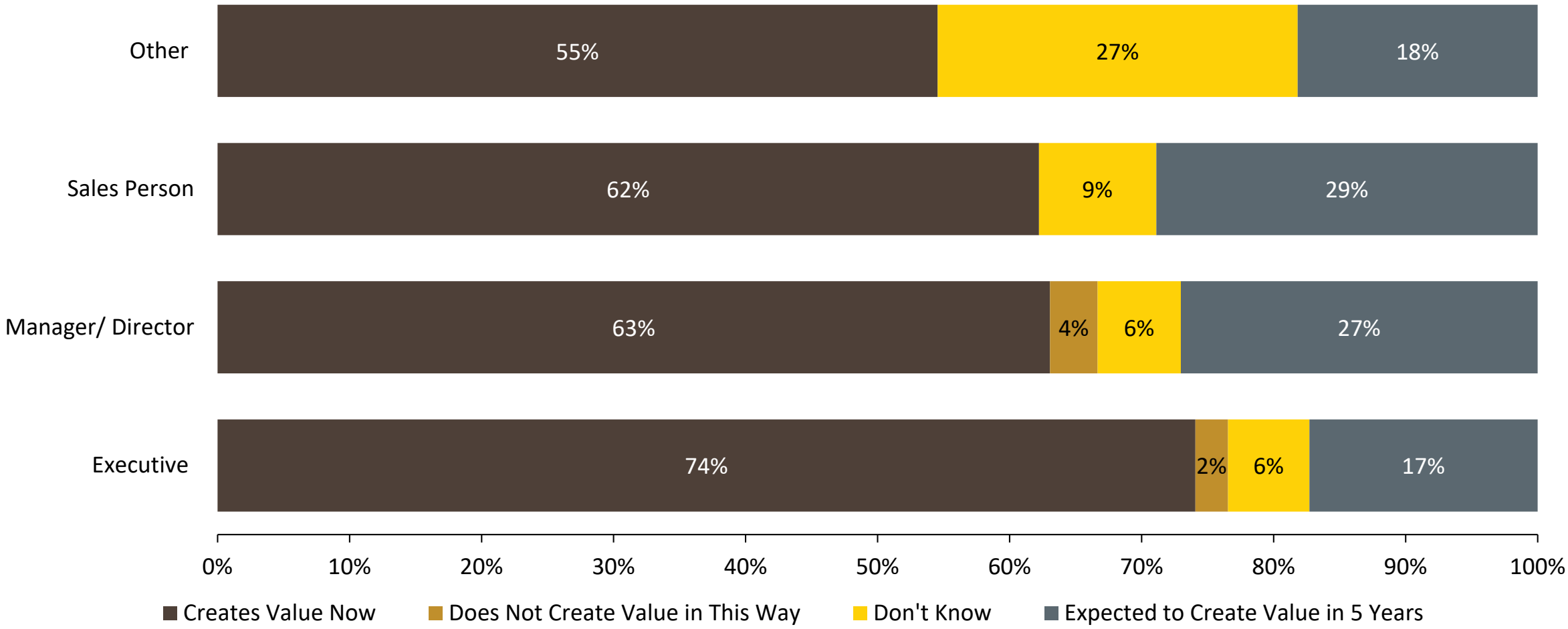
Does **data analytics** create, or is it expected to create, **value** in the following business functions of your organization?

	Creates Value **Now**	Expected to Create Value **in 5 Years**	**Does Not** Create Value in This Way	Don't Know
Inbound Logistics (*e.g. ordering/receiving, inventory replenishment*)	○	○	○	○
Operations (*e.g. production volumes, process details, quality control, efficiency measure*)	○	○	○	○
Outbound Logistics (*e.g. ordering/delivery*)	○	○	○	○
Marketing (*e.g. customer data/CRM, product development, product life-cycle, segmentation*)	○	○	○	○
Sales (*e.g. customer orders, referrals, transactional data*)	○	○	○	○
Service (*e.g. application, repair, tech support*)	○	○	○	○
HR Management (*e.g. goal setting and monitoring, compensation, payroll, benefits*)	○	○	○	○
Procurement (*e.g. input costs, SRM*)	○	○	○	○
Regulatory Compliance (*e.g. labor, environmental standard*)	○	○	○	○

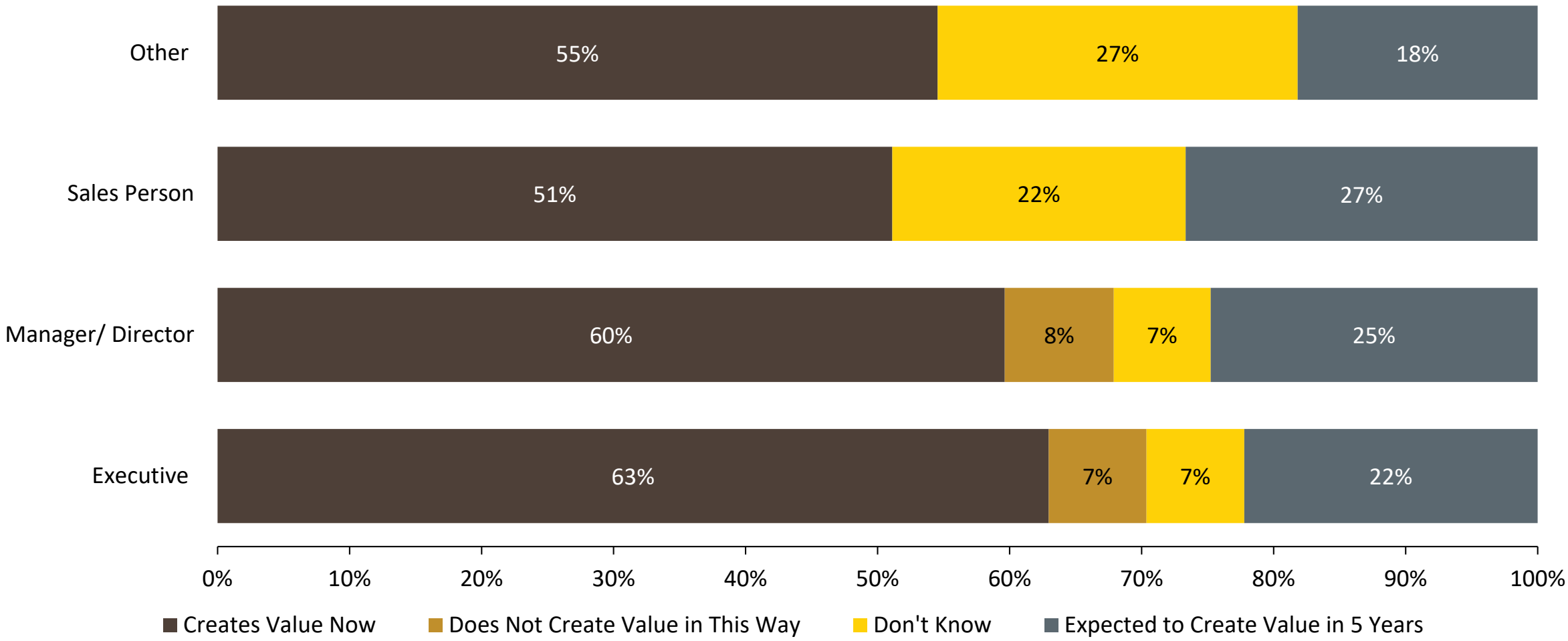
Value Creation by Role - Inbound Logistics



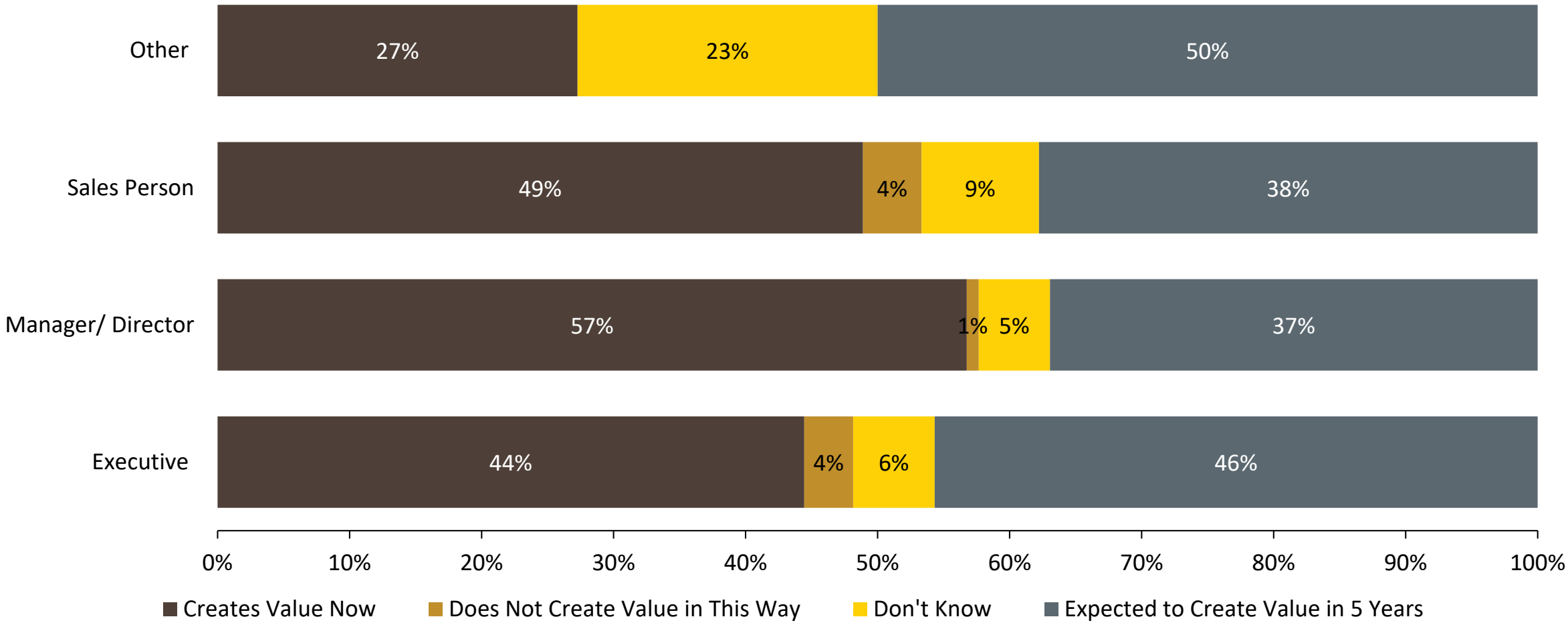
Value Creation by Role - Operations



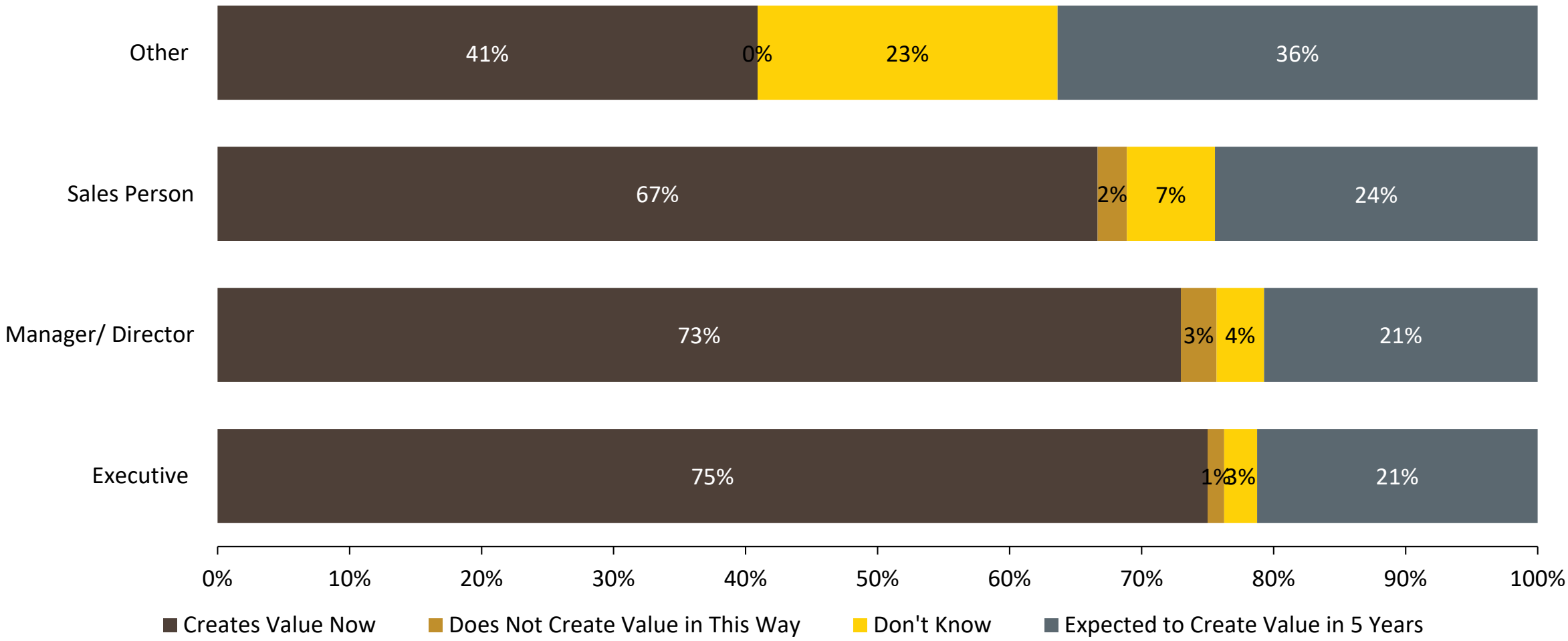
Value Creation by Role - Outbound Logistics



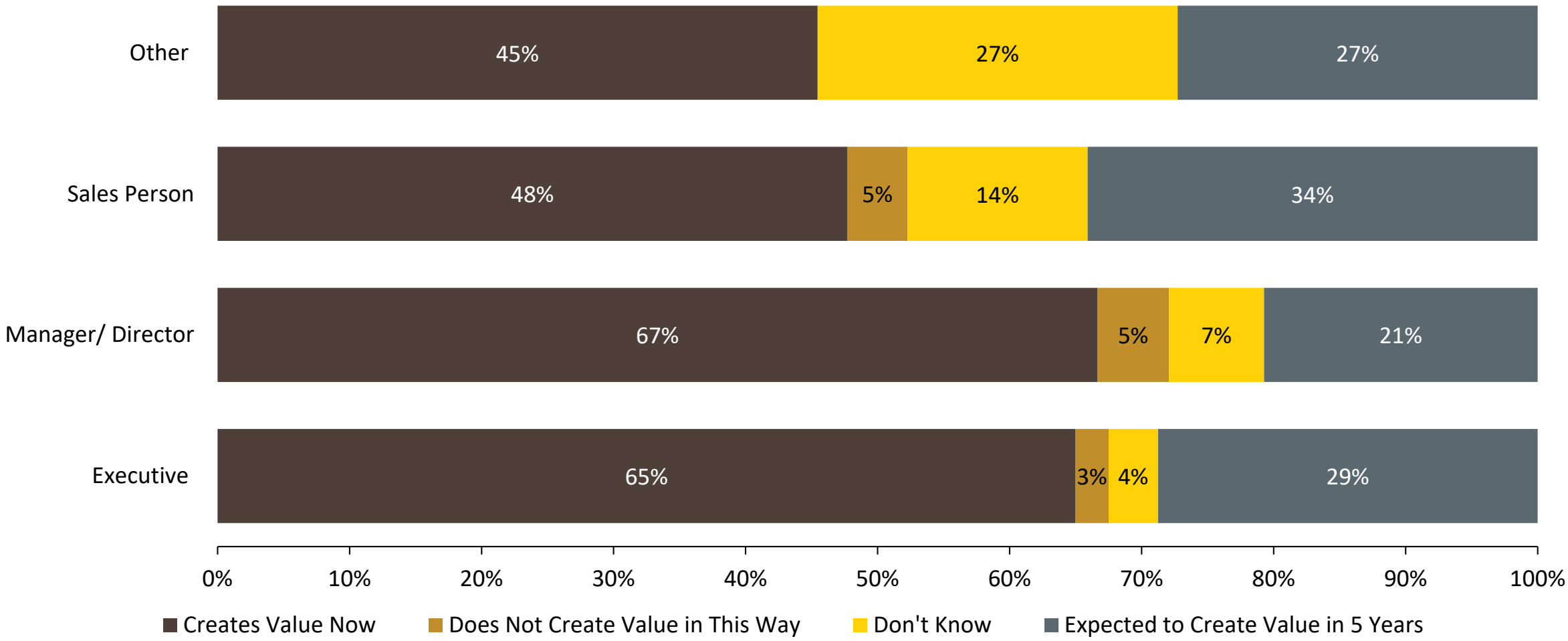
Value Creation by Role - Marketing



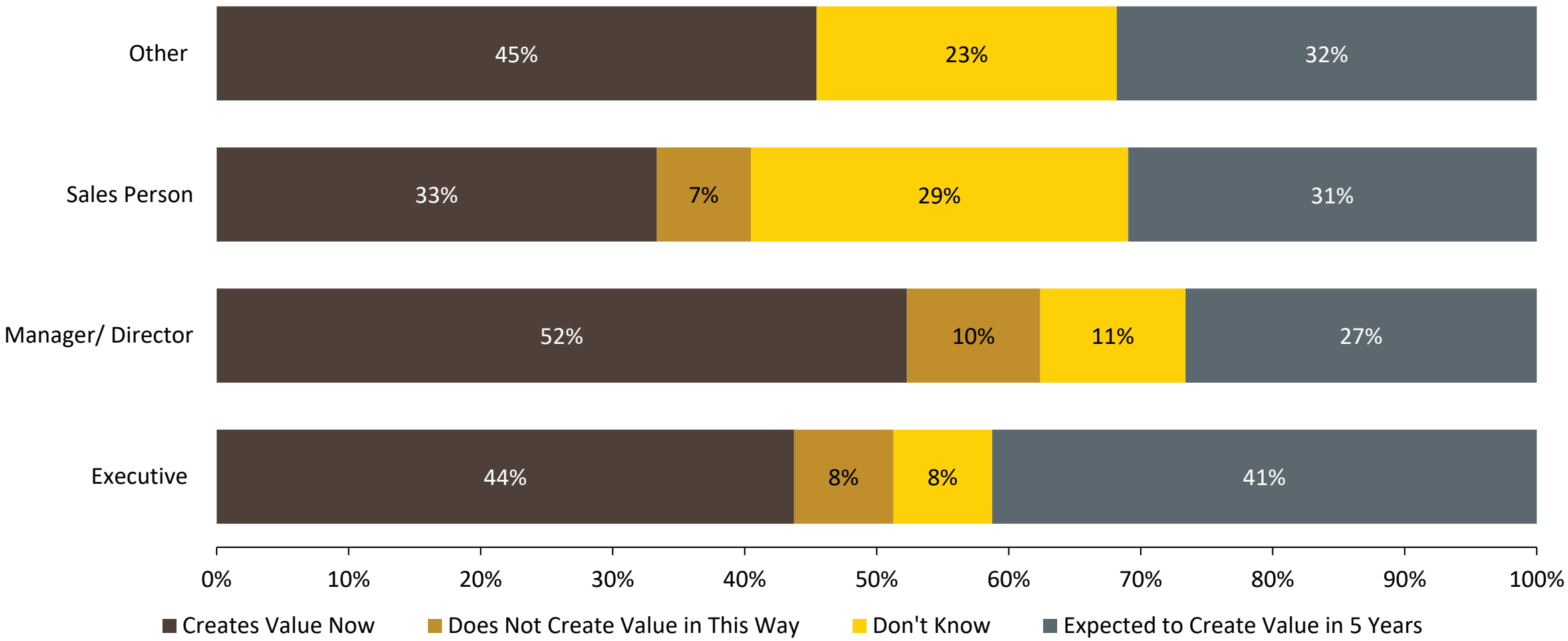
Value Creation by Role - Sales



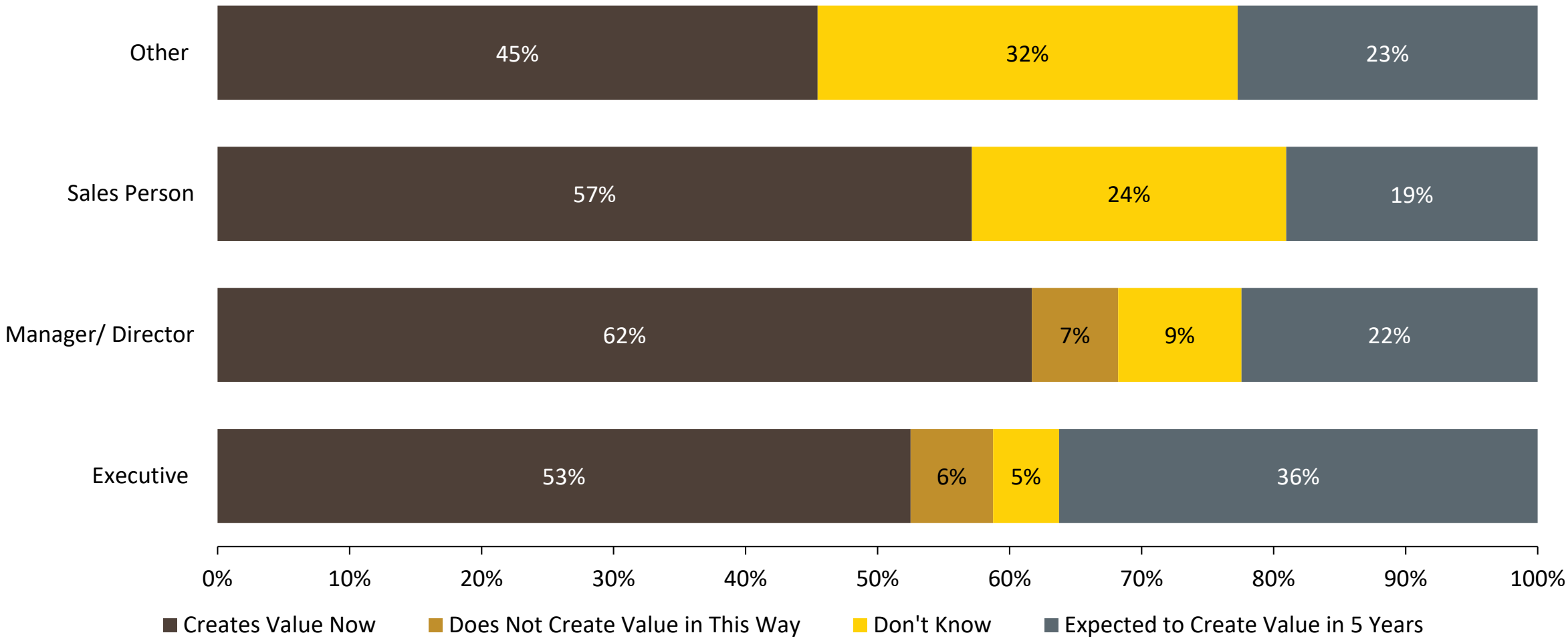
Value Creation by Role - Service



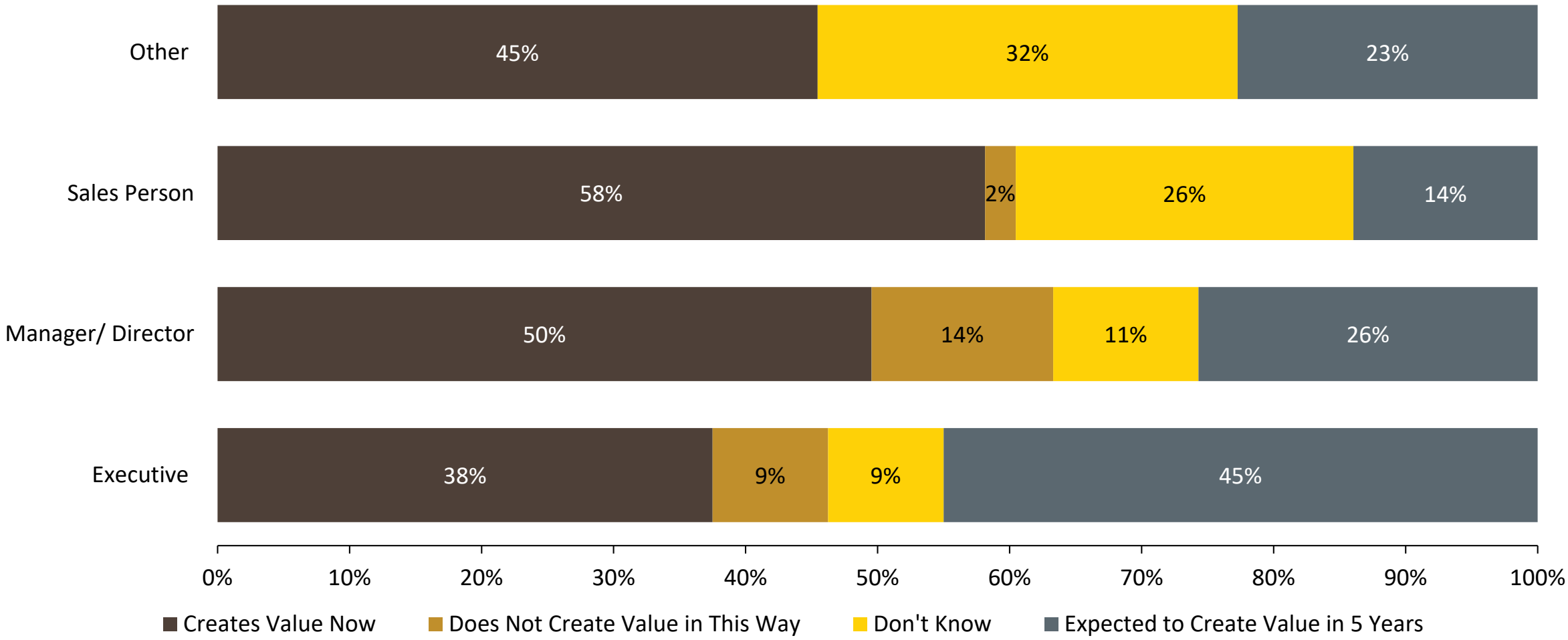
Value Creation by Role - HR Management



Value Creation by Role - Procurement

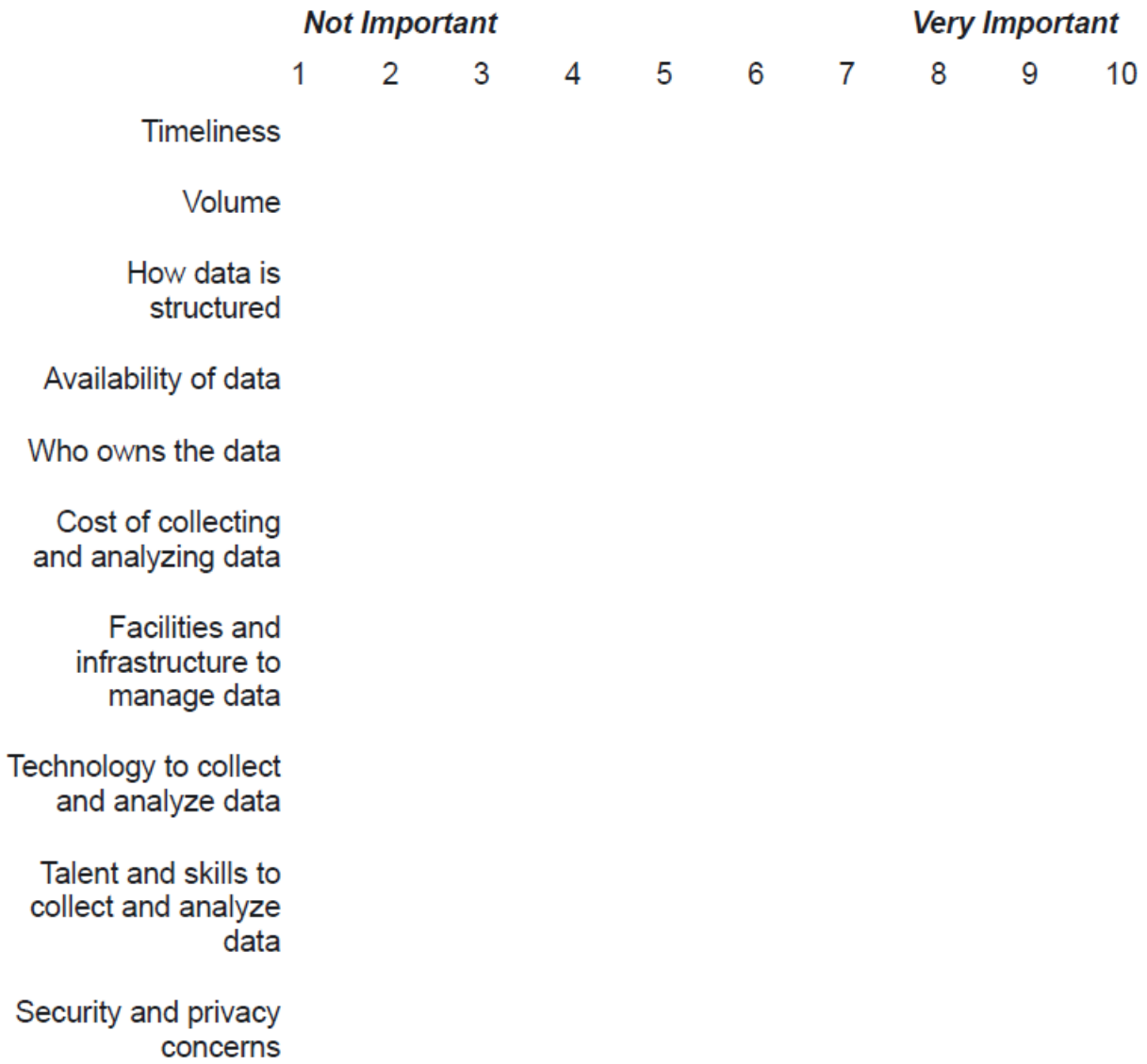


Value Creation by Role - Regulatory Compliance



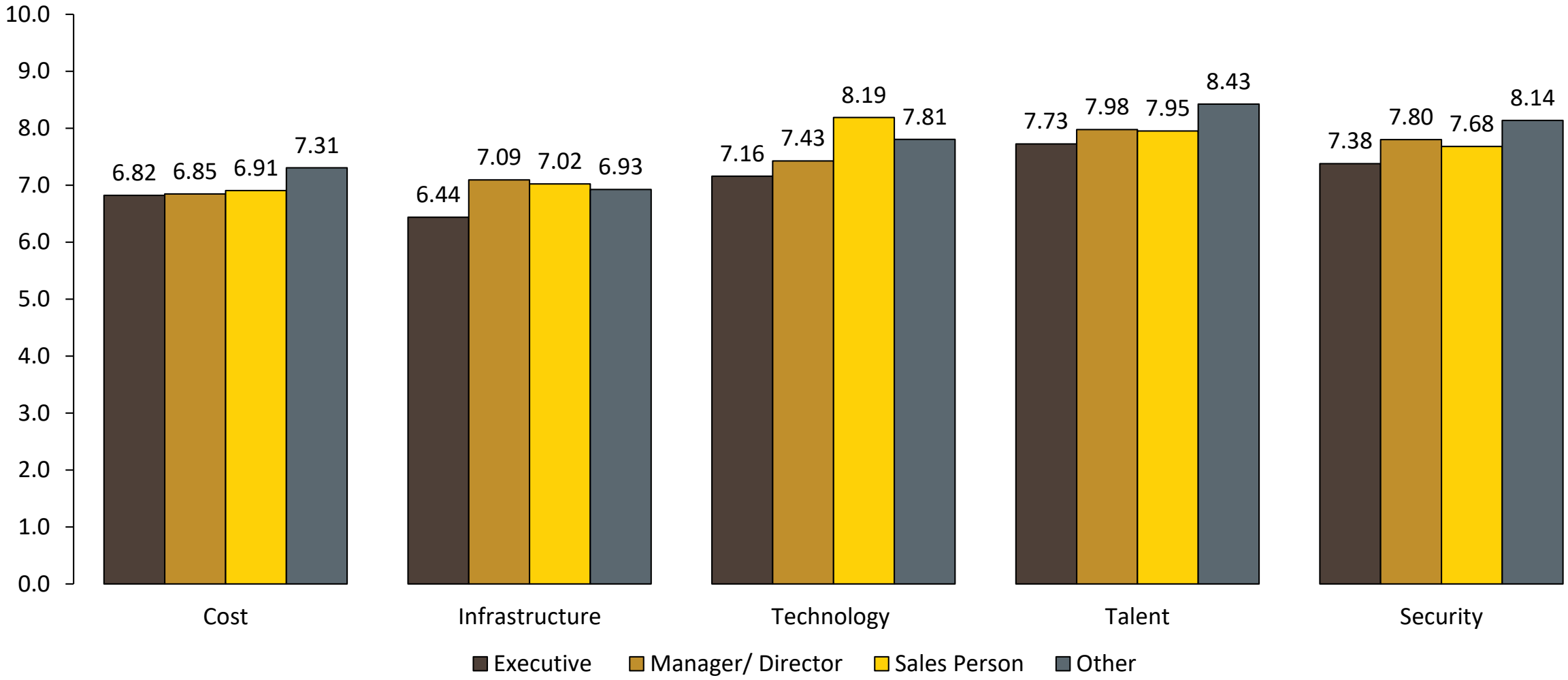
Data Collection Challenges

On a scale of 1 to 10, where 1 means ***"not important"*** and 10 means ***"very important"***, please rate the importance of the following data-related challenges in your organization. *(Use the slider to select your rating.)*



Average Rating of the Most Important Data Related Challenges by Role

Average Rating of the Most Important Data Related Challenges by Role



Decision Made on Data Analytics by The Extent Data is Collected

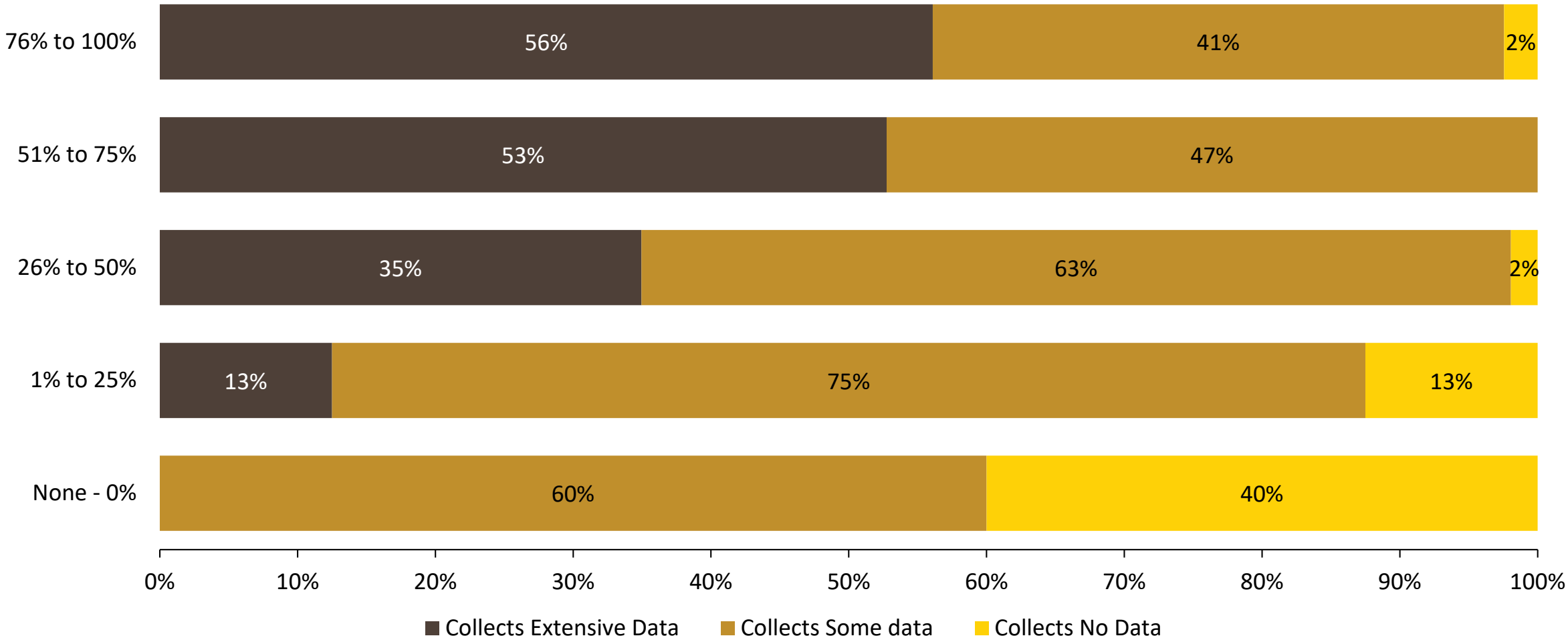
To what extent does your organization **collect data** that is useful?

- ○ Collects No Data
- ○ Collects Some data
- ○ Collects Extensive Data

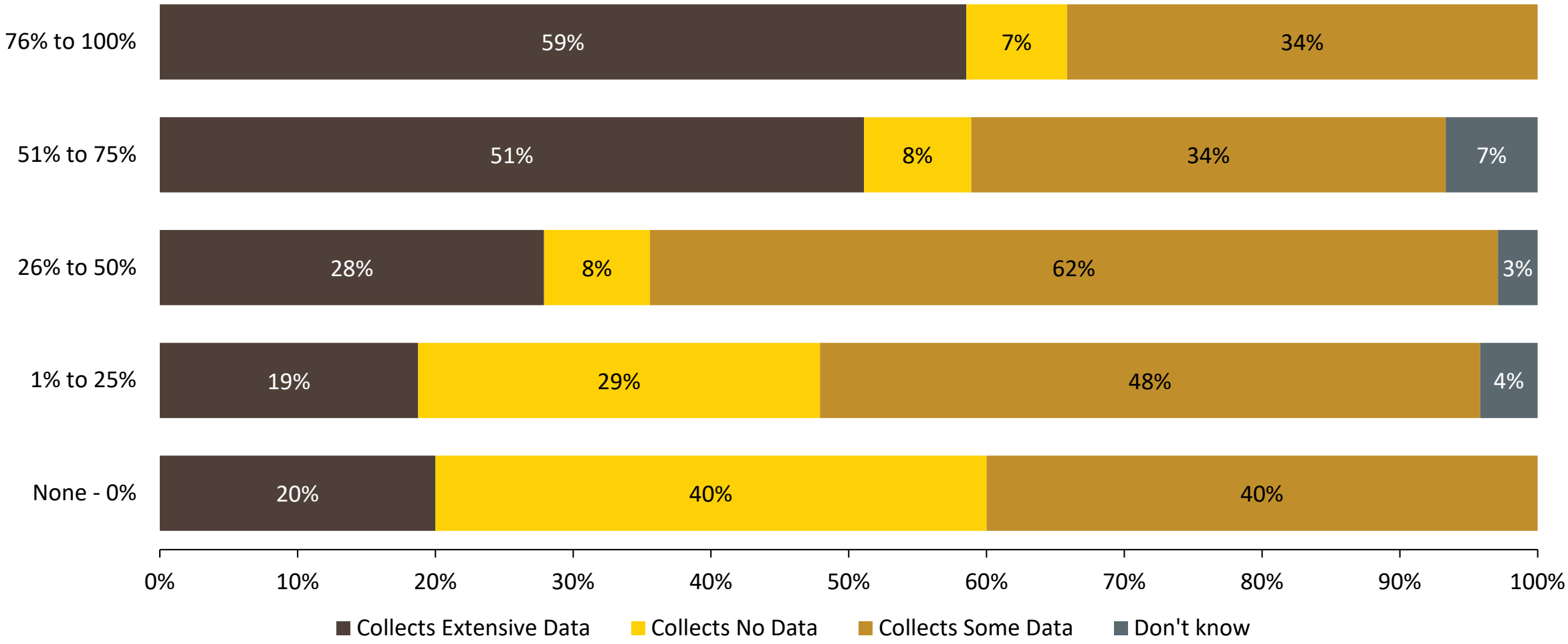
Approximately what percentage of overall decisions are made based on **data analytics** in your organization?

- ○ None - 0%
- ○ 1% to 25%
- ○ 26% to 50%
- ○ 51% to 75%
- ○ 76% to 100%

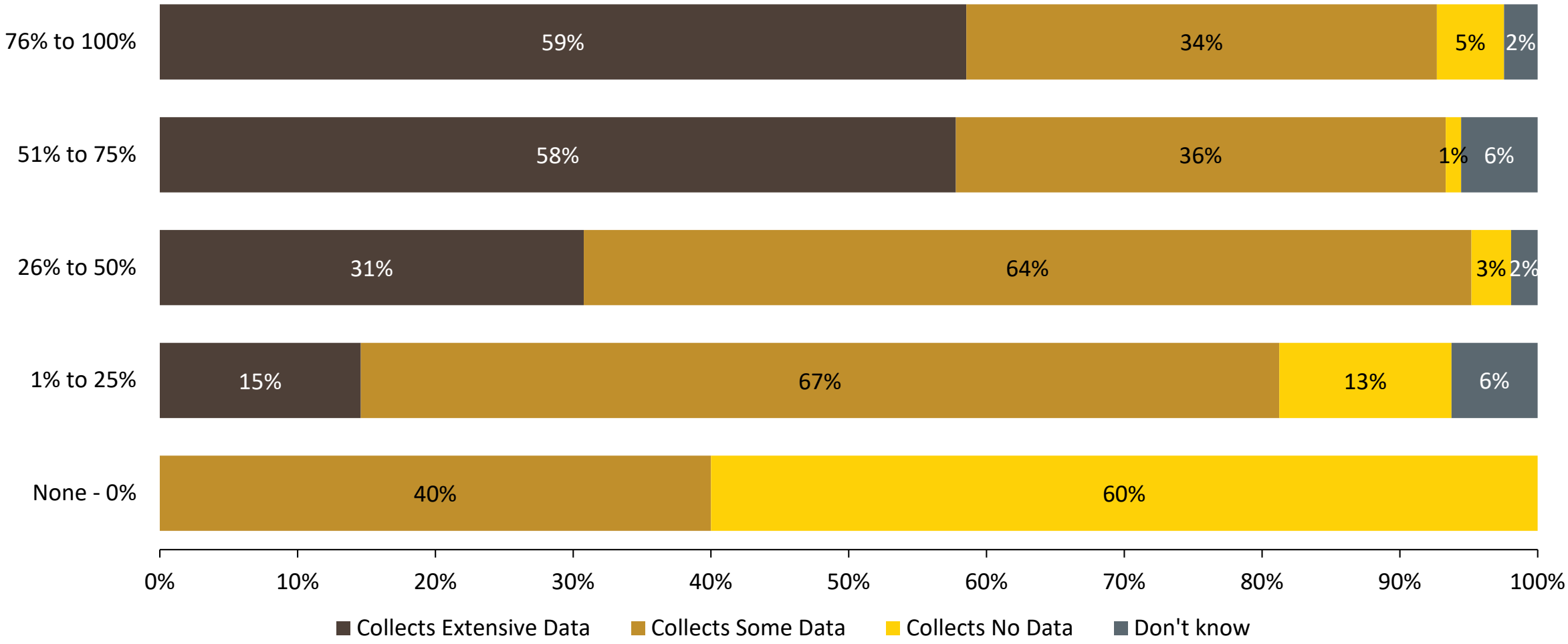
% of Decision Made on Data Analytics by The Extent Data is Collected - Overall



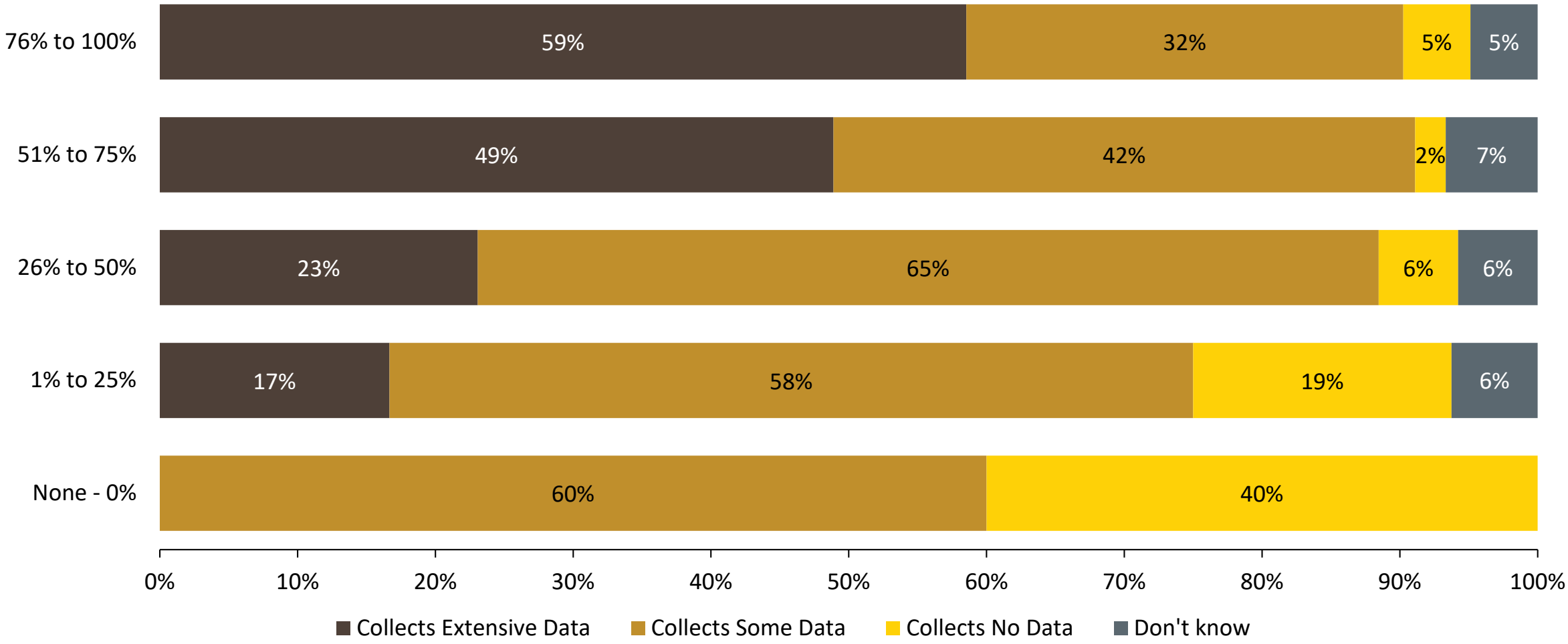
% of Decision Made on Data Analytics by The Extent Data is Collected – Inbound Logistics



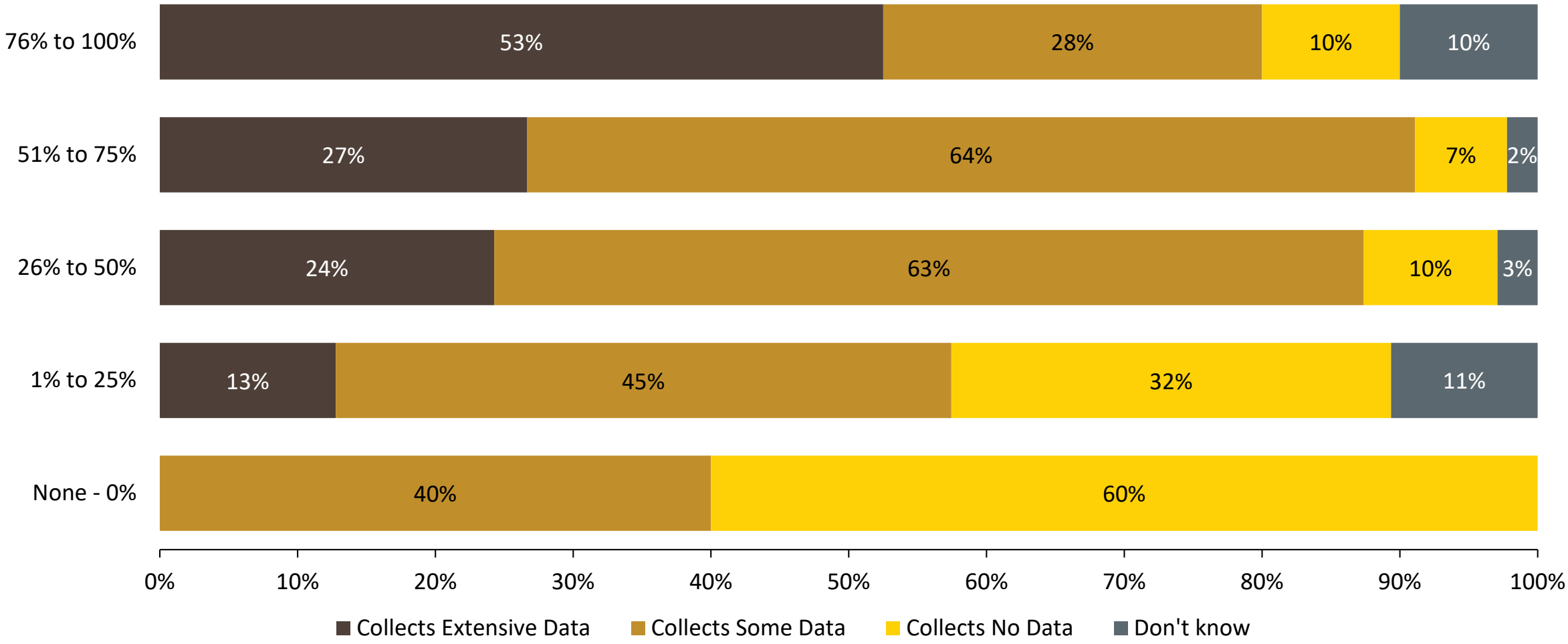
% of Decision Made on Data Analytics by The Extent Data is Collected - Operations



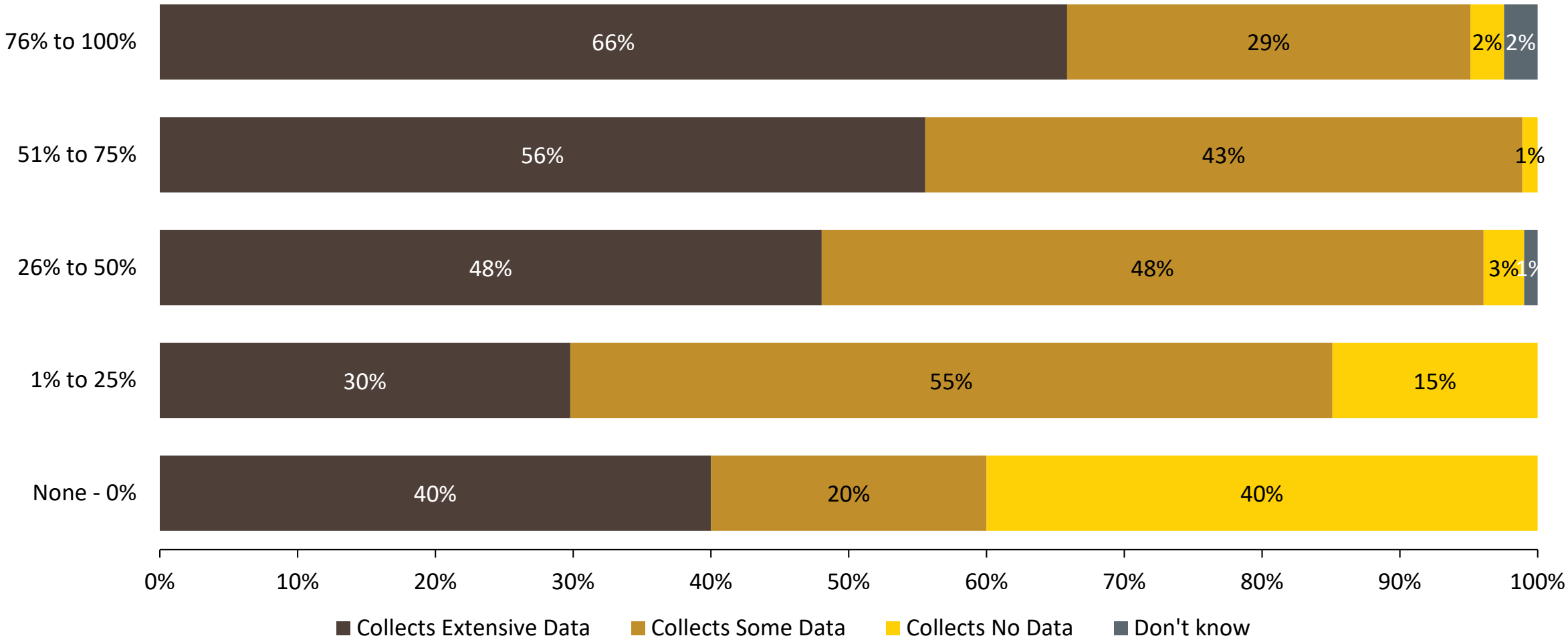
% of Decision Made on Data Analytics by The Extent Data is Collected – Outbound Logistics



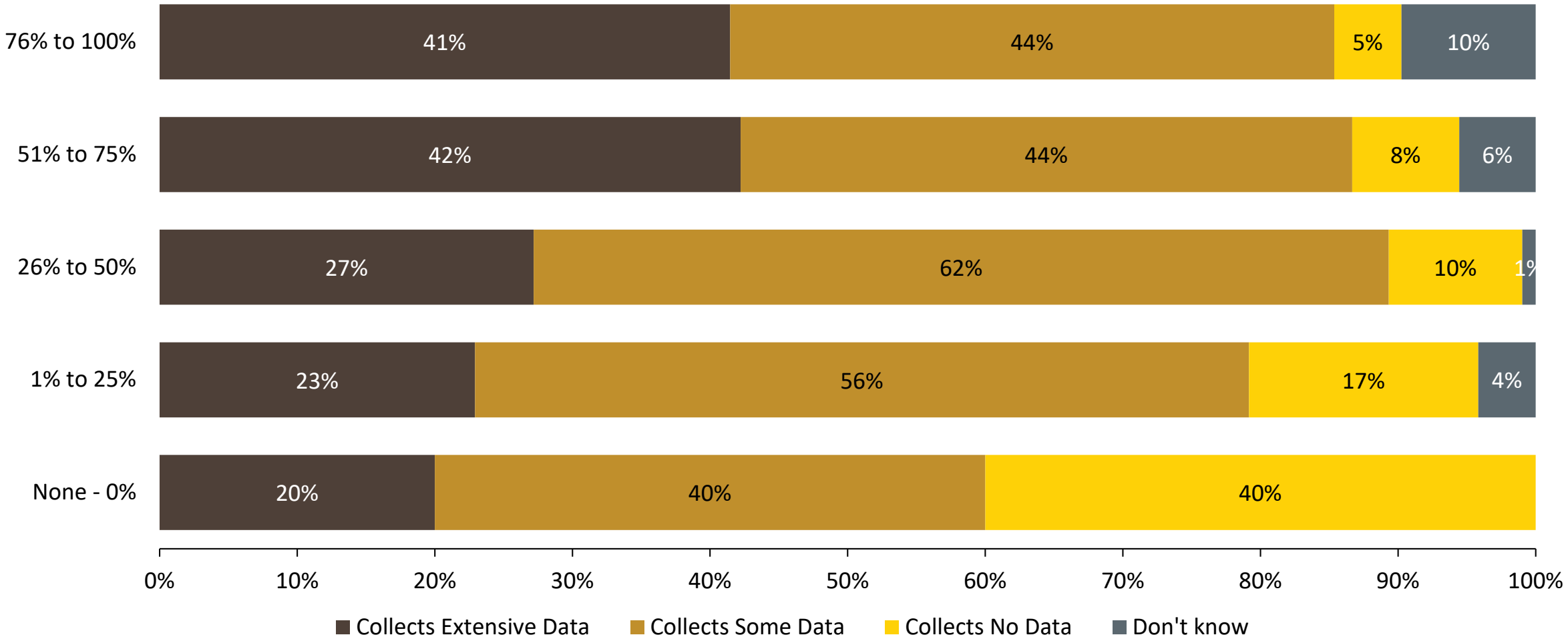
% of Decision Made on Data Analytics by The Extent Data is Collected - Marketing



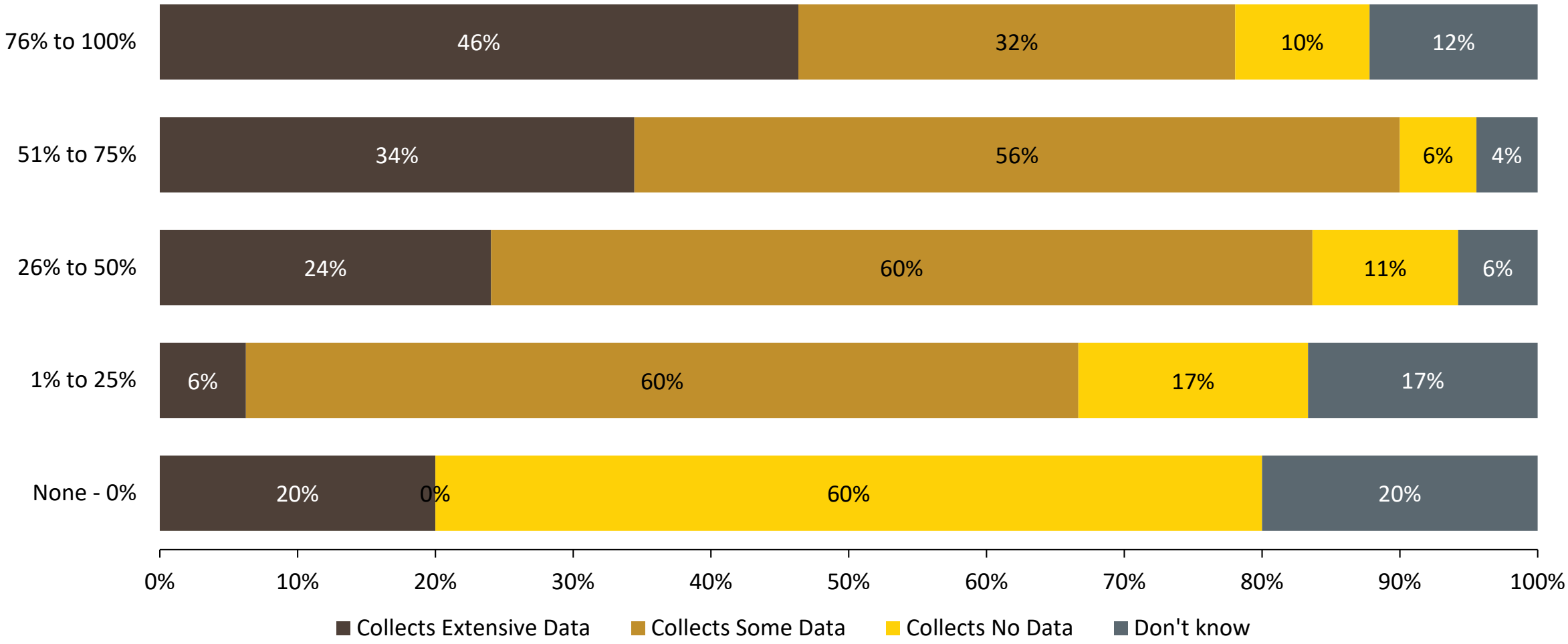
% of Decision Made on Data Analytics by The Extent Data is Collected - Sales



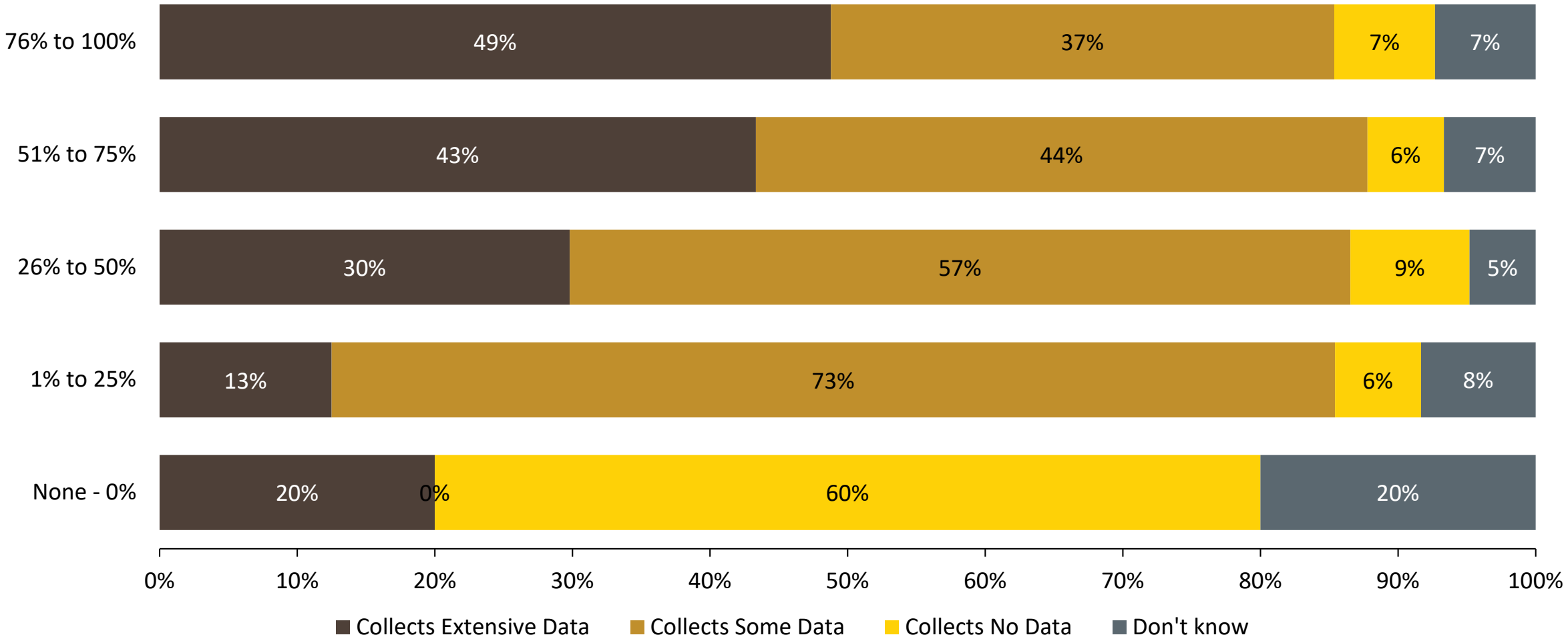
% of Decision Made on Data Analytics by The Extent Data is Collected - Service



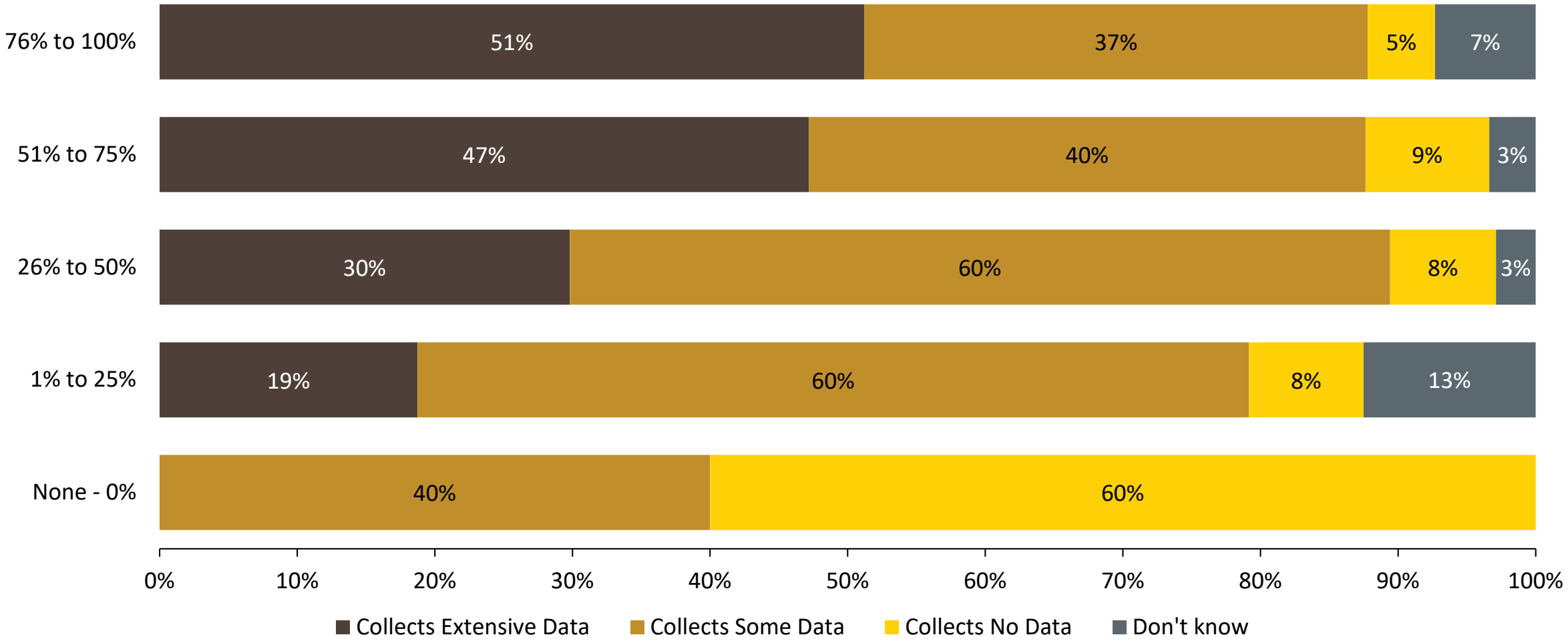
% of Decision Made on Data Analytics by The Extent Data is Collected – HR Management



% of Decision Made on Data Analytics by The Extent Data is Collected - Procurement



% of Decision Made on Data Analytics by The Extent Data is Collected – Regulatory Compliance



Data Analytics Survey Results

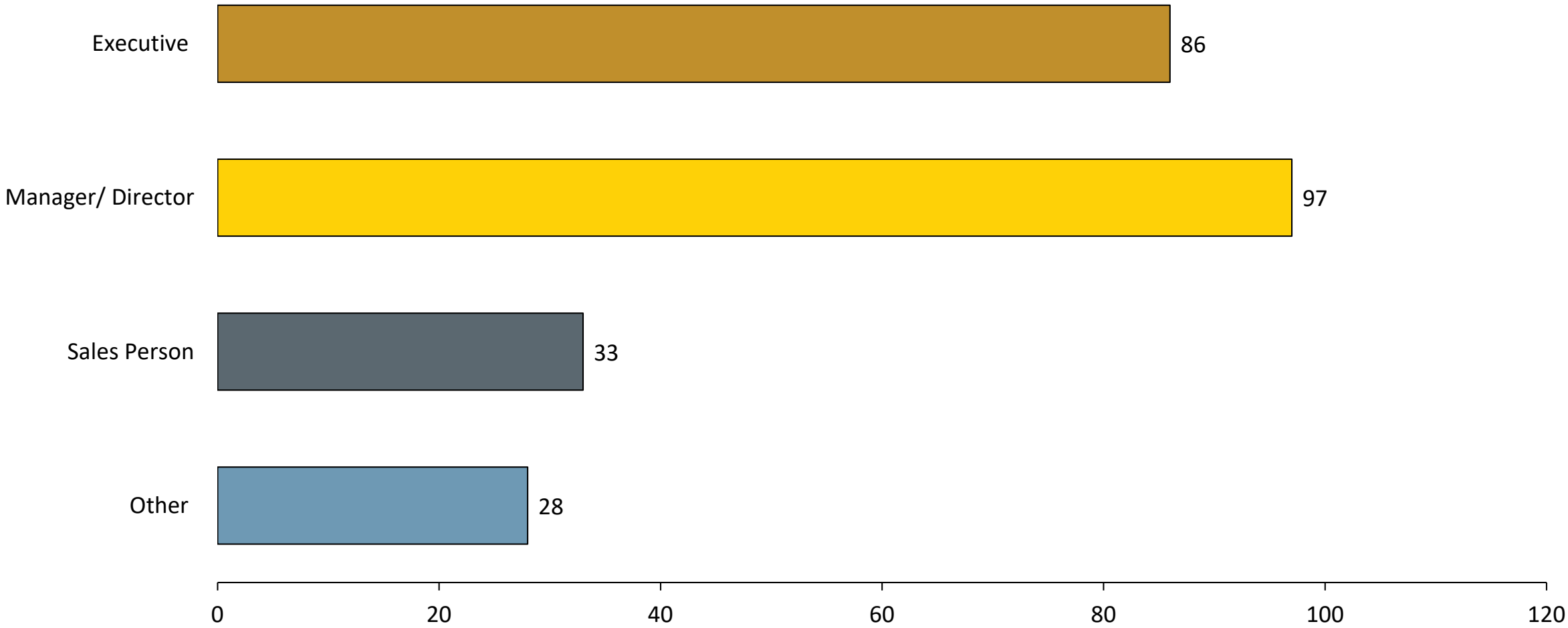
First Handler

PURDUE UNIVERSITY

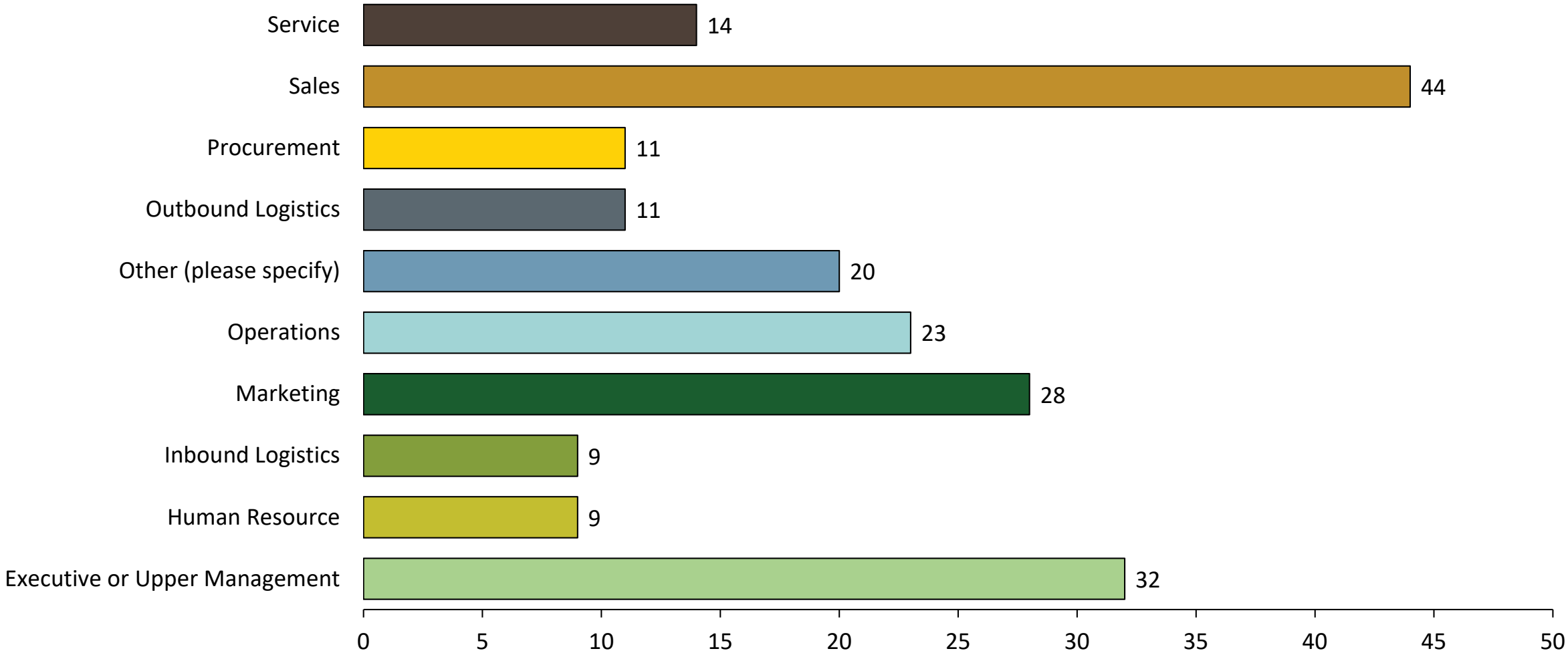
Center for Food and Agricultural Business
COLLEGE OF AGRICULTURE

Demographics

Respondents by Role



Respondents by Business Function

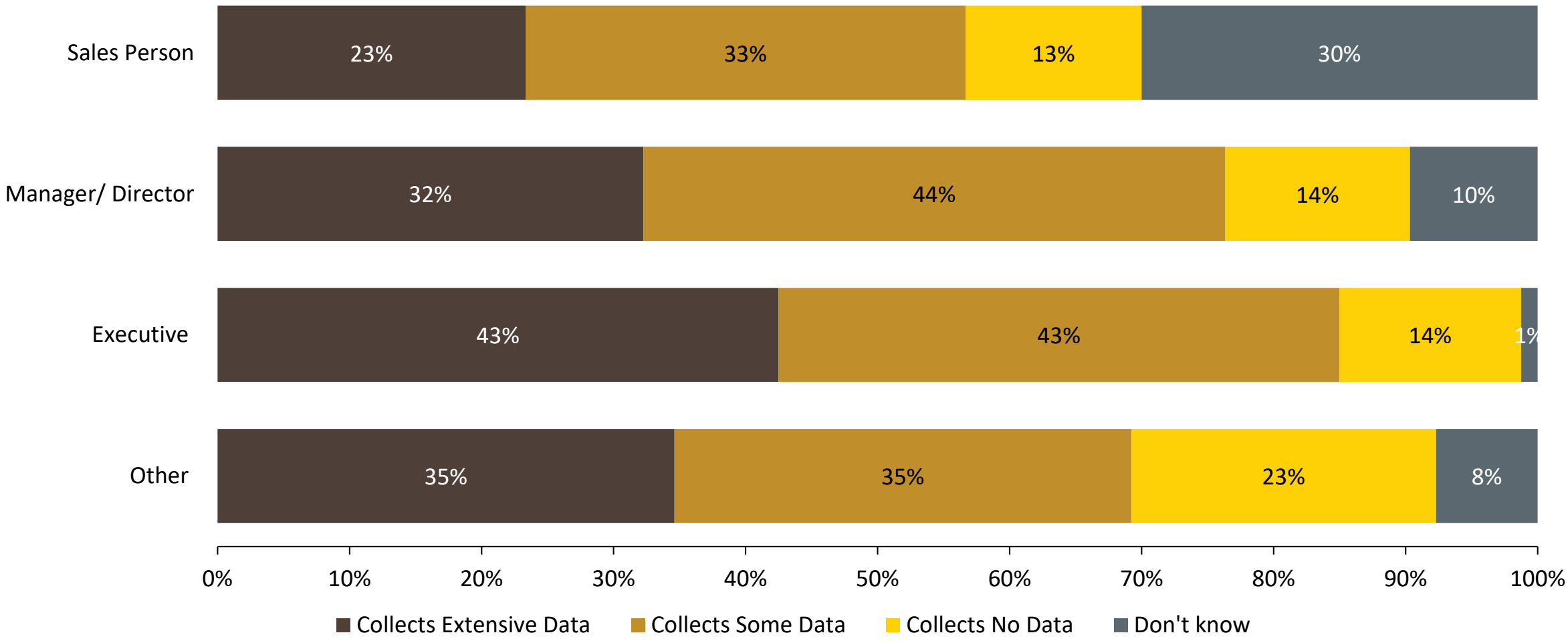


The Extent Data is Collected - by Role

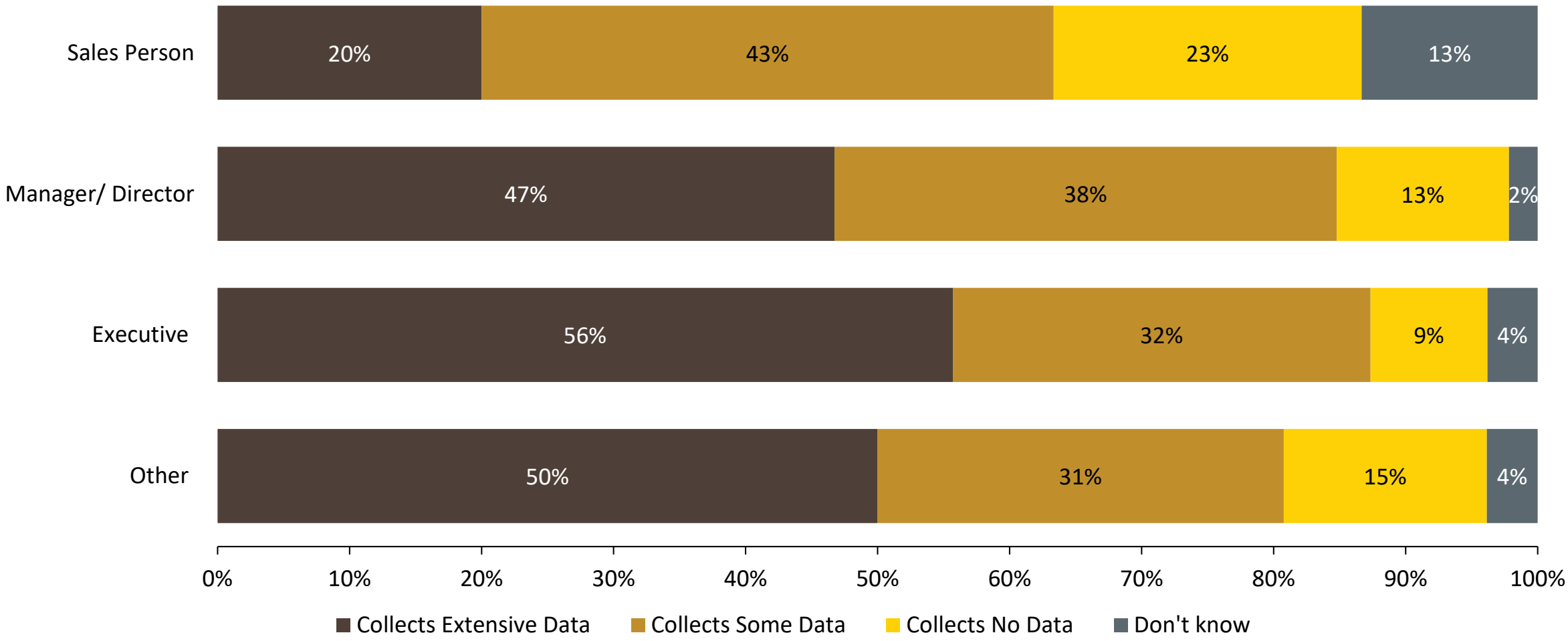
To what extent does your organization **collect data** for the following business functions?

	Don't know	Collects **No** Data	Collects **Some** Data	Collects **Extensive** Data
Inbound Logistics (*e.g. ordering/receiving, inventory replenishment*)	○	○	○	○
Operations (*e.g. production volumes, process details, quality control, efficiency measure*)	○	○	○	○
Outbound Logistics (*e.g. ordering/delivery*)	○	○	○	○
Marketing (*e.g. customer data/CRM, product development, product life-cycle, segmentation*)	○	○	○	○
Sales (*e.g. customer orders, referrals, transactional data*)	○	○	○	○
Service (*e.g. application, repair, tech support*)	○	○	○	○
HR Management (*e.g. goal setting and monitoring, compensation, payroll, benefits*)	○	○	○	○
Procurement (*e.g. input costs, SRM*)	○	○	○	○
Regulatory Compliance (*e.g. labor, environmental standard*)	○	○	○	○

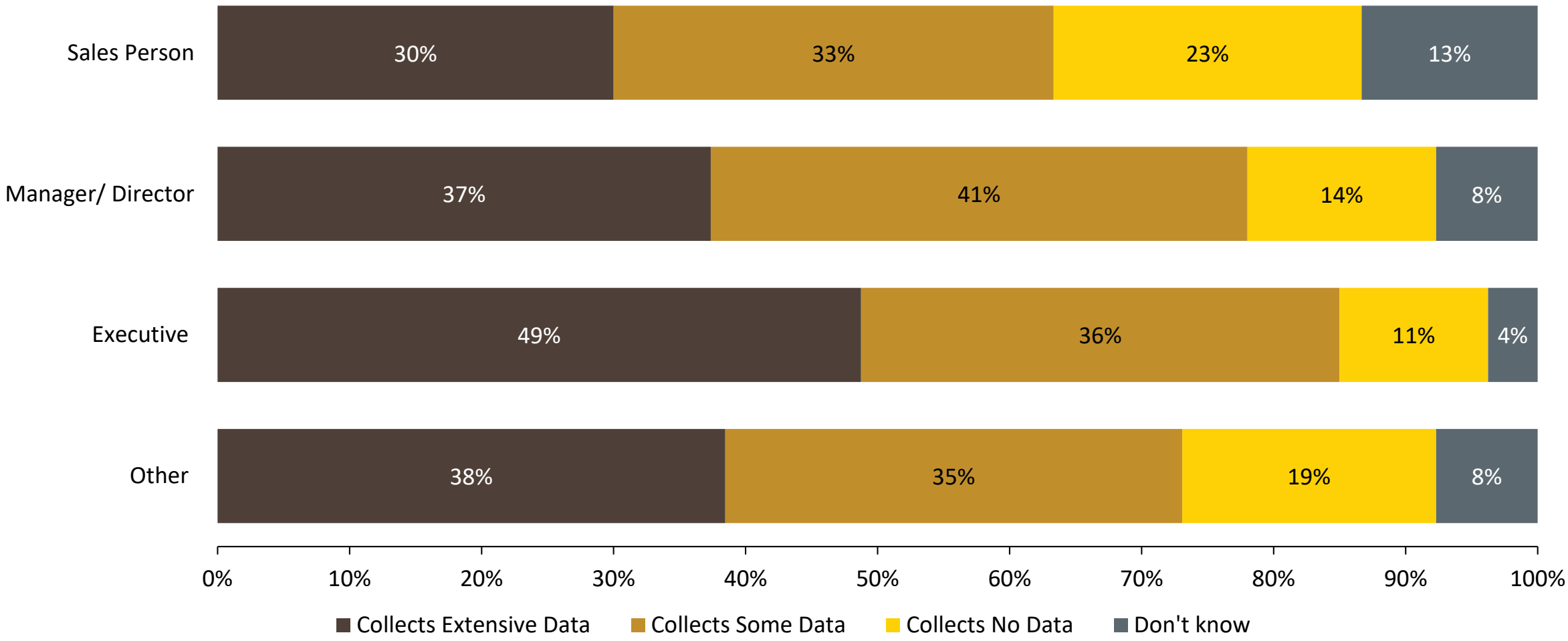
The Extent Data Is Collected by Role – Inbound Logistics



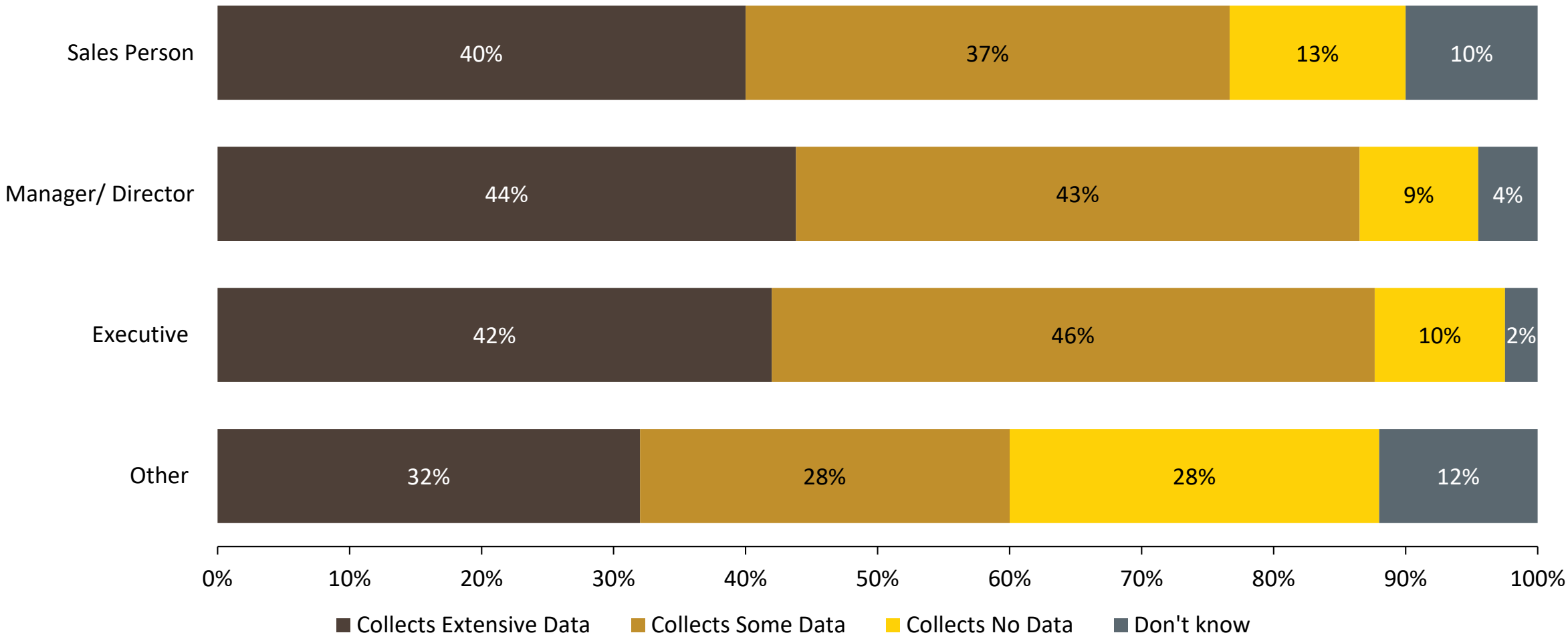
The Extent Data Is Collected by Role – Operations



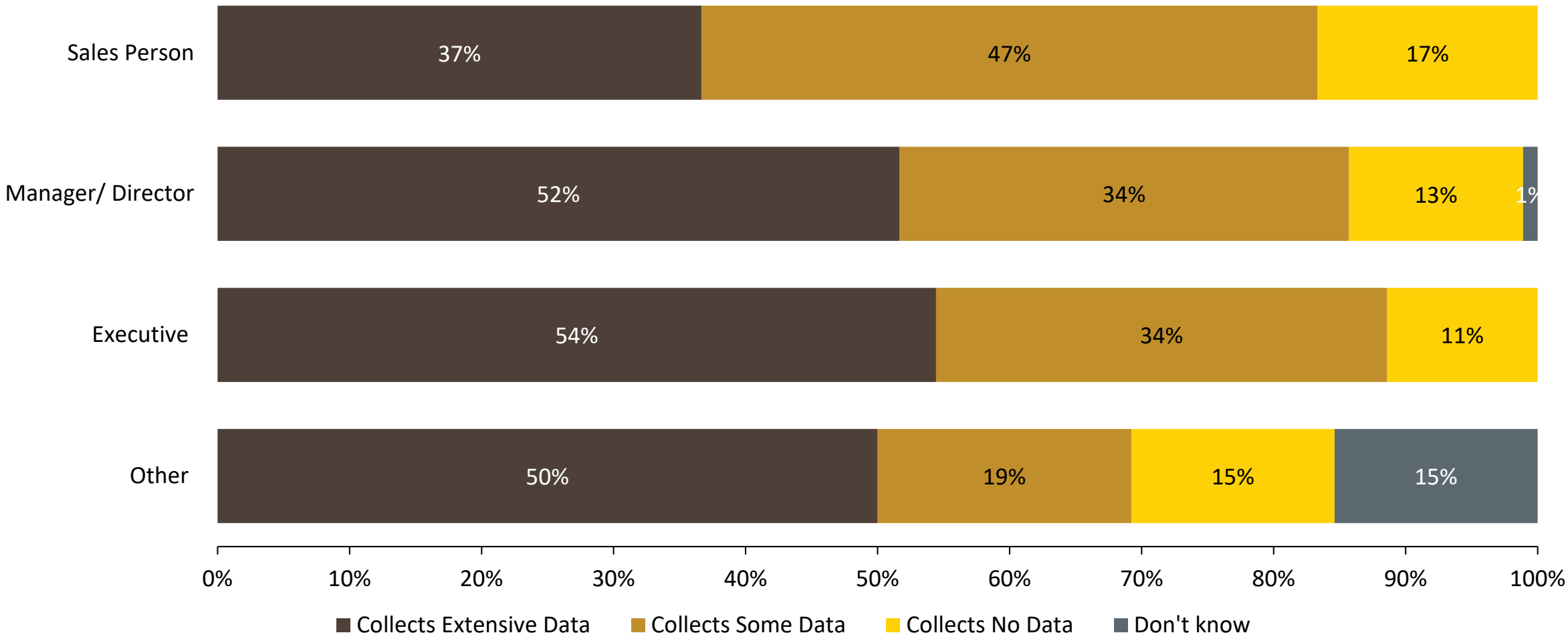
The Extent Data Is Collected by Role – Outbound Logistics



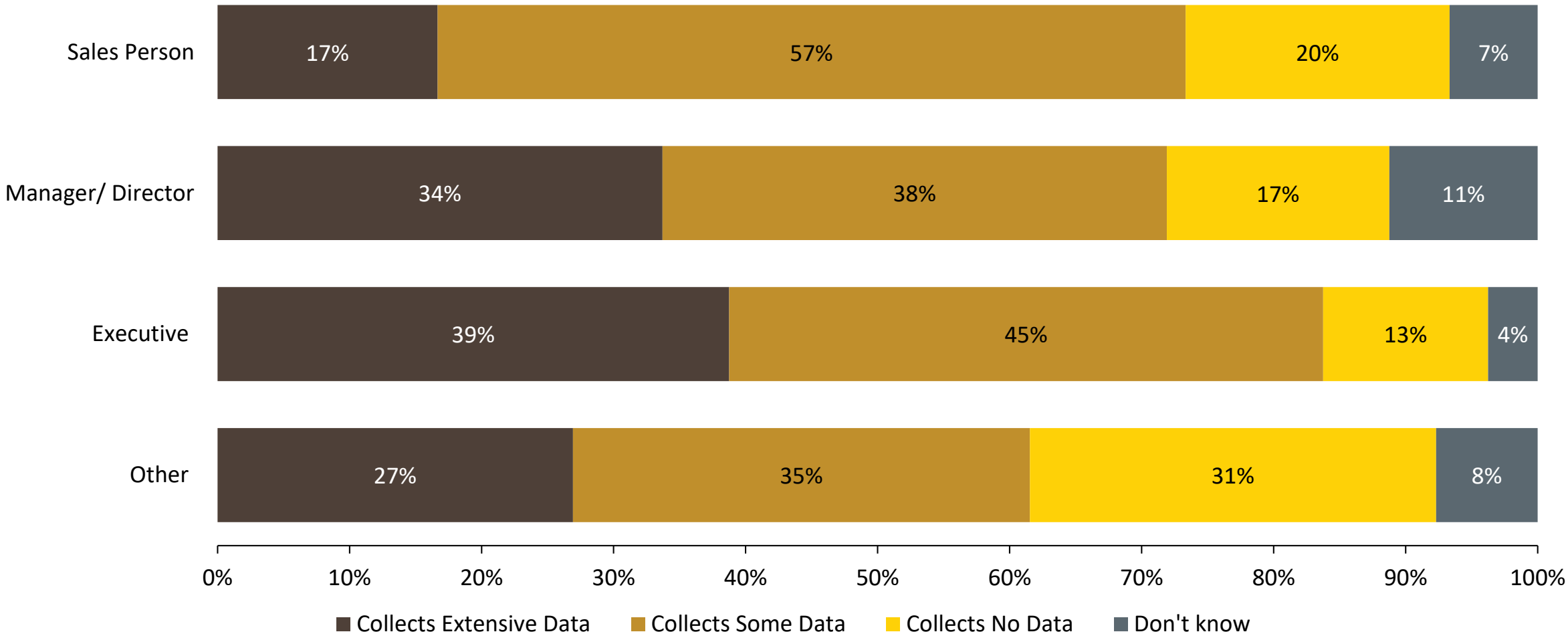
The Extent Data Is Collected by Role – Marketing



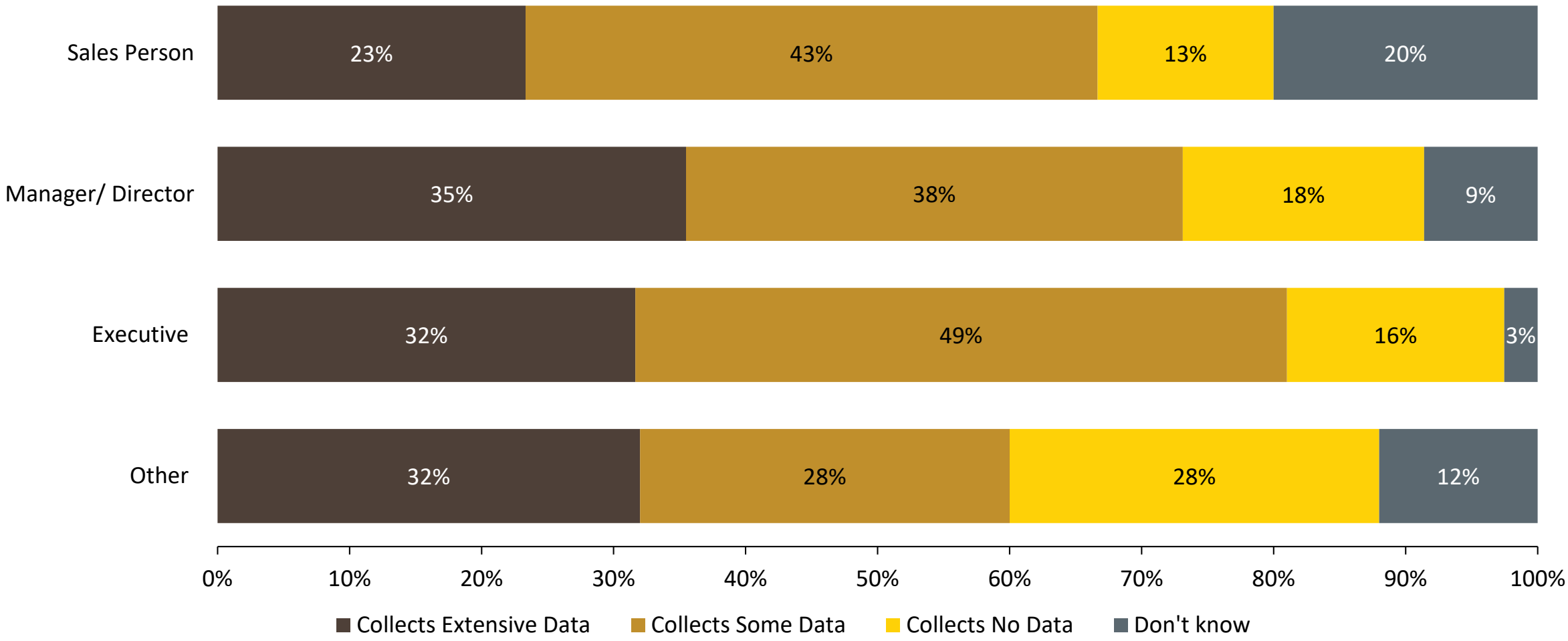
The Extent Data Is Collected by Role – Sales



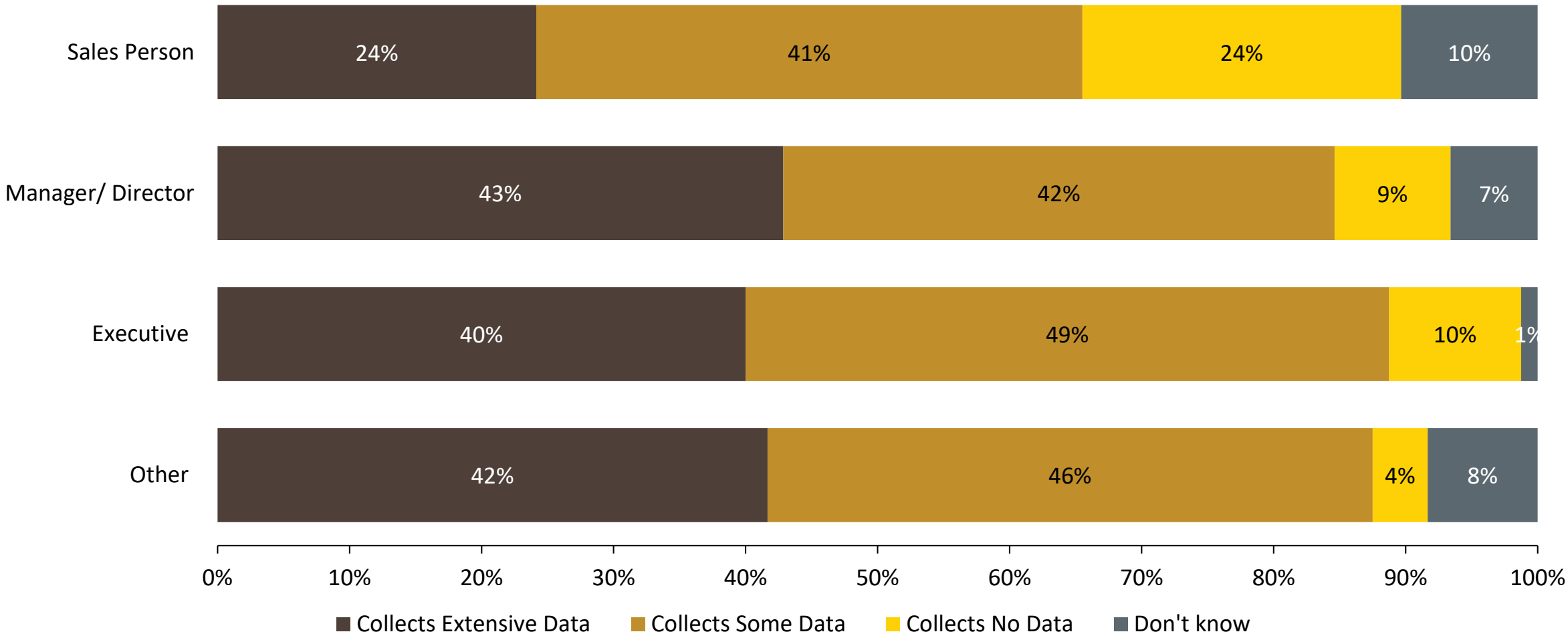
The Extent Data Is Collected by Role – Service



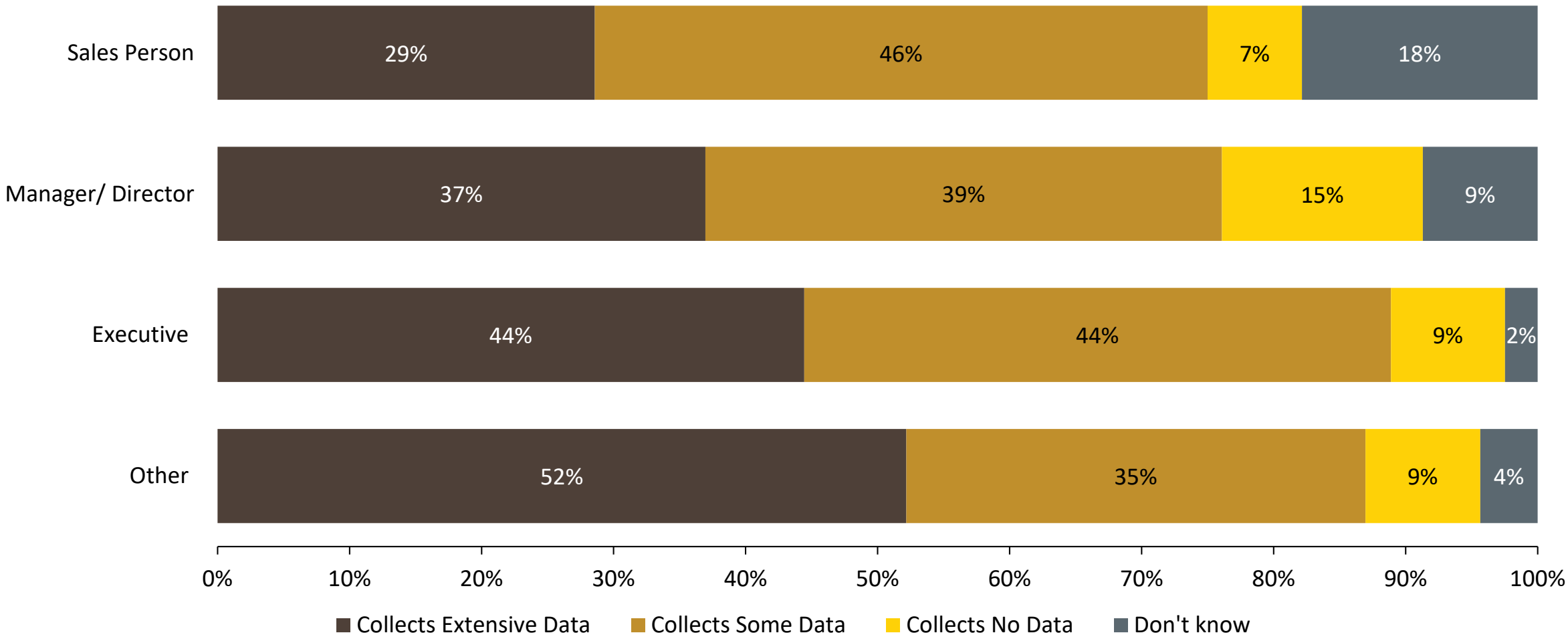
The Extent Data Is Collected by Role – HR Management



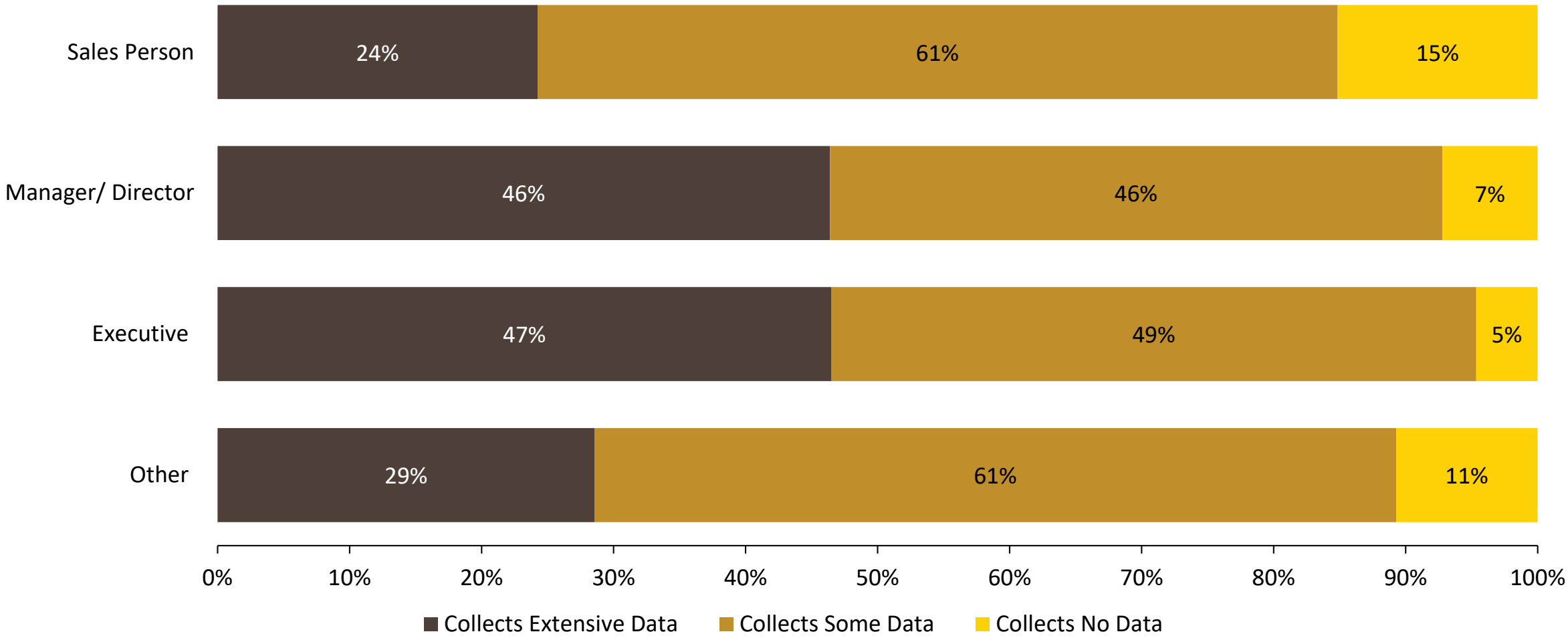
The Extent Data Is Collected by Role – Procurement



The Extent Data Is Collected by Role – Regulatory Compliance



The Extent Data Is Collected by Role – Overall

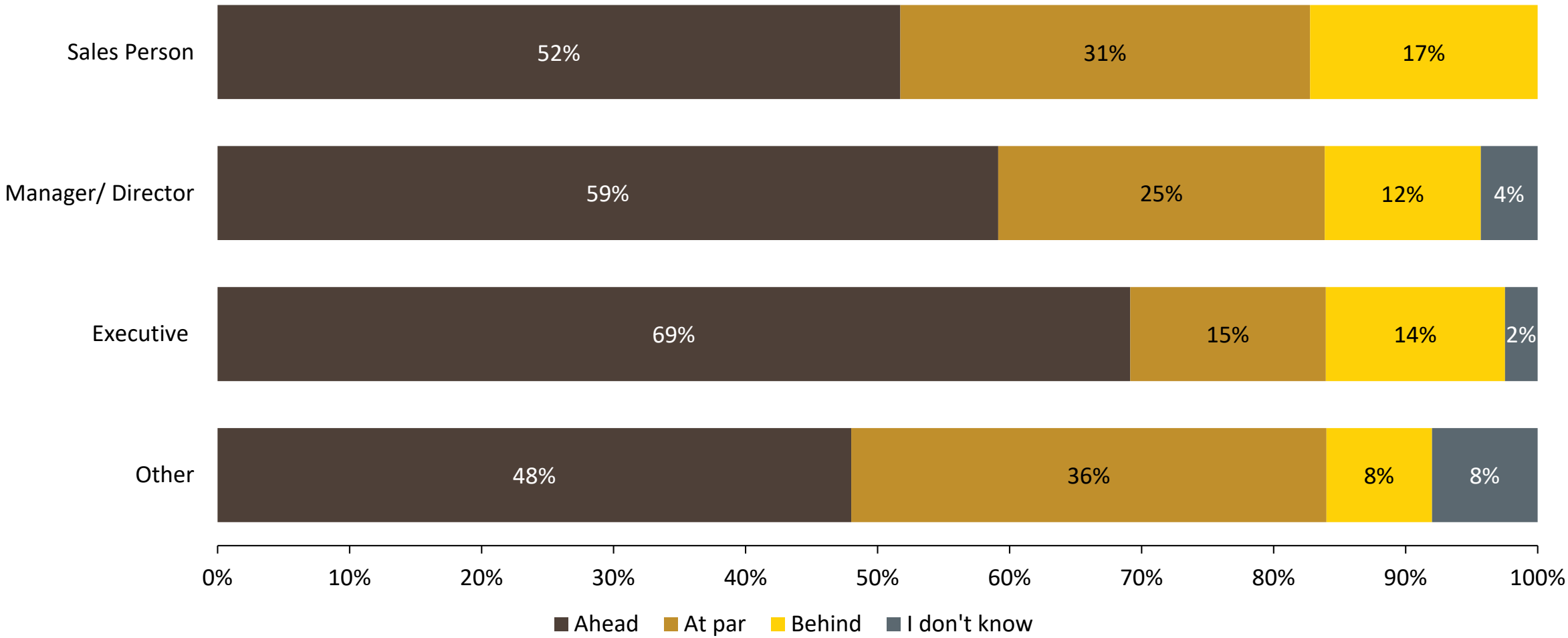


Data Collection and Analytics Compared to Competitors – by Role

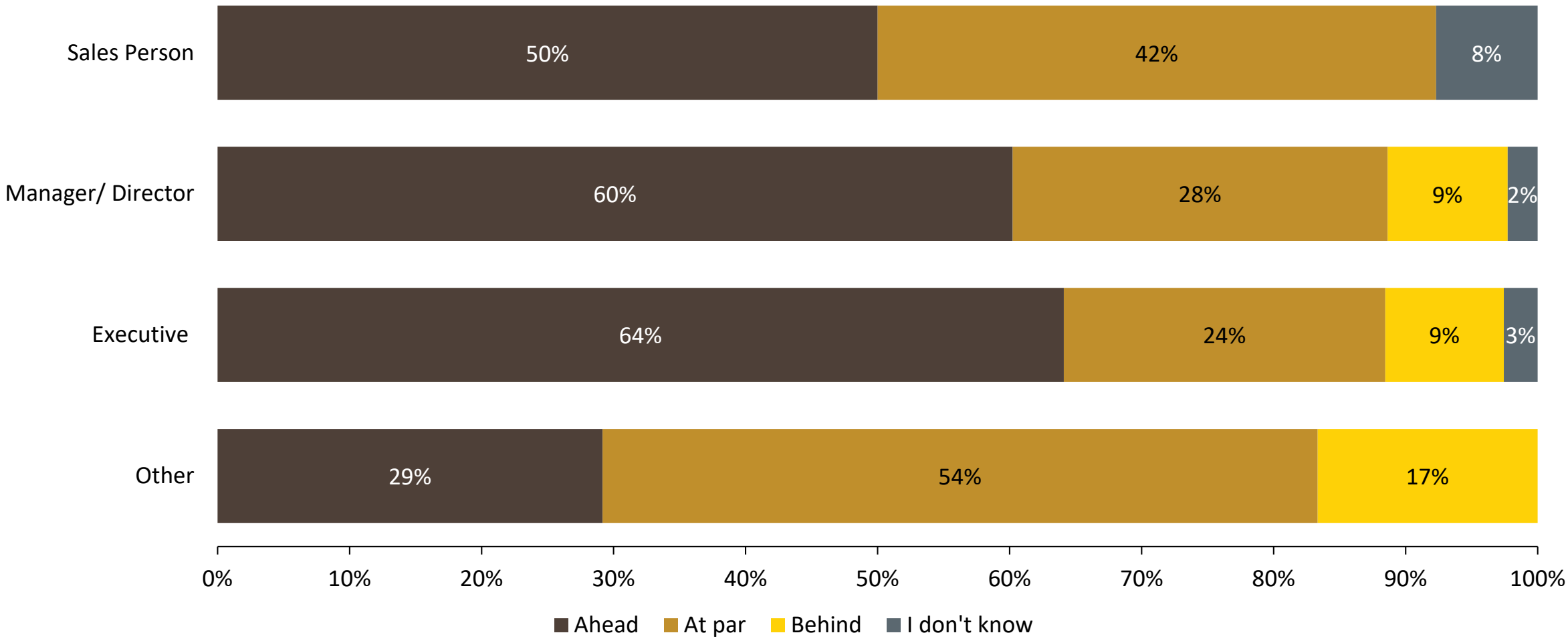
Compared to your competitors, how do you feel about **data collection** in your organization?

- ○ Far ahead
- ○ Somewhat ahead
- ○ At par
- ○ Somewhat behind
- ○ Far behind
- ○ I don't know

Data Collection by Role Compared to Competitors



Data analytics by Role Compared to Competitors

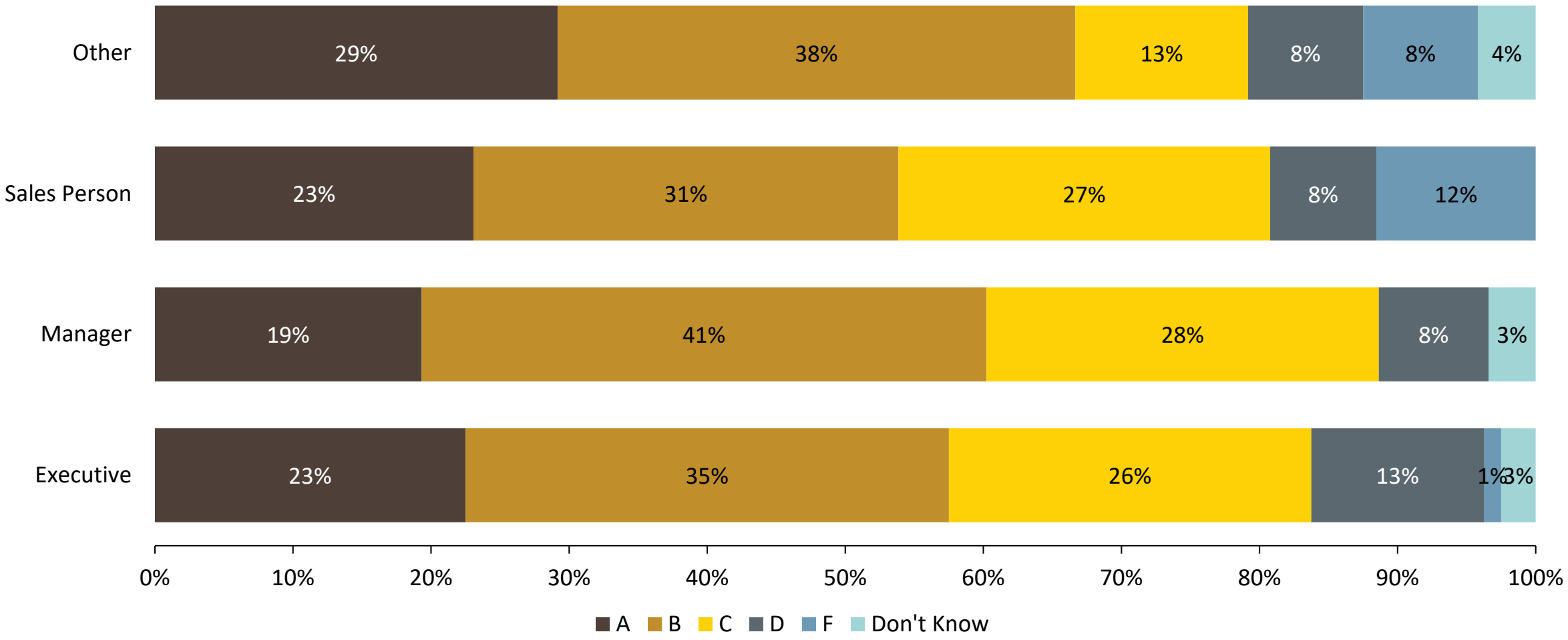


Organization Grade on Data Analytics

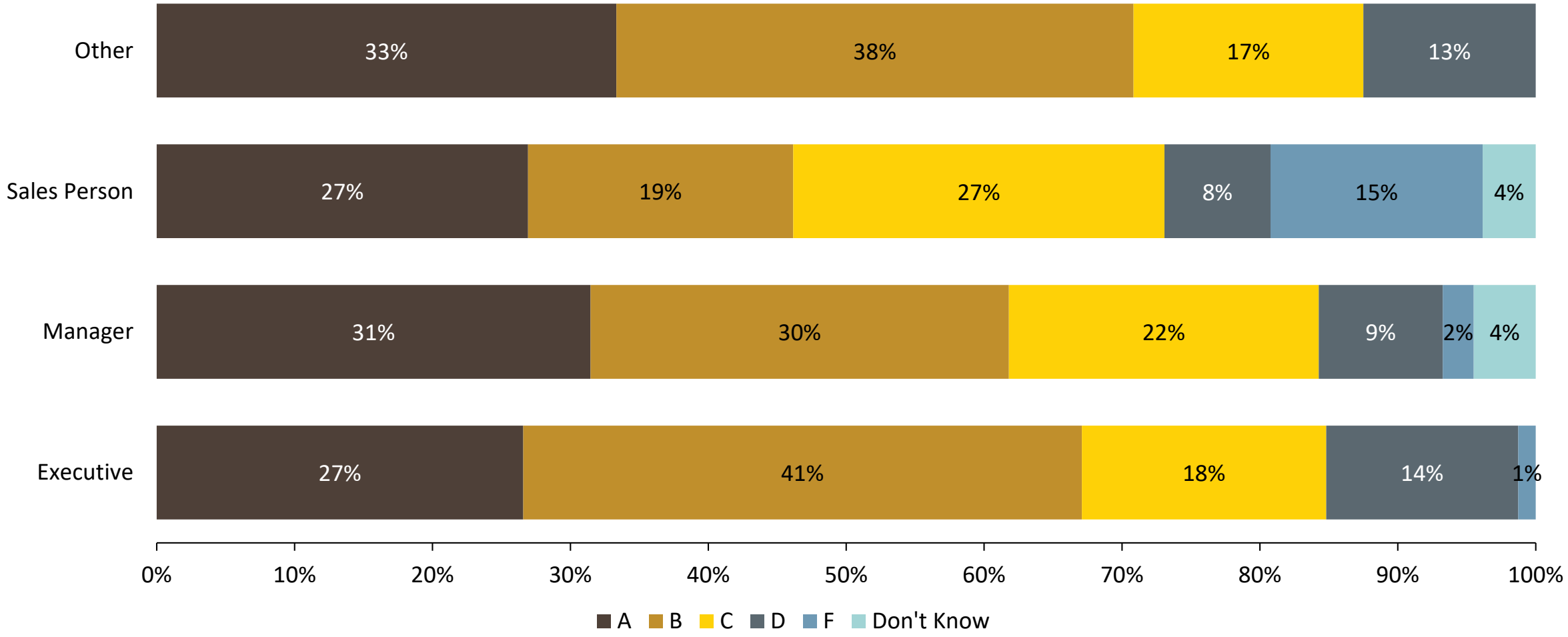
If you were to give your organization a "grade" based on using **data analytics** on decision making, what grade would you give for the following business functions?

	A	B	C	D	F	Don't Know
Inbound Logistics (*e.g. ordering/receiving, inventory replenishment*)	○	○	○	○	○	○
Operations (*e.g. production volumes, process details, quality control, efficiency measure*)	○	○	○	○	○	○
Outbound Logistics (*e.g. ordering/delivery*)	○	○	○	○	○	○
Marketing (*e.g. customer data/CRM, product development, product life-cycle, segmentation*)	○	○	○	○	○	○
Sales (*e.g. customer orders, referrals, transactional data*)	○	○	○	○	○	○
Service (*e.g. application, repair, tech support*)	○	○	○	○	○	○
HR Management (*e.g. goal setting and monitoring, compensation, payroll, benefits*)	○	○	○	○	○	○
Procurement (*e.g. input costs, SRM*)	○	○	○	○	○	○
Regulatory Compliance (*e.g. labor, environmental standard*)	○	○	○	○	○	○
Overall	○	○	○	○	○	○

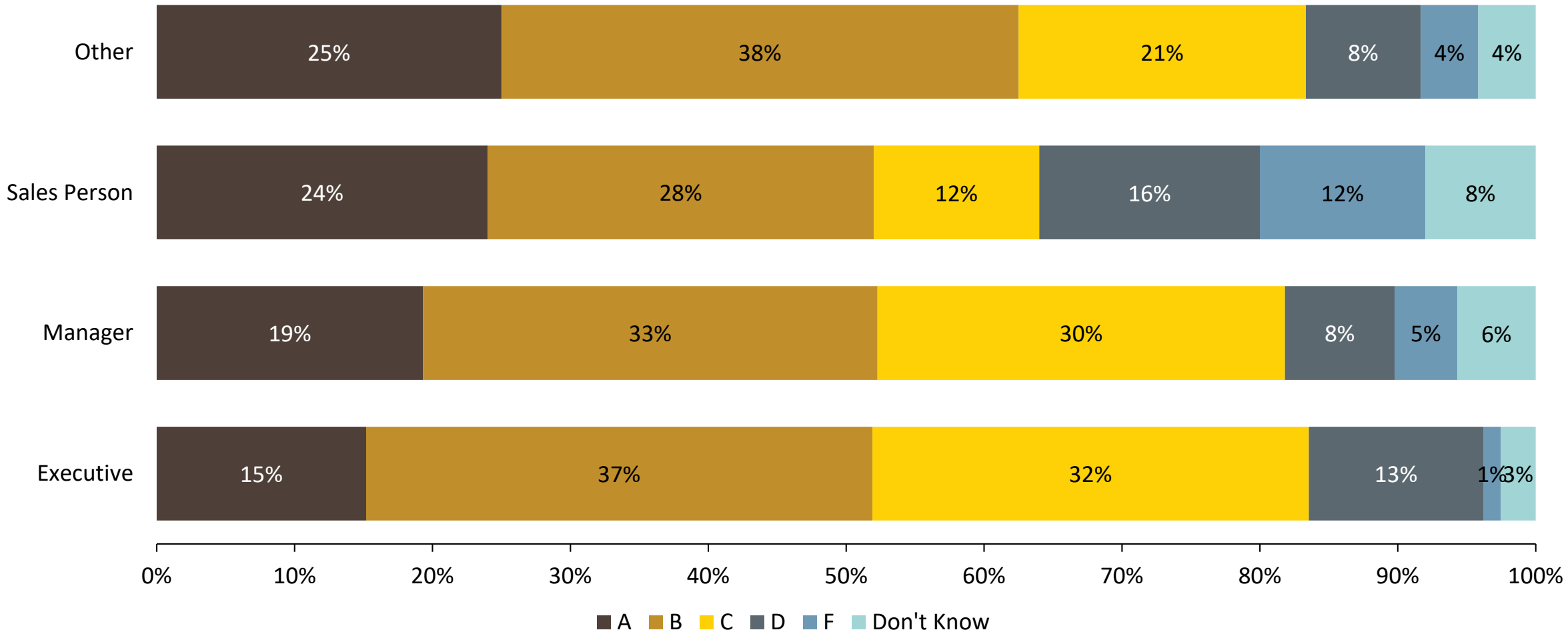
Organization Grade on Data Analytics by Role – Inbound Logistics



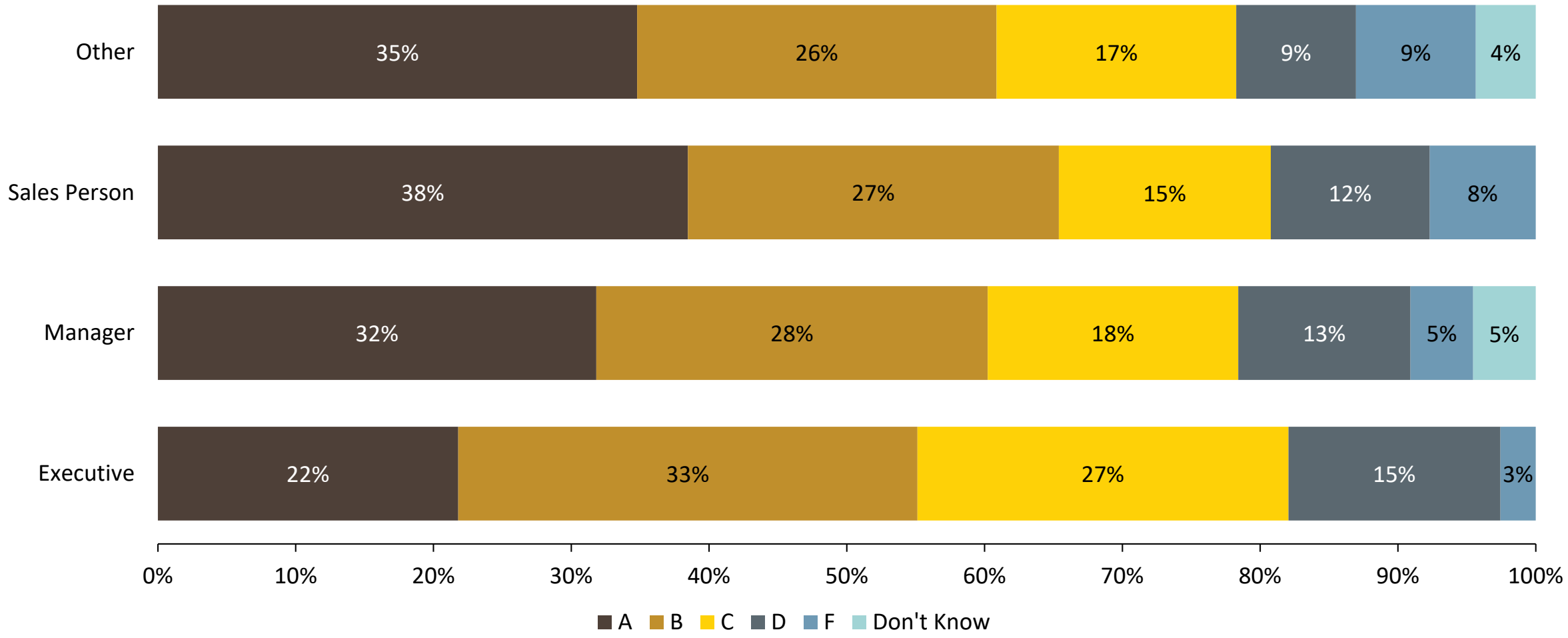
Organization Grade on Data Analytics by Role – Operations



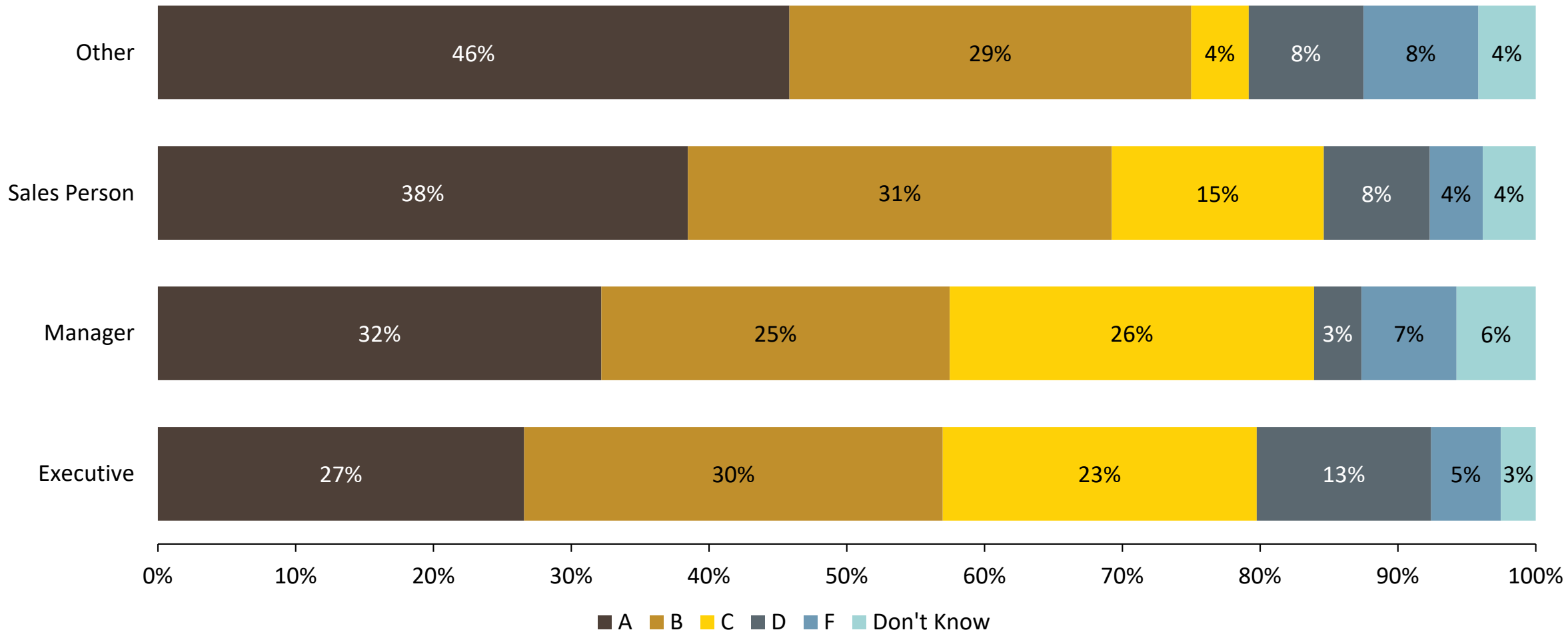
Organization Grade on Data Analytics by Role – Outbound Logistics



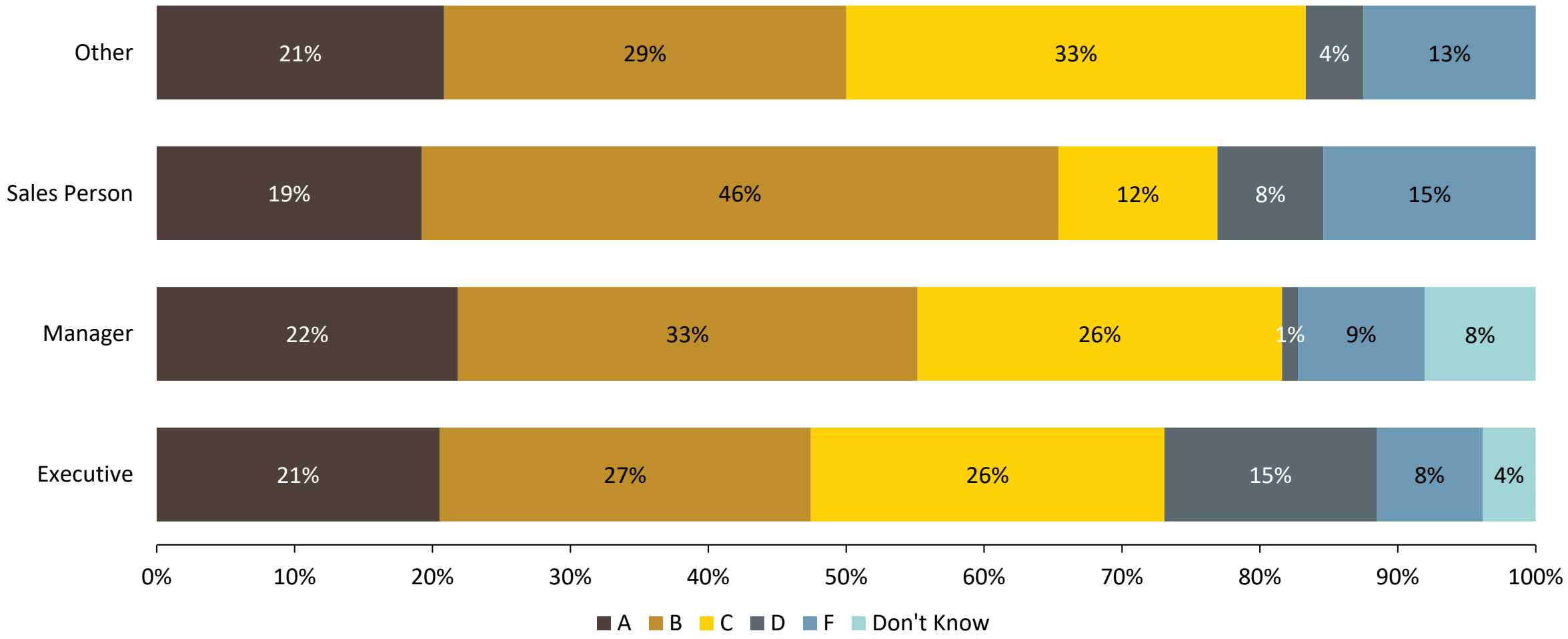
Organization Grade on Data Analytics by Role – Marketing



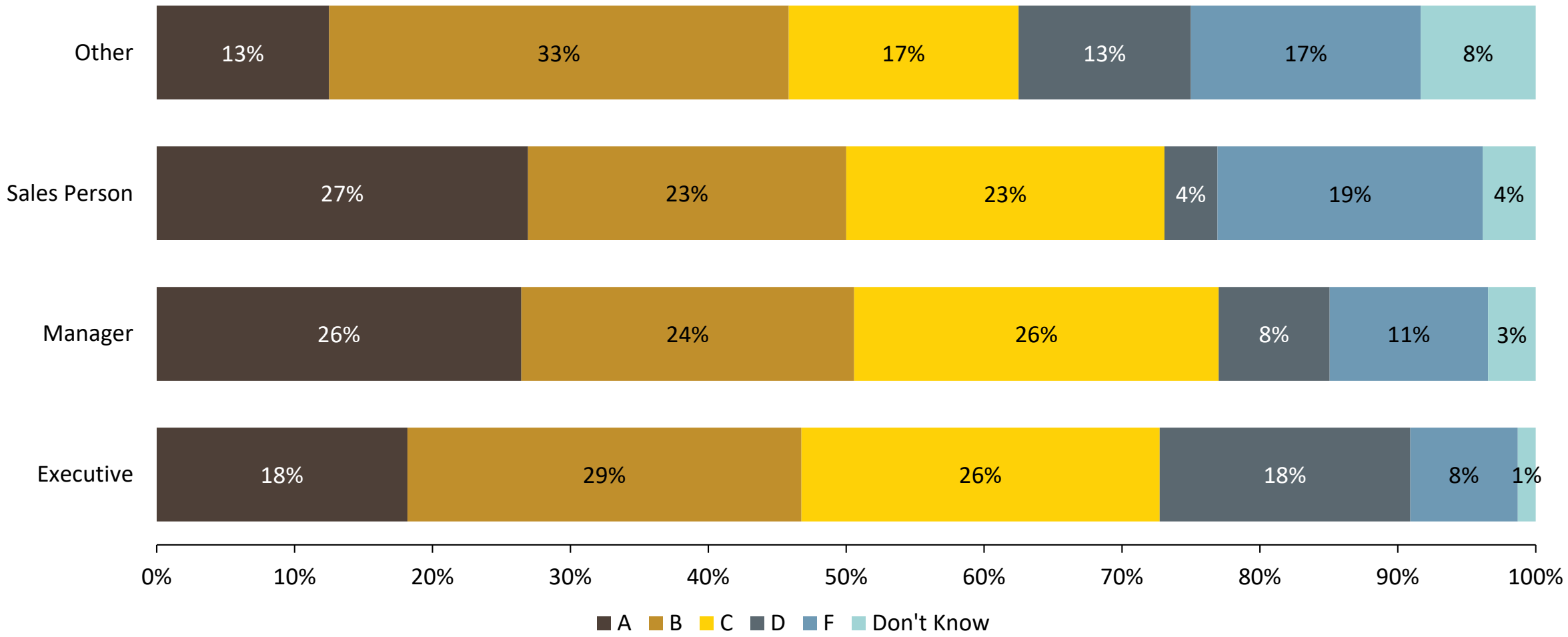
Organization Grade on Data Analytics by Role – Sales



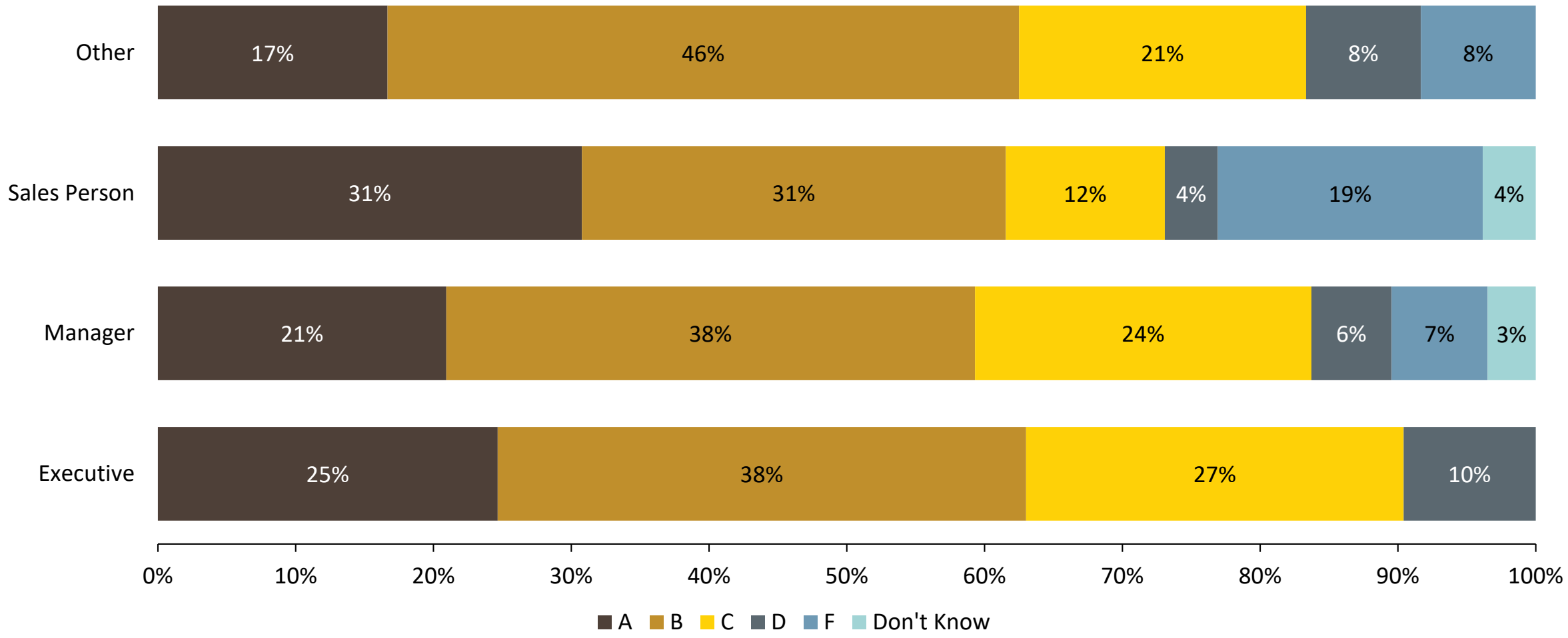
Organization Grade on Data Analytics by Role – Service



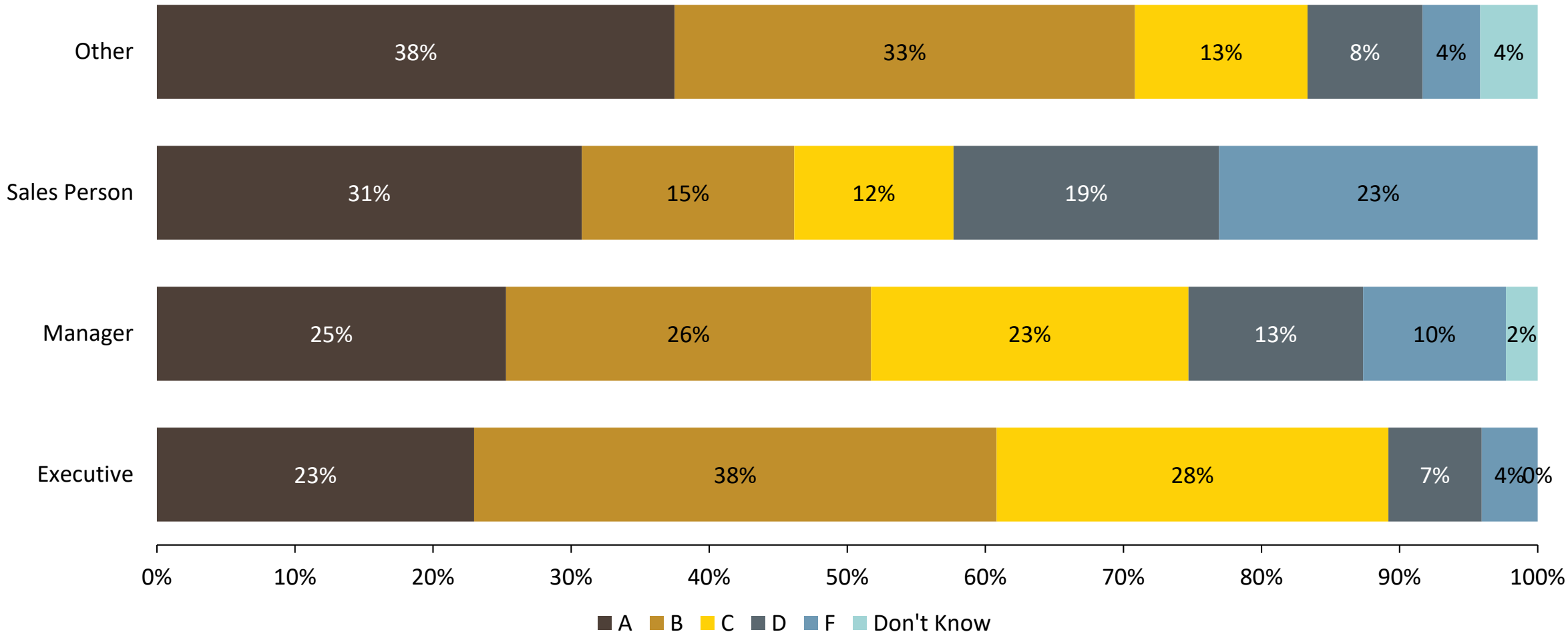
Organization Grade on Data Analytics by Role – HR Management



Organization Grade on Data Analytics by Role - Procurement



Organization Grade on Data Analytics by Role – Regulatory Compliance



Most Important Benefits of Data Analytics by Role

What do you see as the most important benefit of data analytics? Please rank the following statements from 1 to 6, where 1 is ***"the most important benefit"*** and 6 is ***"the least important benefit"***. *(Drag each term and drop it to desired rank)*

Improved decision-making

Improved customer satisfaction

Improved compliance with data protection and privacy regulations

Improved operational efficiency

Driving company profitability

Improved market awareness

Most Important Benefits of Data Analytics by Role

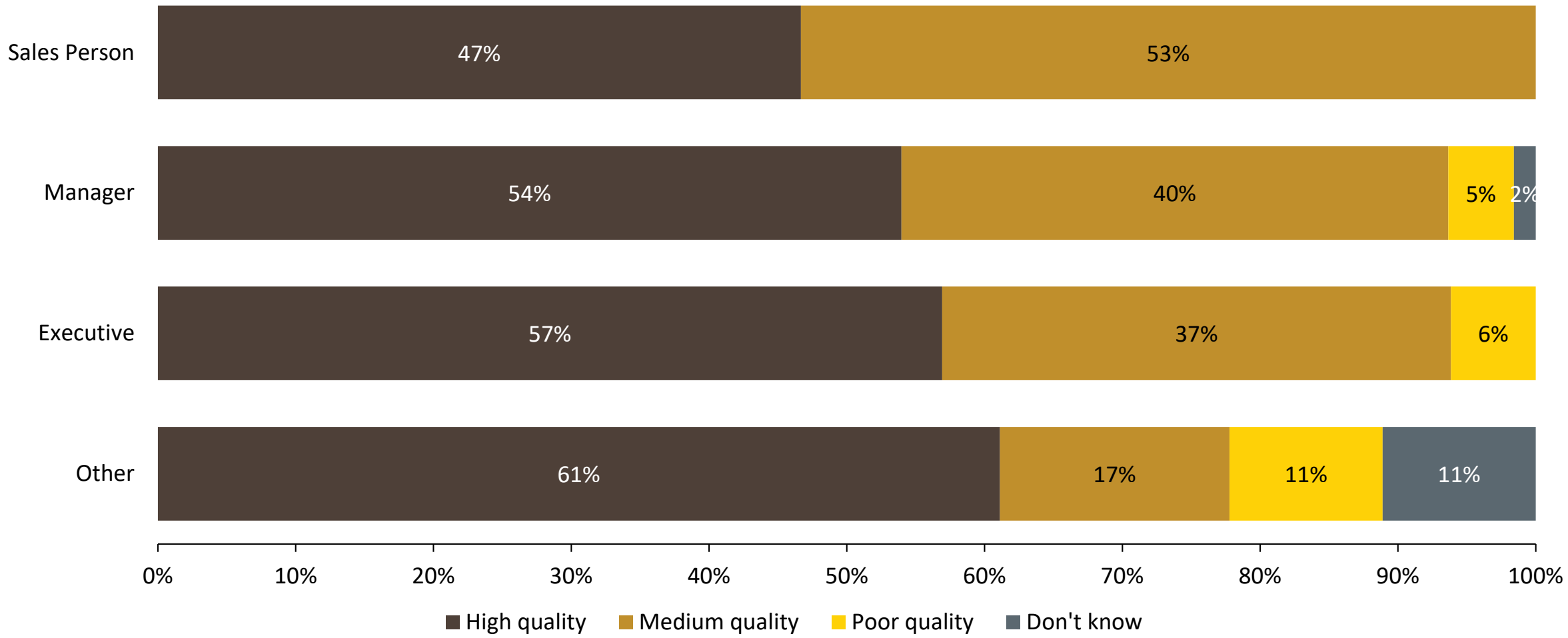
Data Quality by Role

How would you rate your organization on the **quality** of collected data in the following business functions?

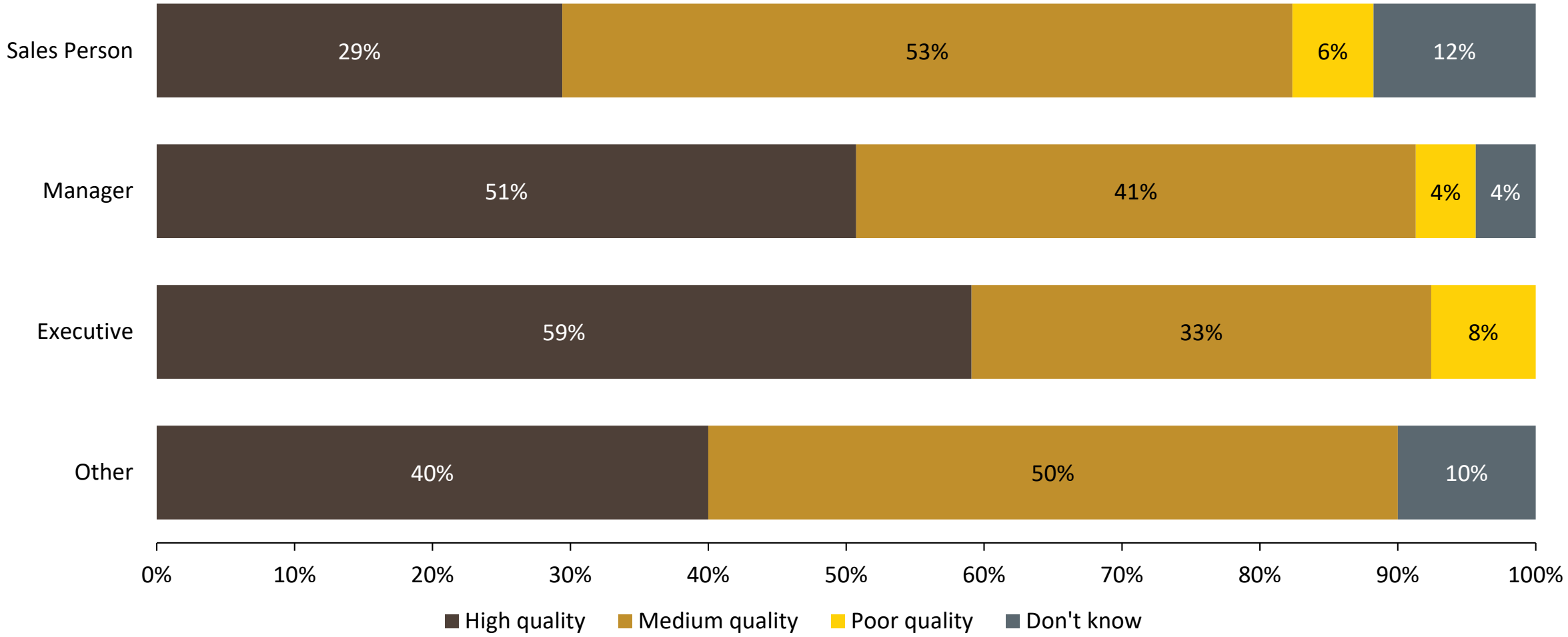
*(**Quality** refers to completeness, validity, consistency, timeliness and accuracy that makes data appropriate for a specific use.)*

	Poor quality	Medium quality	High quality	Don't know
Inbound Logistics (*e.g. ordering/receiving, inventory replenishment*)	○	○	○	○
Operations (*e.g. production volumes, process details, quality control, efficiency measure*)	○	○	○	○
Outbound Logistics (*e.g. ordering/delivery*)	○	○	○	○
Marketing (*e.g. customer data/CRM, product development, product life-cycle, segmentation*)	○	○	○	○
Sales (*e.g. customer orders, referrals, transactional data*)	○	○	○	○
Service (*e.g. application, repair, tech support*)	○	○	○	○
HR Management (*e.g. goal setting and monitoring, compensation, payroll, benefits*)	○	○	○	○
Procurement (*e.g. input costs, SRM*)	○	○	○	○
Regulatory Compliance (*e.g. labor, environmental standard*)	○	○	○	○

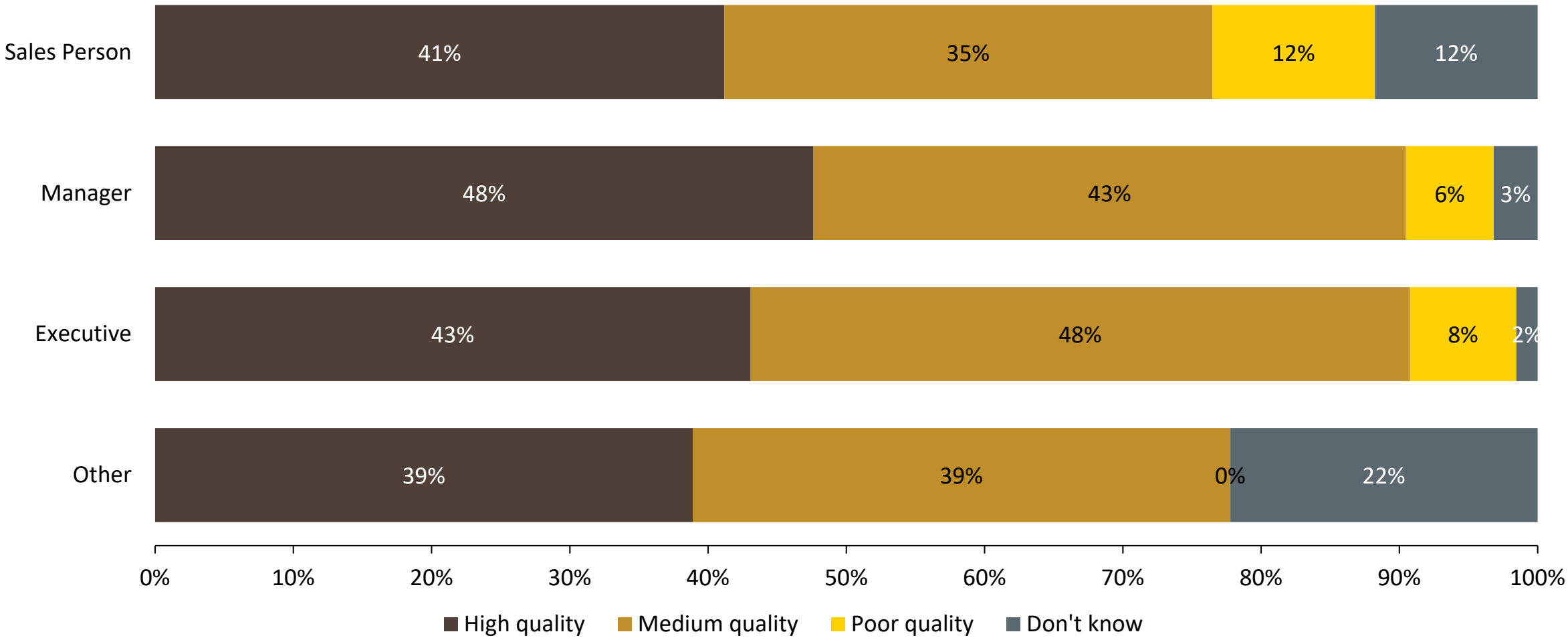
Data Quality by Role – Inbound Logistics



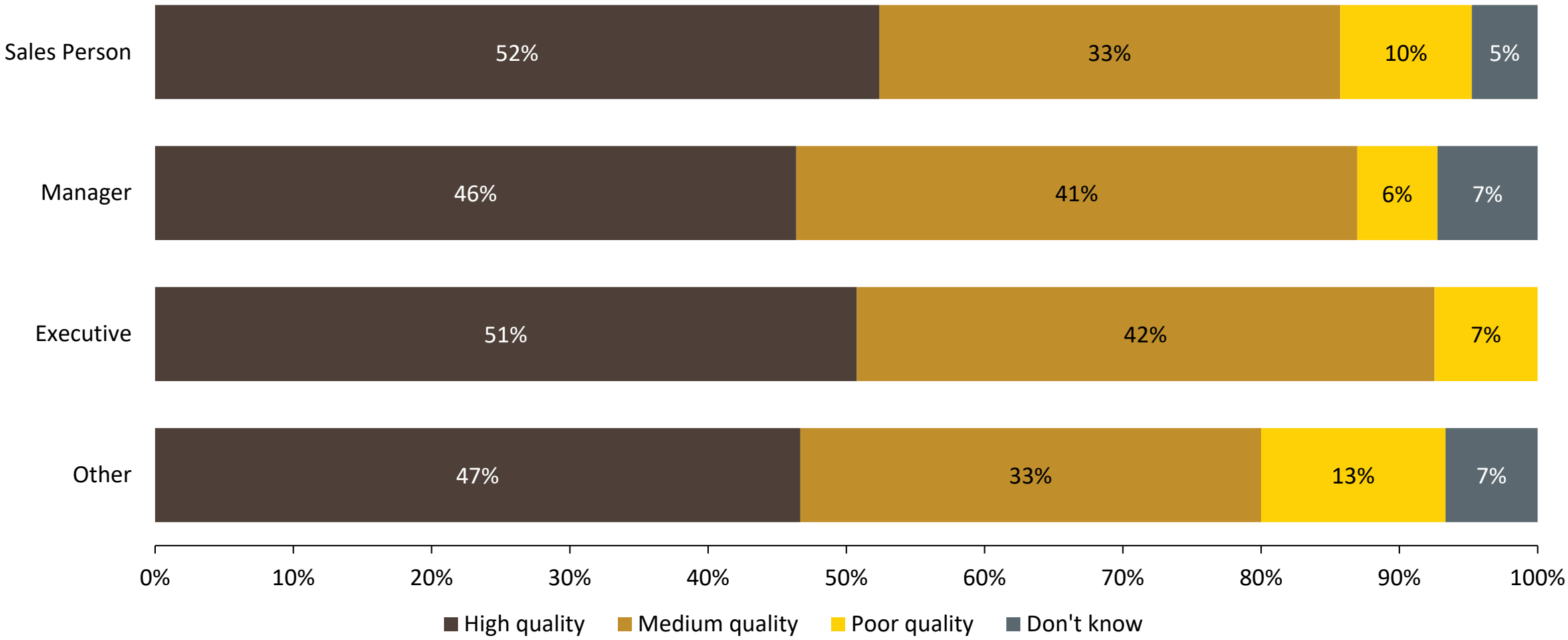
Data Quality by Role - Operations



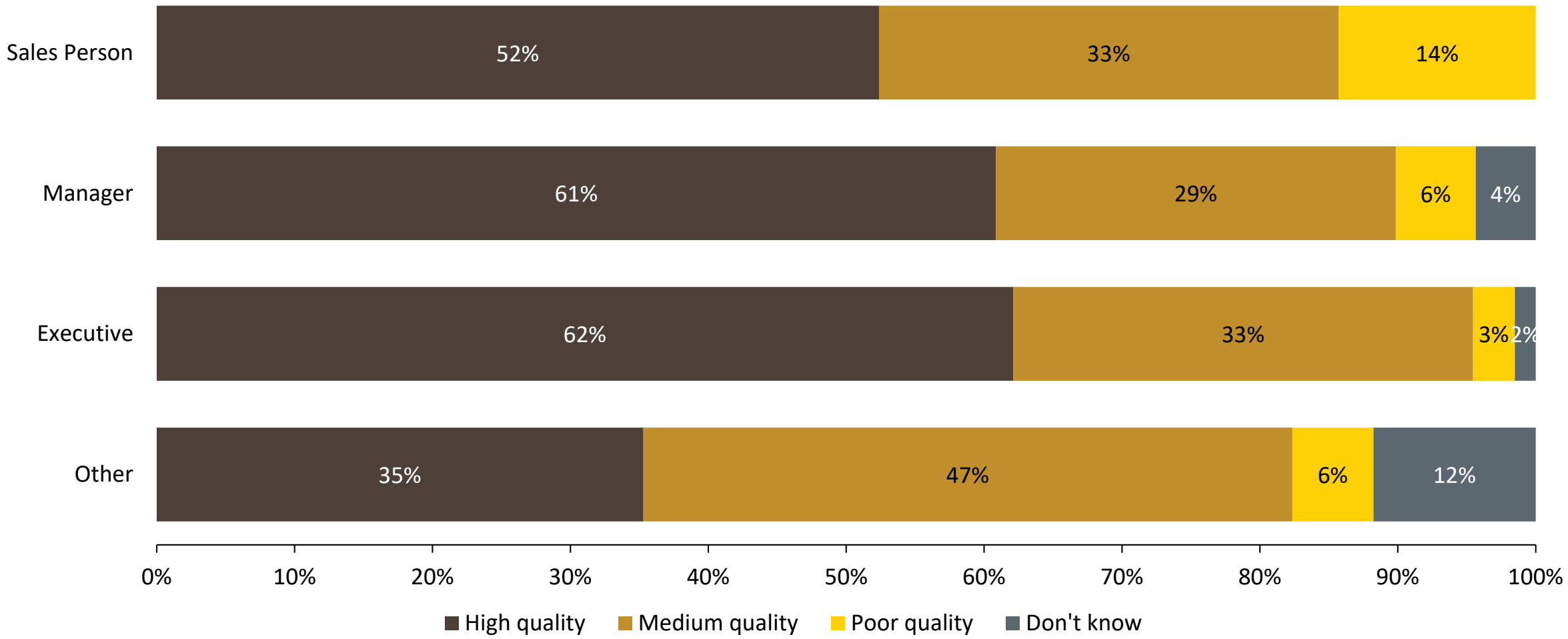
Data Quality by Role – Outbound Logistics



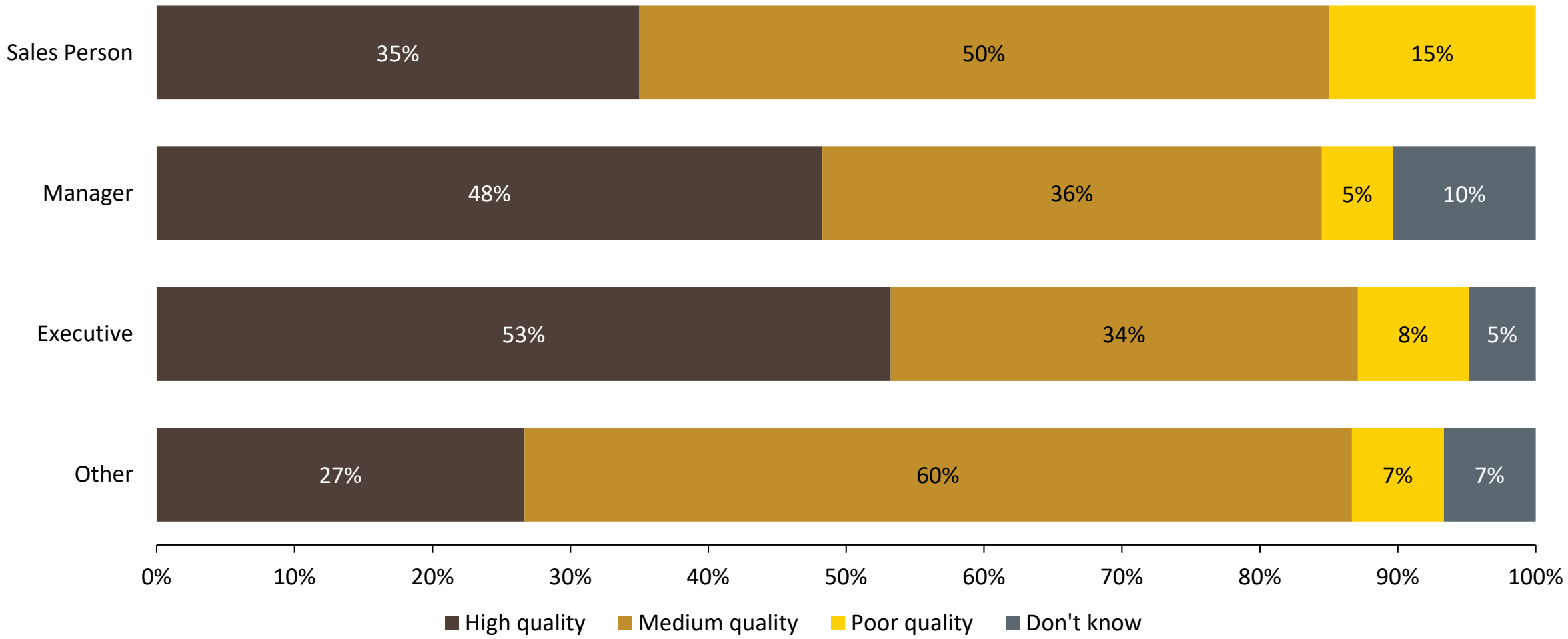
Data Quality by Role - Marketing



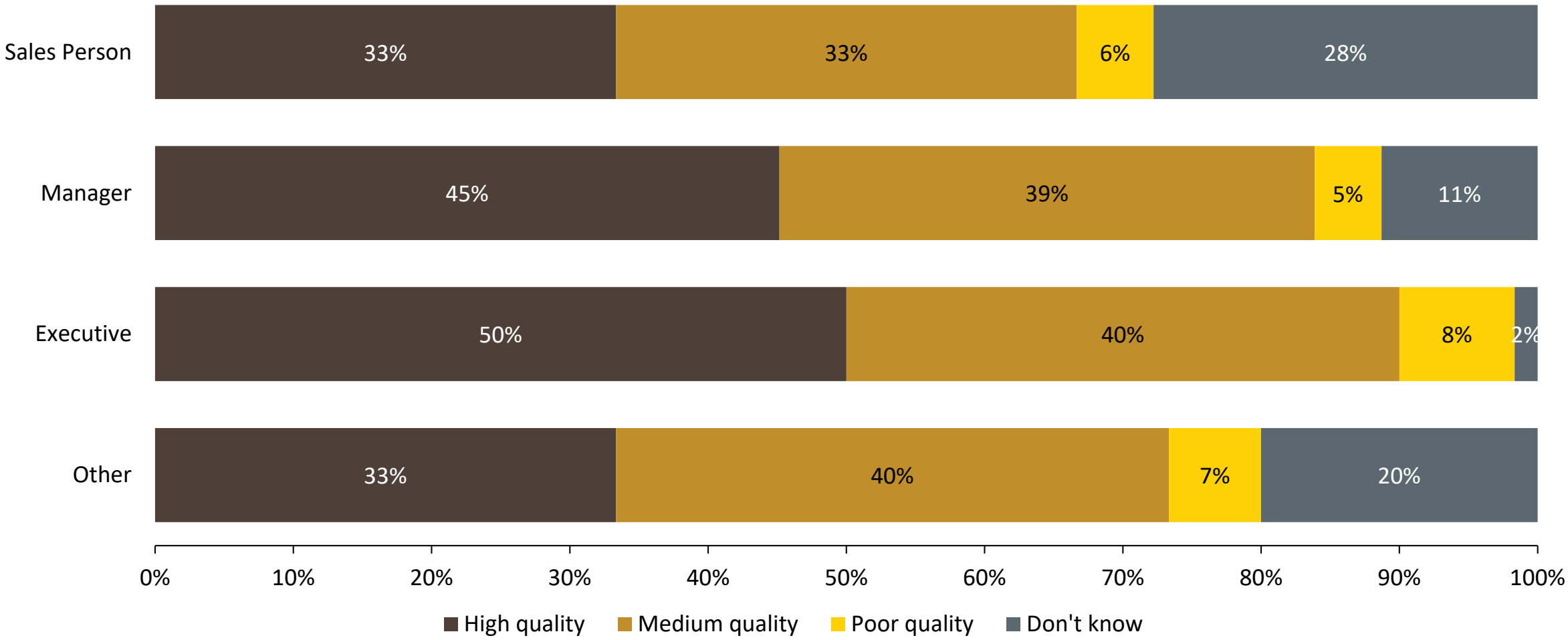
Data Quality by Role – Sales



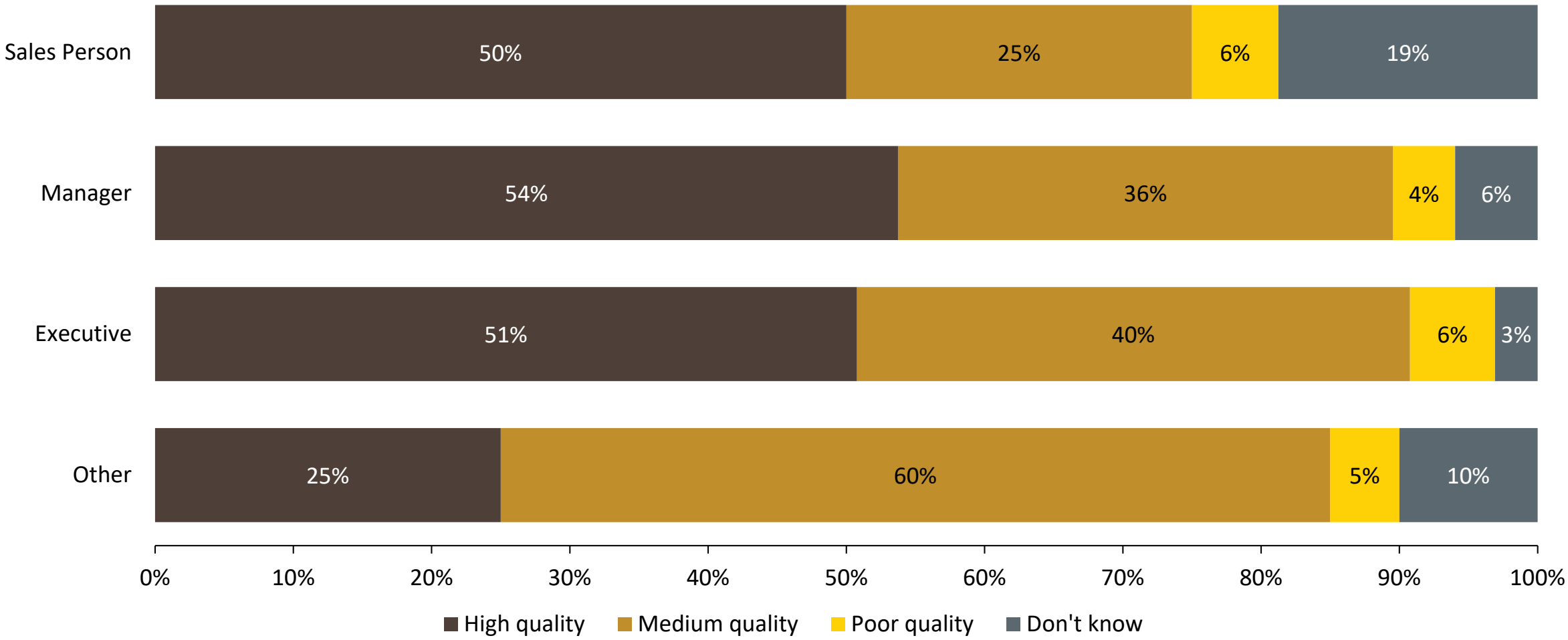
Data Quality by Role - Service



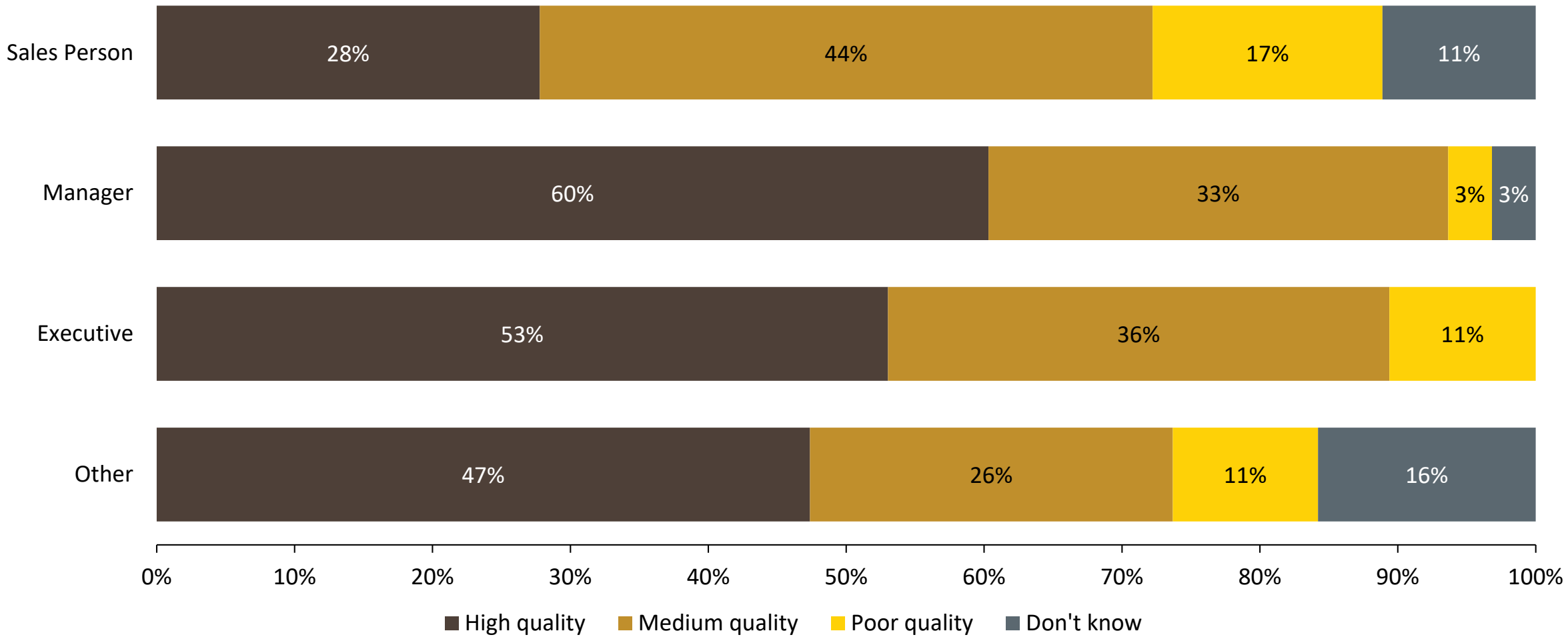
Data Quality by Role – HR Management



Data Quality by Role - Procurement



Data Quality by Role - Regulatory Compliance

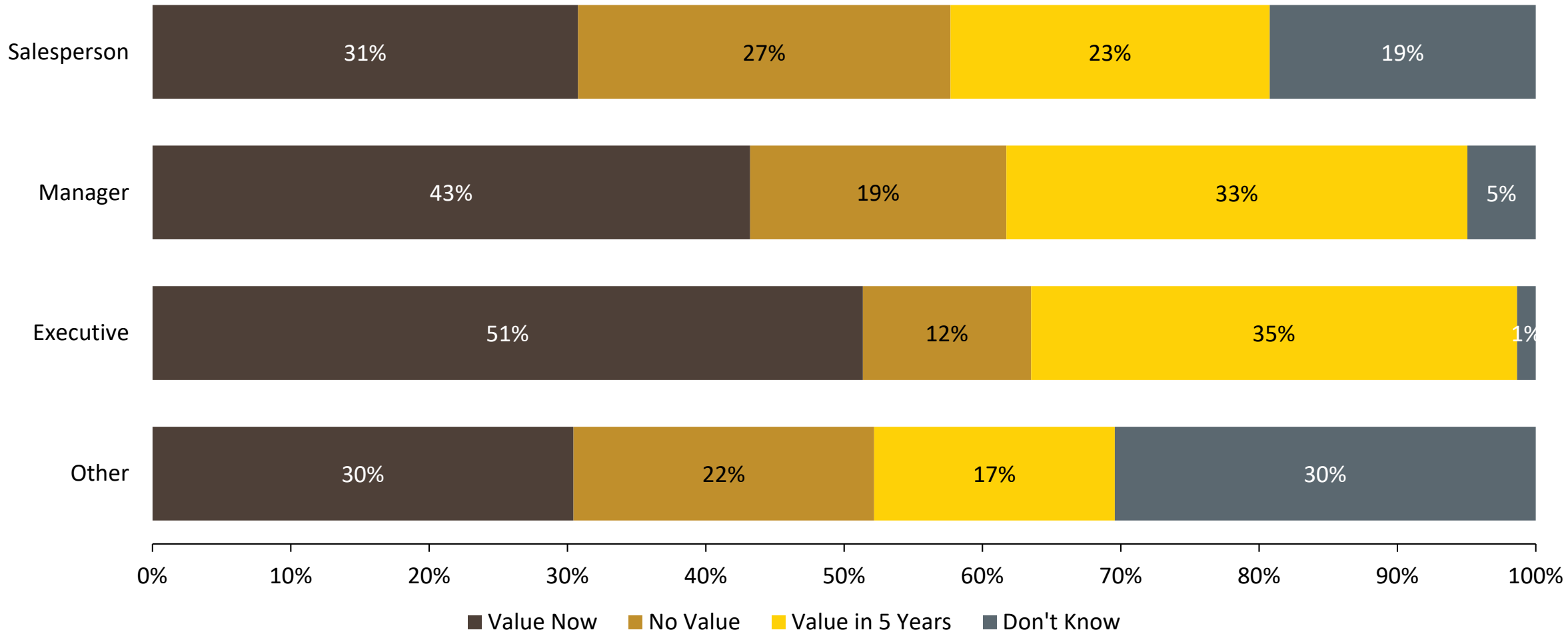


Value Creation by Role

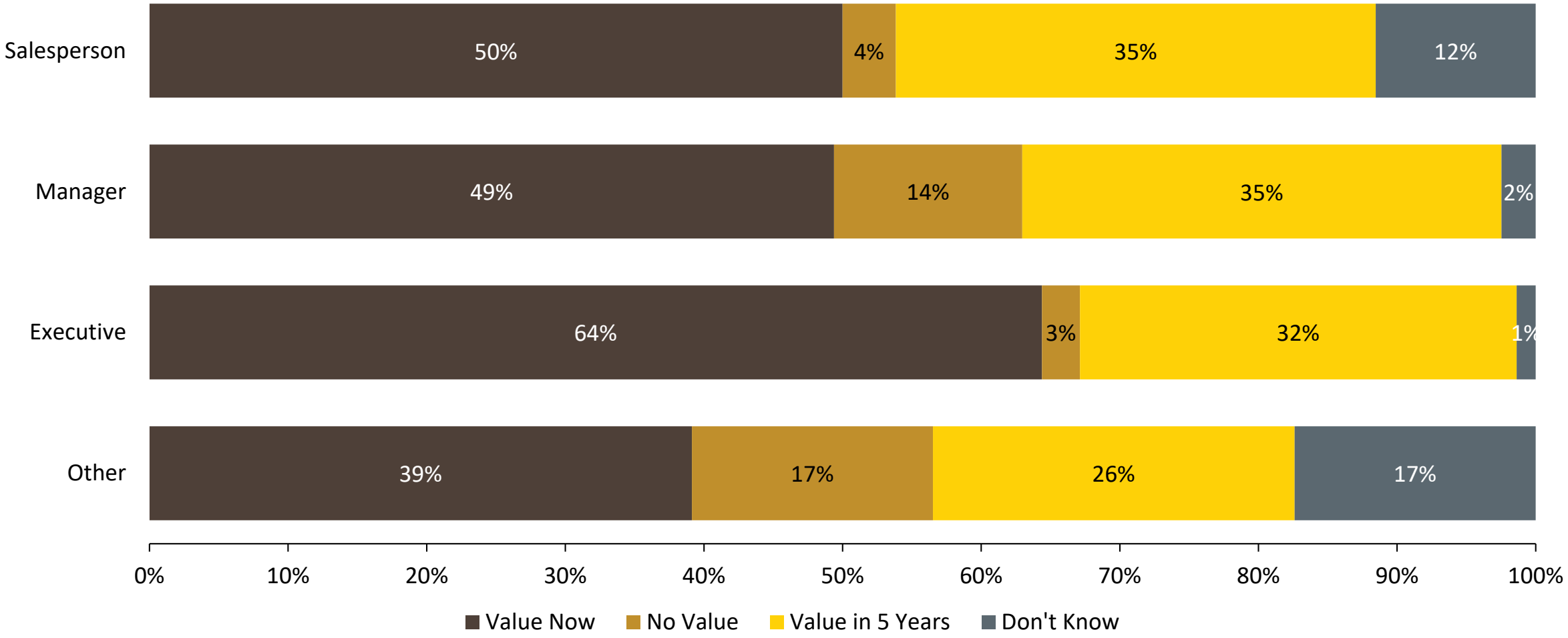
Does **data analytics** create, or is it expected to create, **value** in the following business functions of your organization?

	Creates Value **Now**	Expected to Create Value **in 5 Years**	**Does Not** Create Value in This Way	Don't Know
Inbound Logistics (*e.g. ordering/receiving, inventory replenishment*)	○	○	○	○
Operations (*e.g. production volumes, process details, quality control, efficiency measure*)	○	○	○	○
Outbound Logistics (*e.g. ordering/delivery*)	○	○	○	○
Marketing (*e.g. customer data/CRM, product development, product life-cycle, segmentation*)	○	○	○	○
Sales (*e.g. customer orders, referrals, transactional data*)	○	○	○	○
Service (*e.g. application, repair, tech support*)	○	○	○	○
HR Management (*e.g. goal setting and monitoring, compensation, payroll, benefits*)	○	○	○	○
Procurement (*e.g. input costs, SRM*)	○	○	○	○
Regulatory Compliance (*e.g. labor, environmental standard*)	○	○	○	○

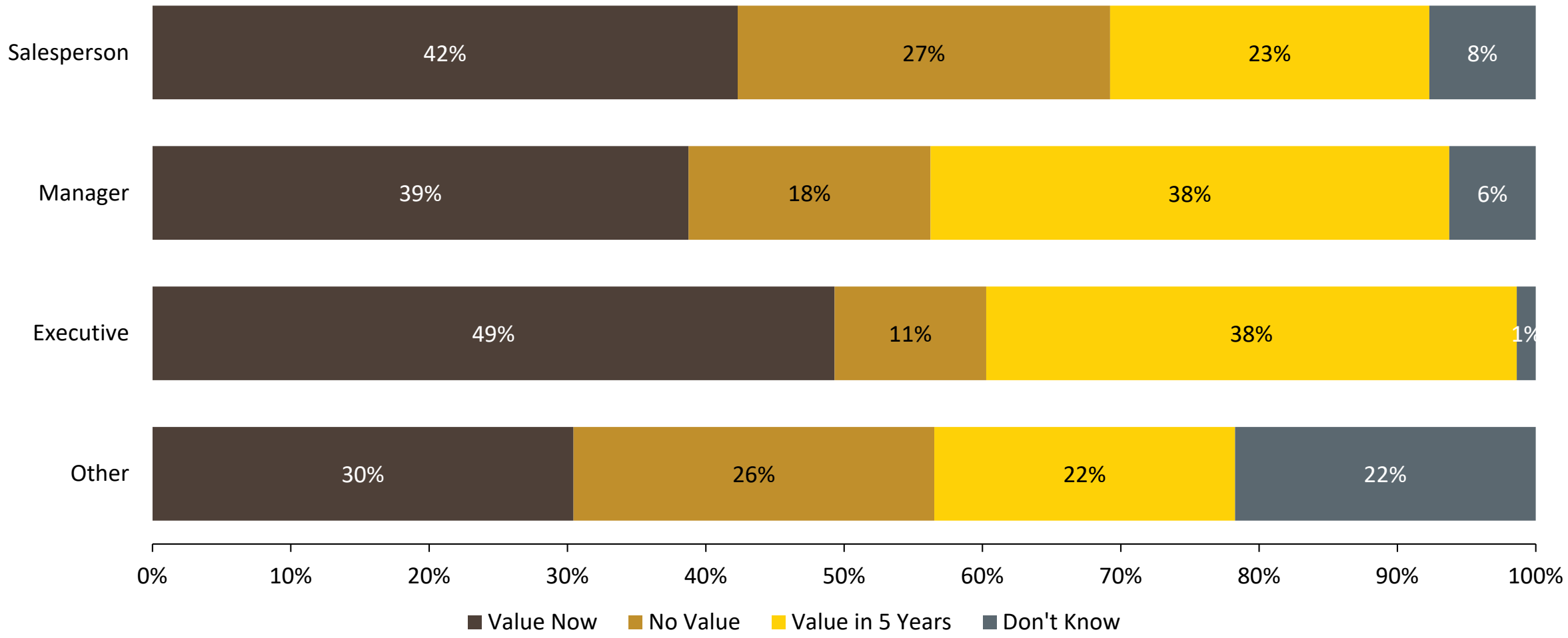
Value Creation by Role – Inbound Logistics



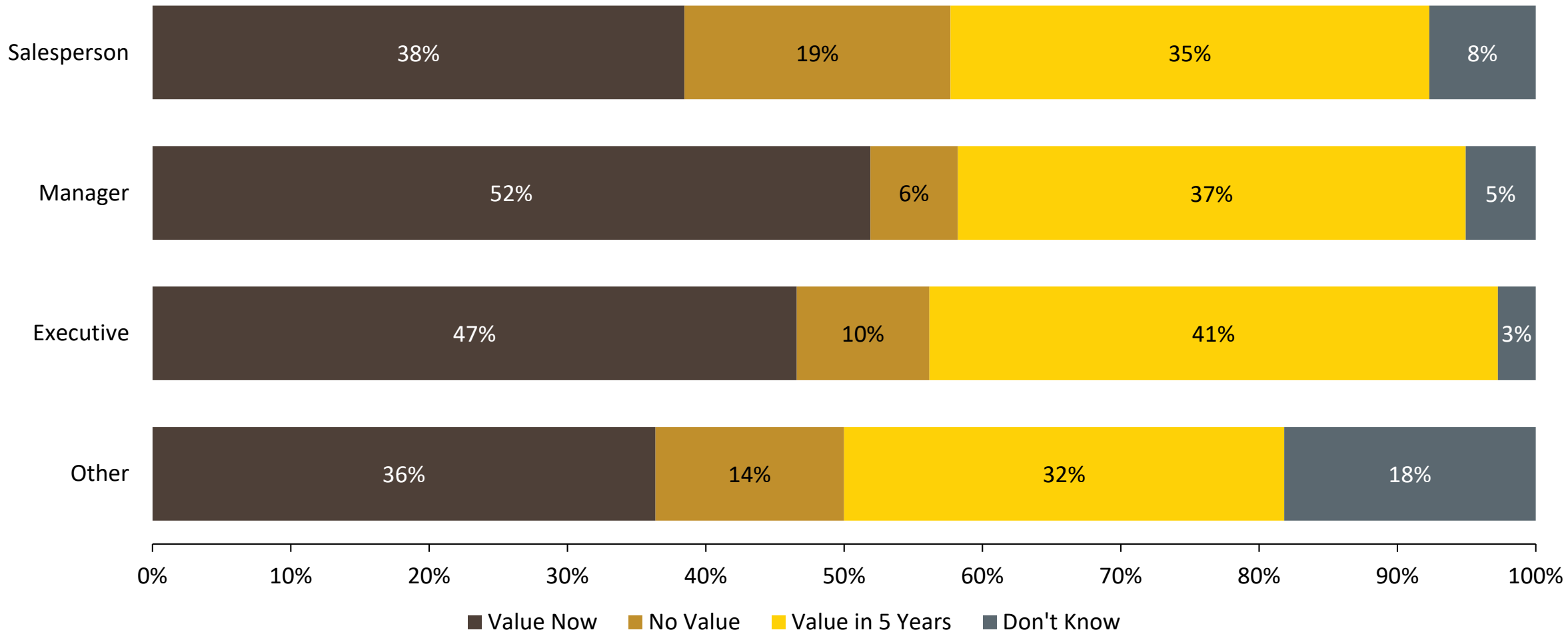
Value Creation by Role – Operations



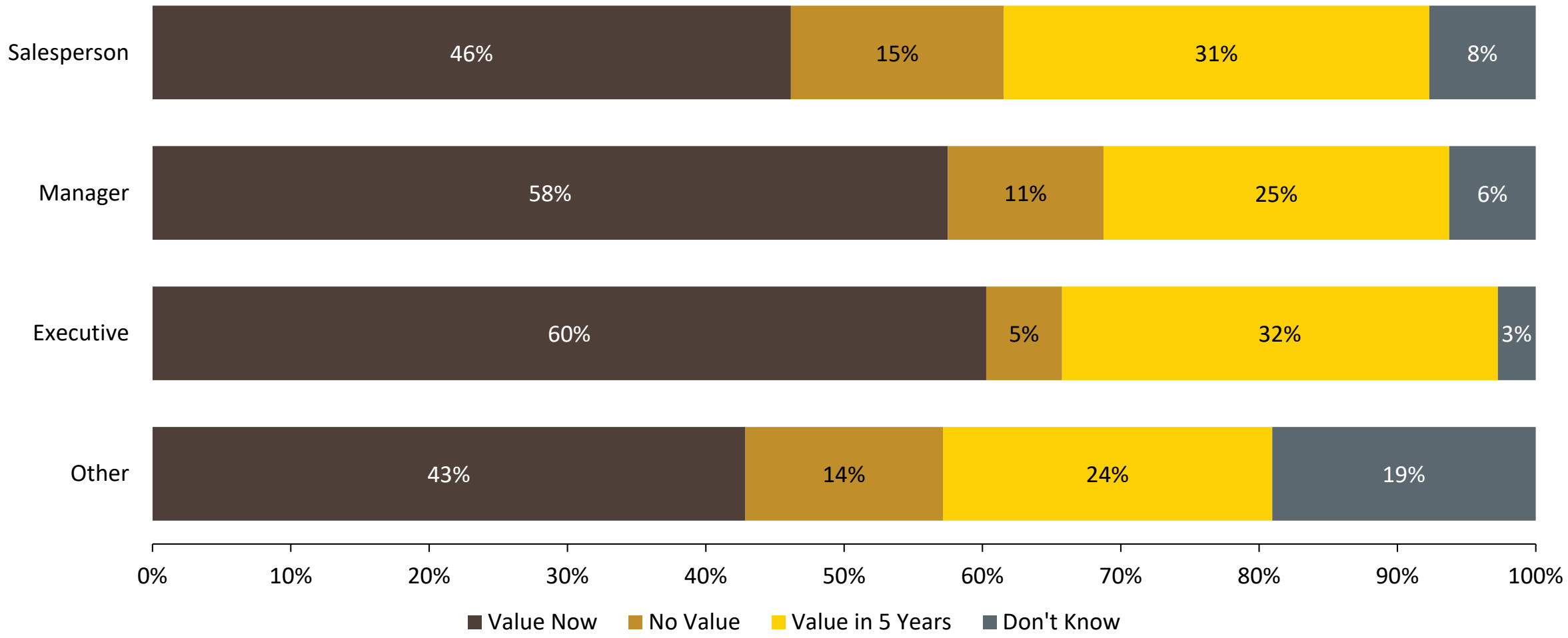
Value Creation by Role – Outbound Logistics



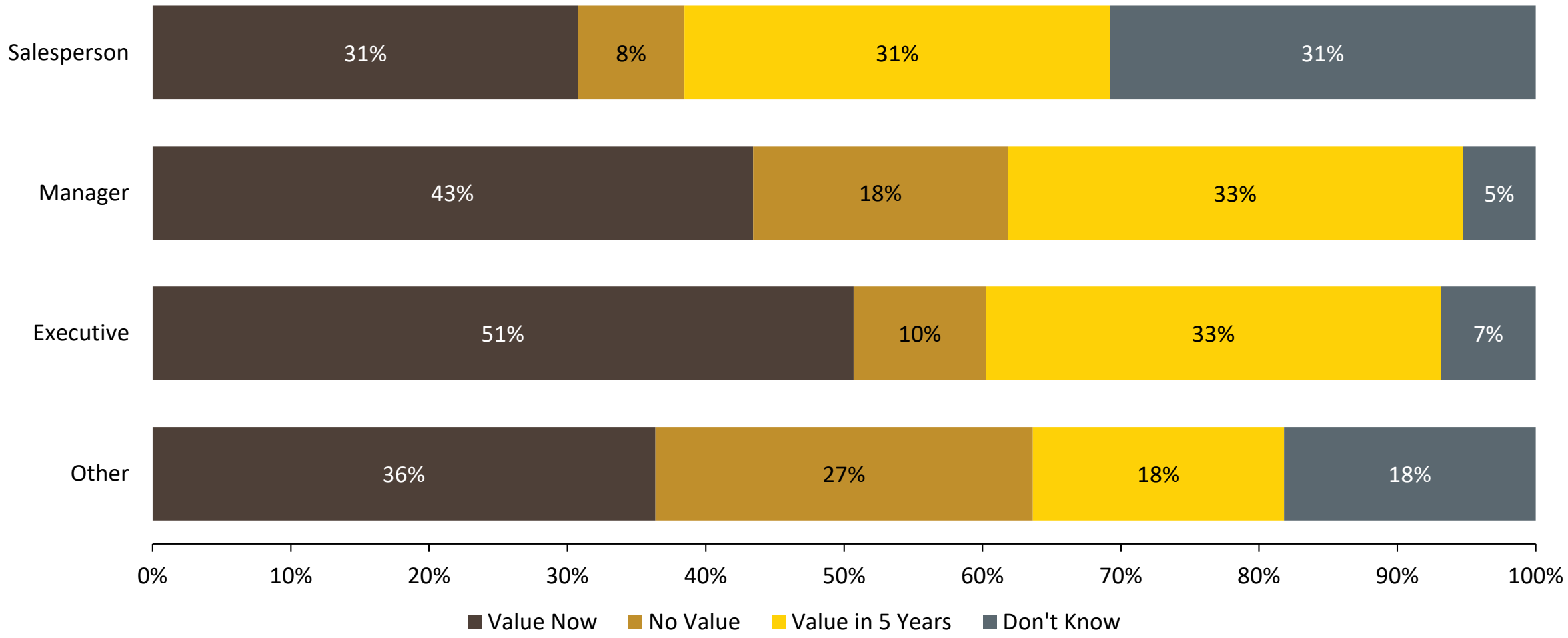
Value Creation by Role – Marketing



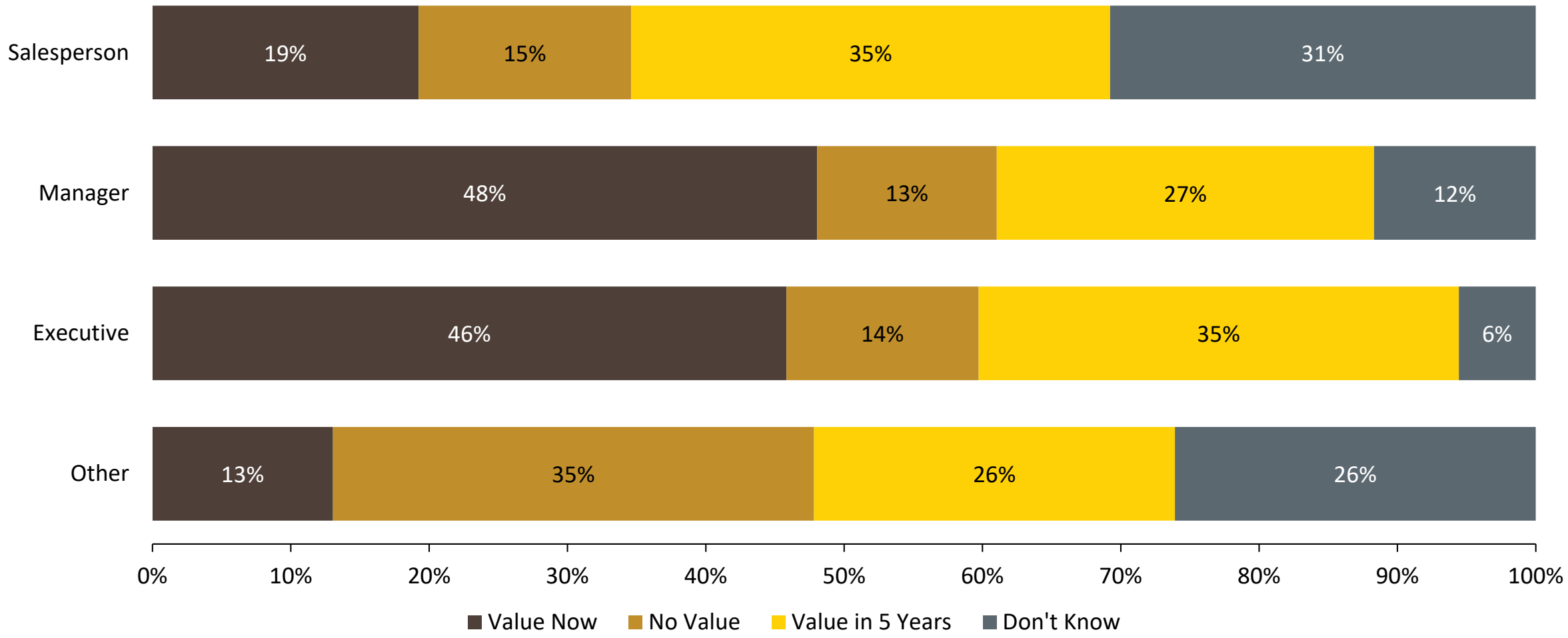
Value Creation by Role – Sales



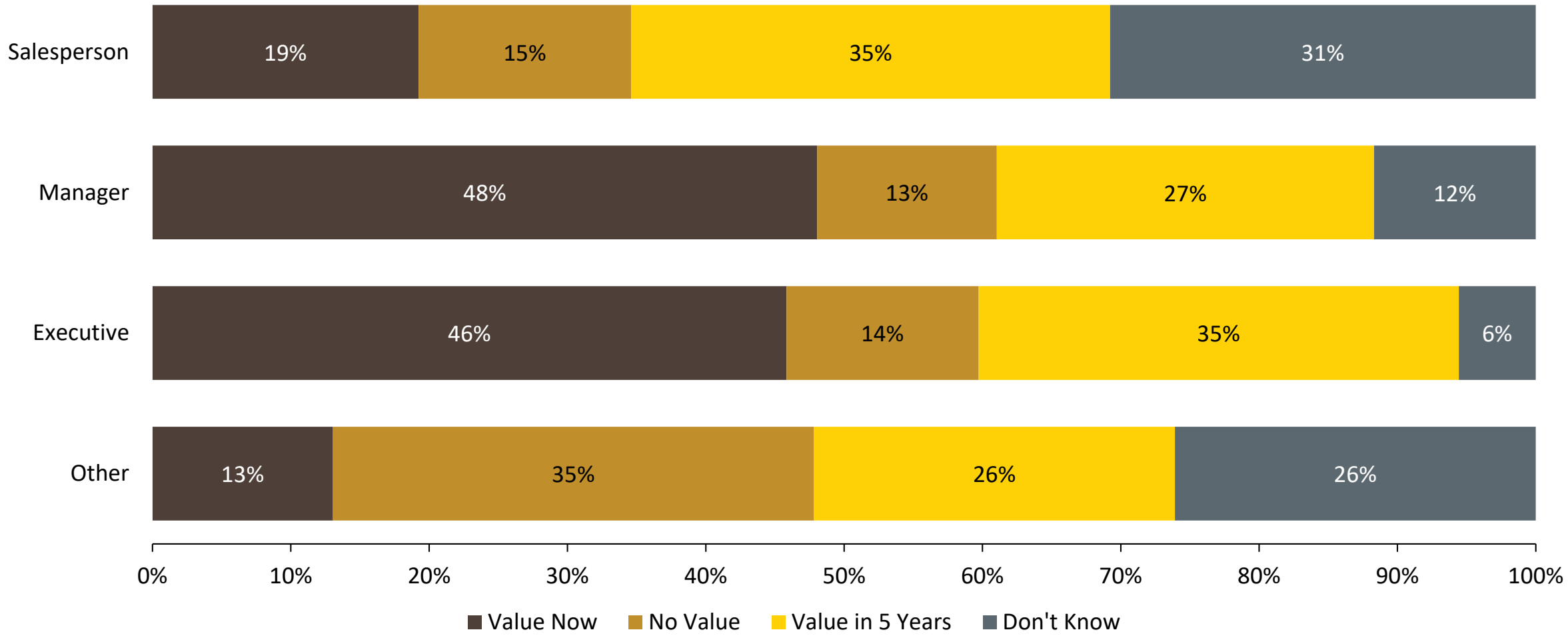
Value Creation by Role – Service



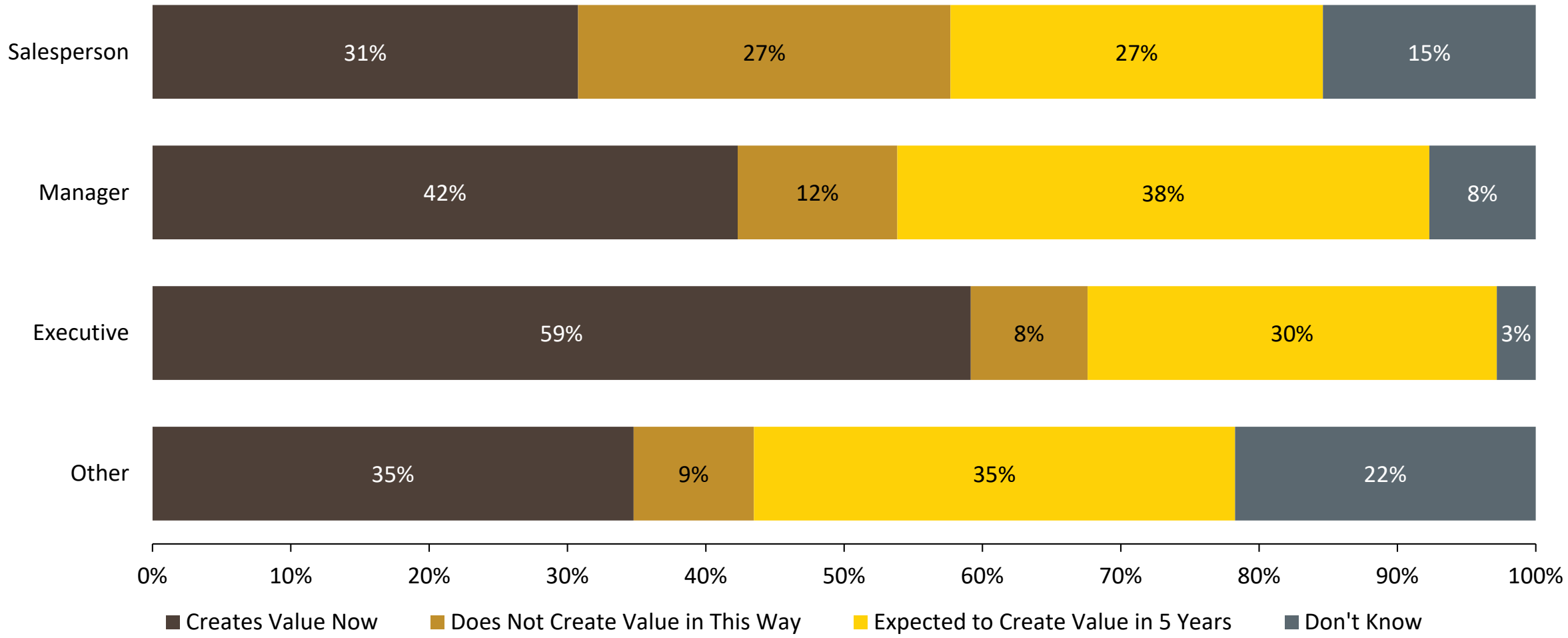
Value Creation by Role – HR Management



Value Creation by Role – Procurement

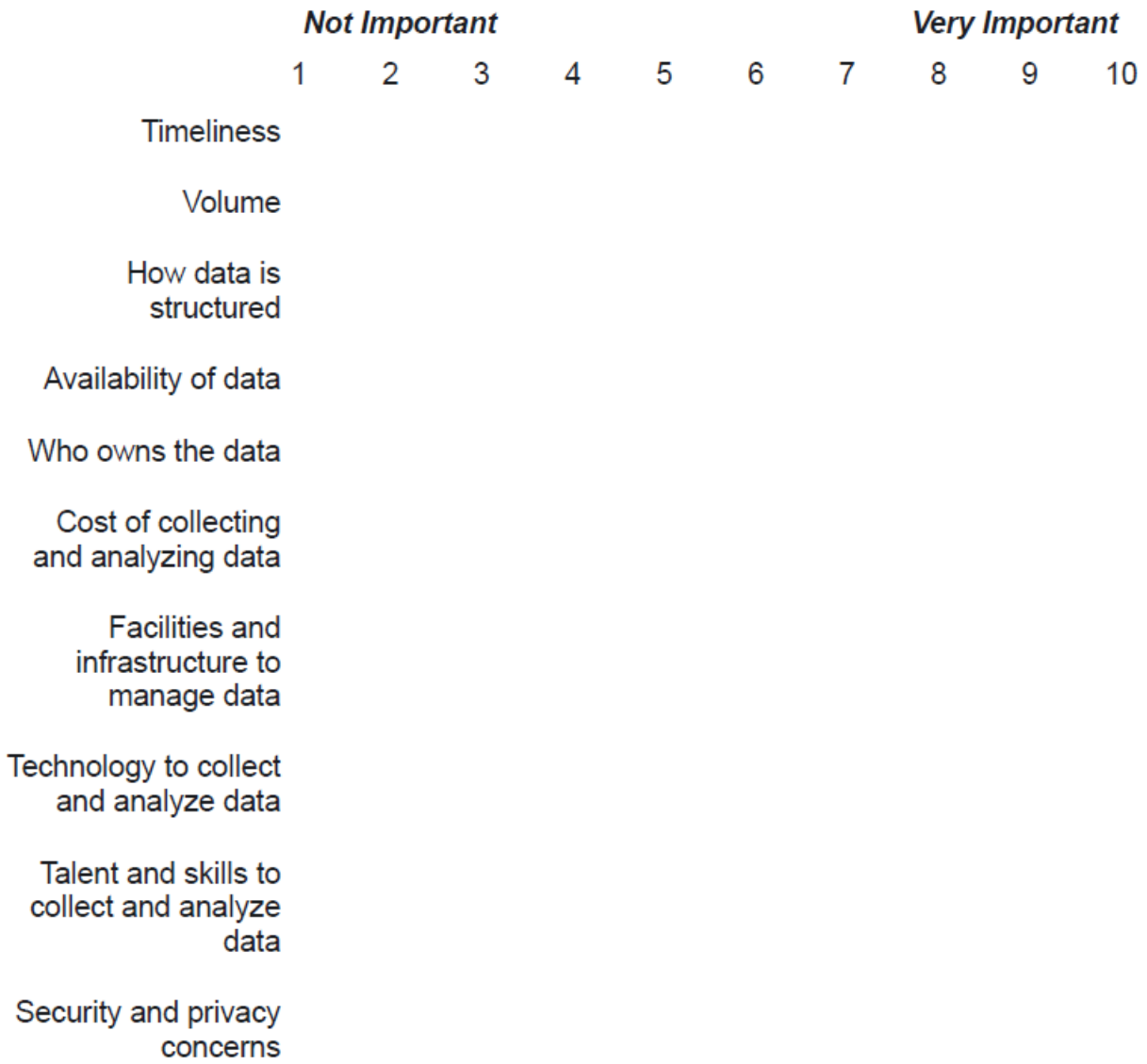


Value Creation by Role – Regulatory Compliance

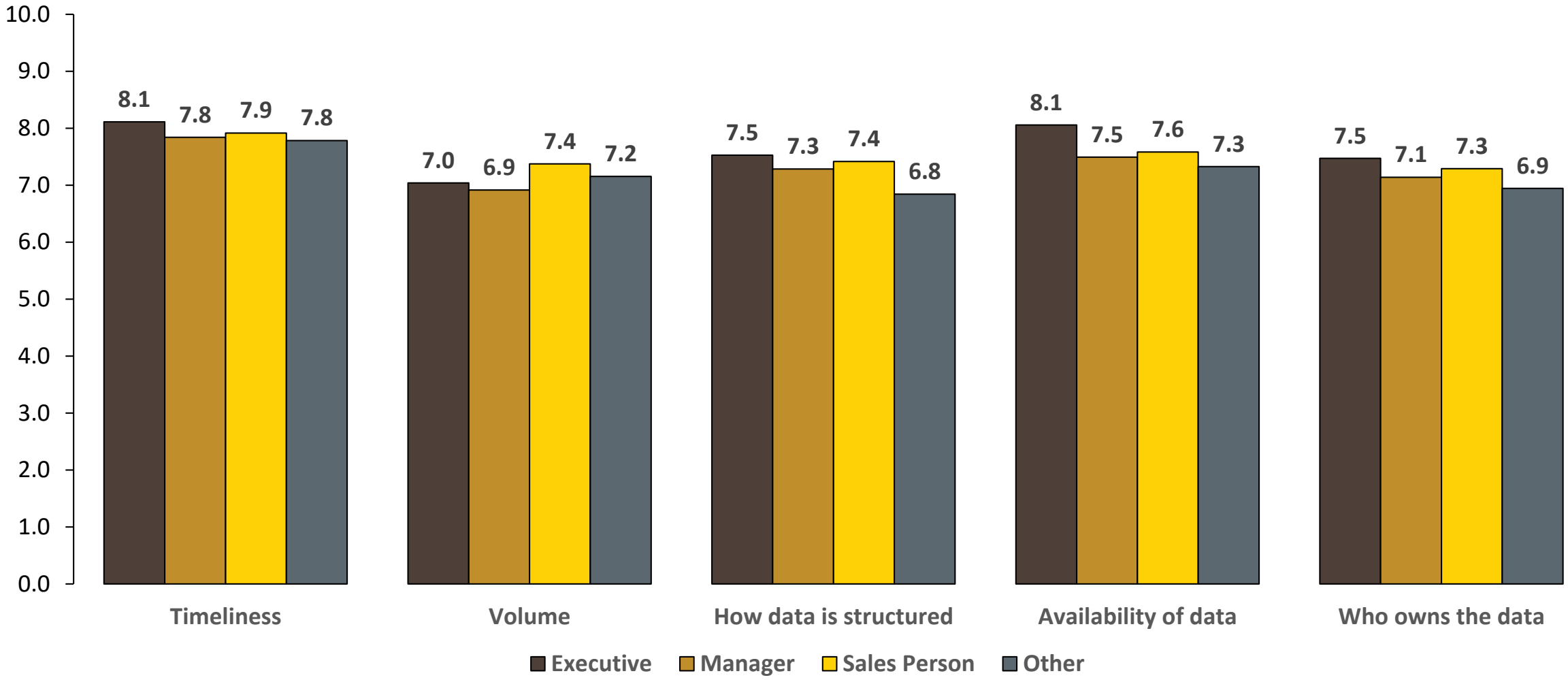


Data Collection Challenges

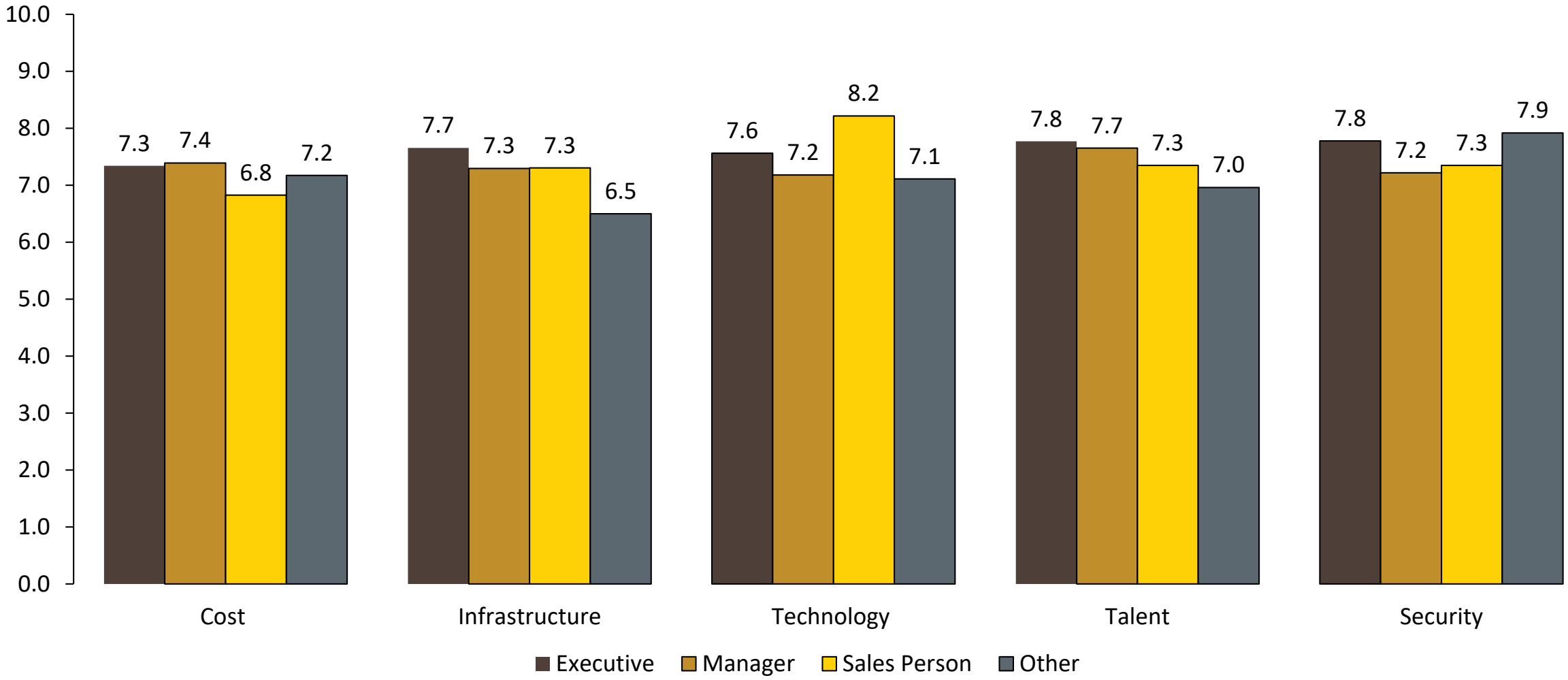
On a scale of 1 to 10, where 1 means ***"not important"*** and 10 means ***"very important"***, please rate the importance of the following data-related challenges in your organization. *(Use the slider to select your rating.)*



Average Rating of the Most Important Data Related Challenges by Role



Average Rating of the Most Important Data Related Challenges by Role



Decision Made on Data Analytics by The Extent Data is Collected

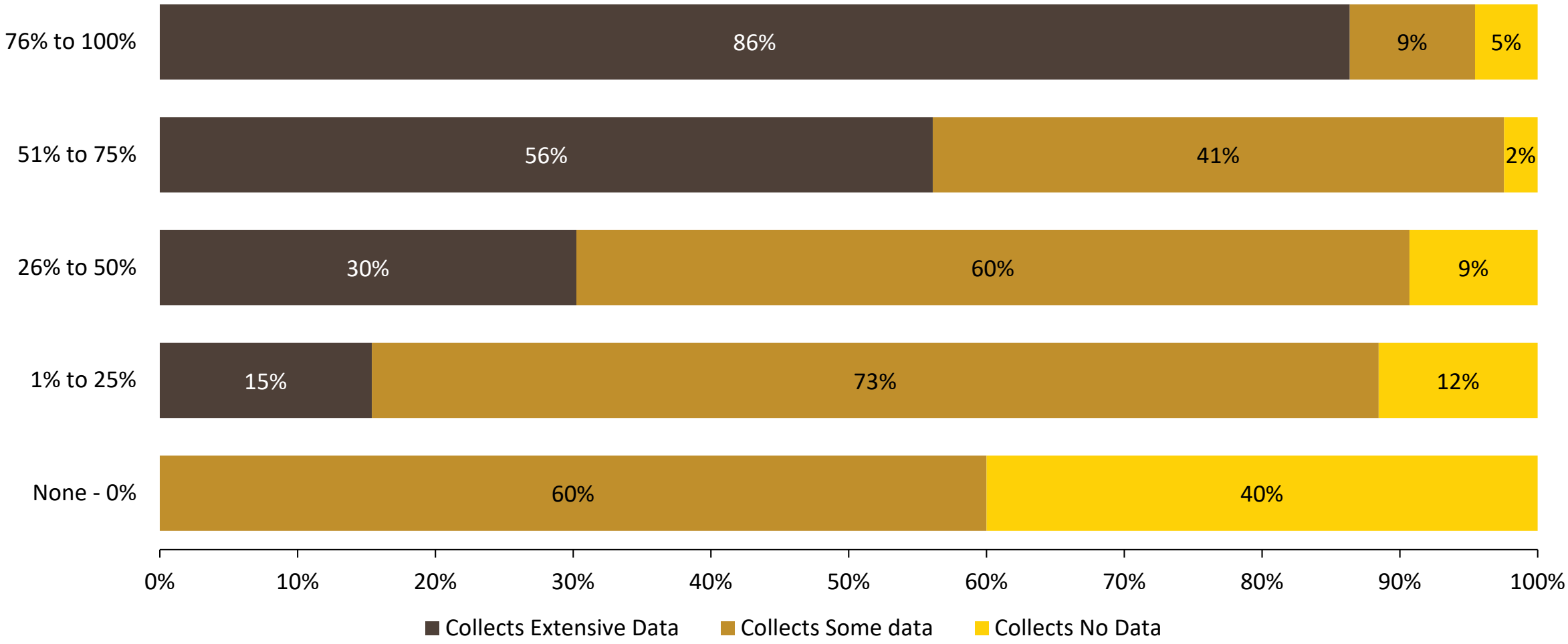
To what extent does your organization **collect data** that is useful?

- ○ Collects No Data
- ○ Collects Some data
- ○ Collects Extensive Data

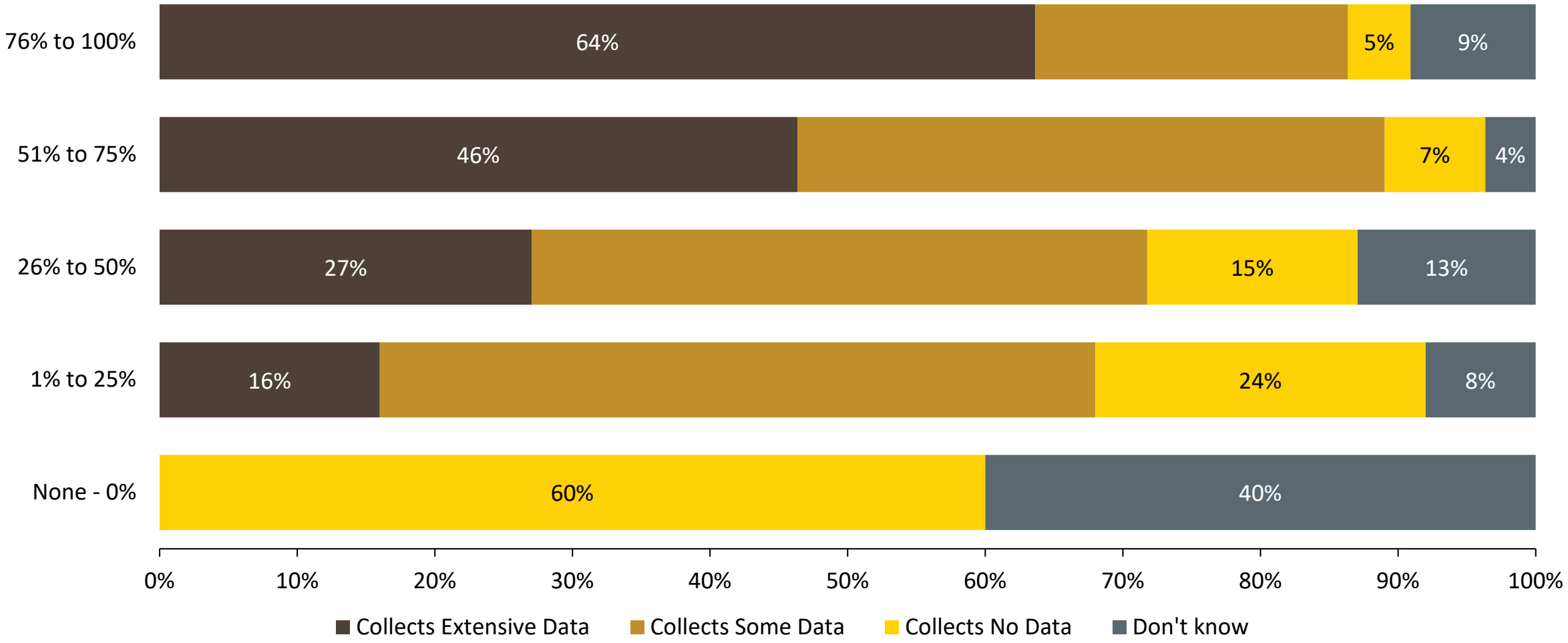
Approximately what percentage of overall decisions are made based on **data analytics** in your organization?

- ○ None - 0%
- ○ 1% to 25%
- ○ 26% to 50%
- ○ 51% to 75%
- ○ 76% to 100%

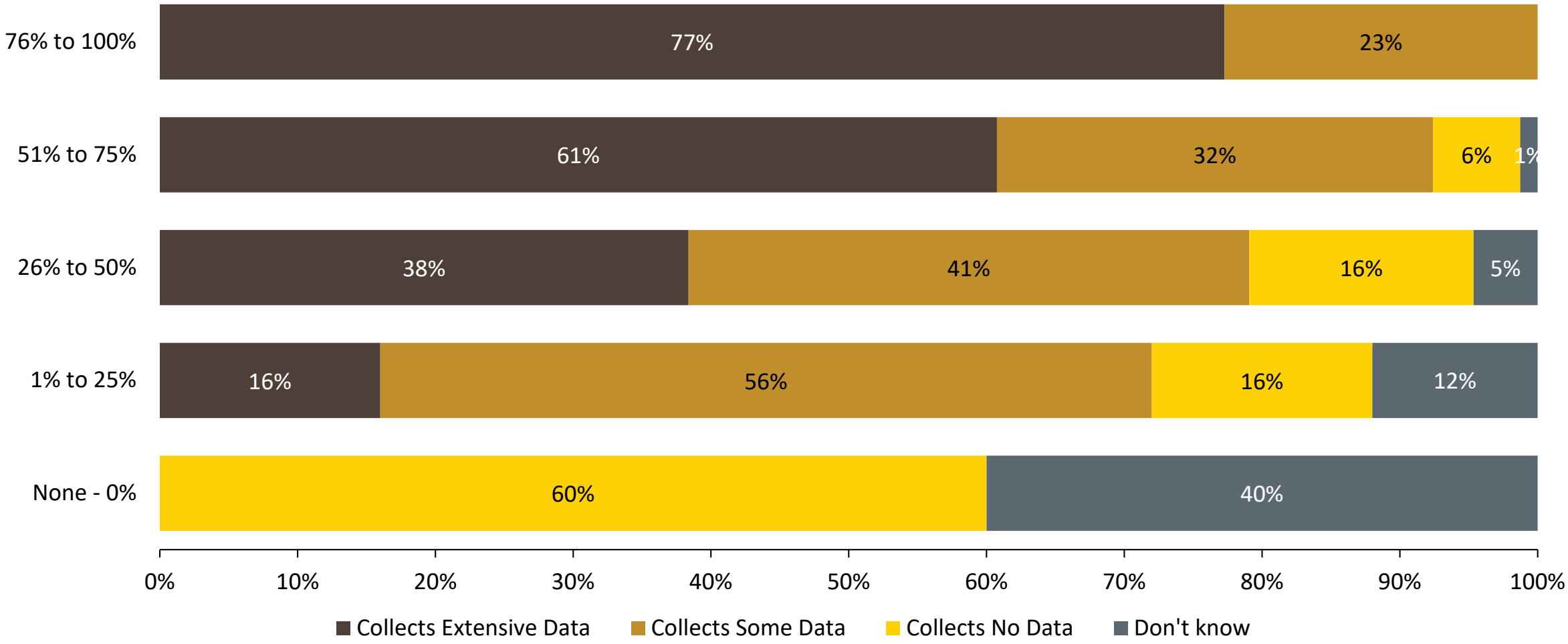
% of Decision Made on Data Analytics by The Extent Data is Collected - Overall



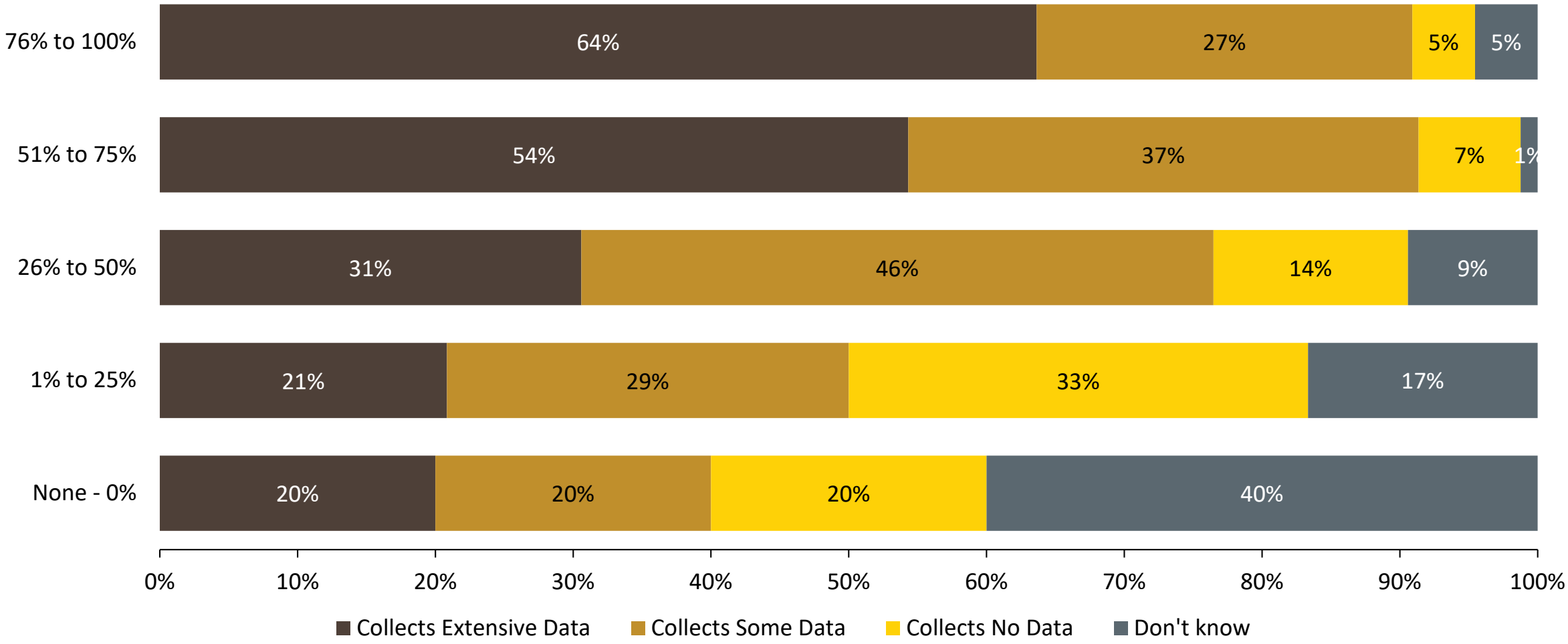
% of Decision Made on Data Analytics by The Extent Data is Collected – Inbound Logistics



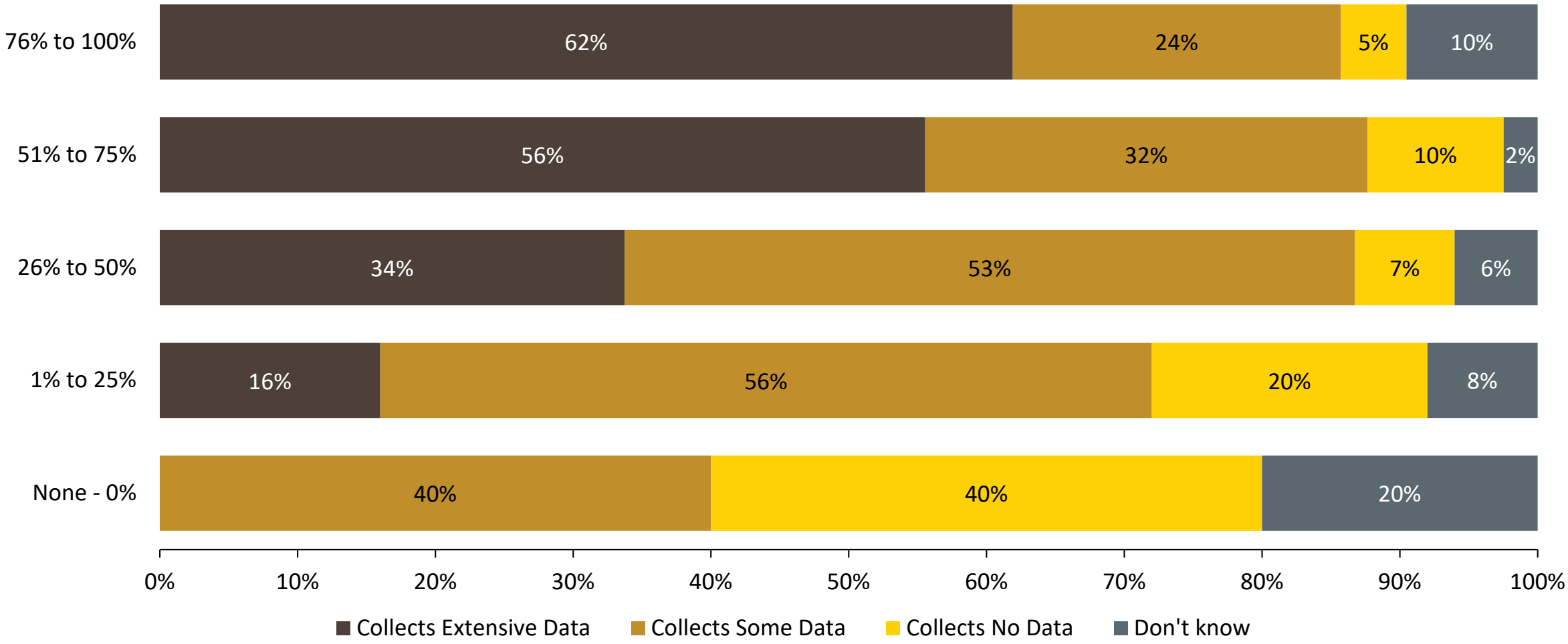
% of Decision Made on Data Analytics by The Extent Data is Collected – Operations



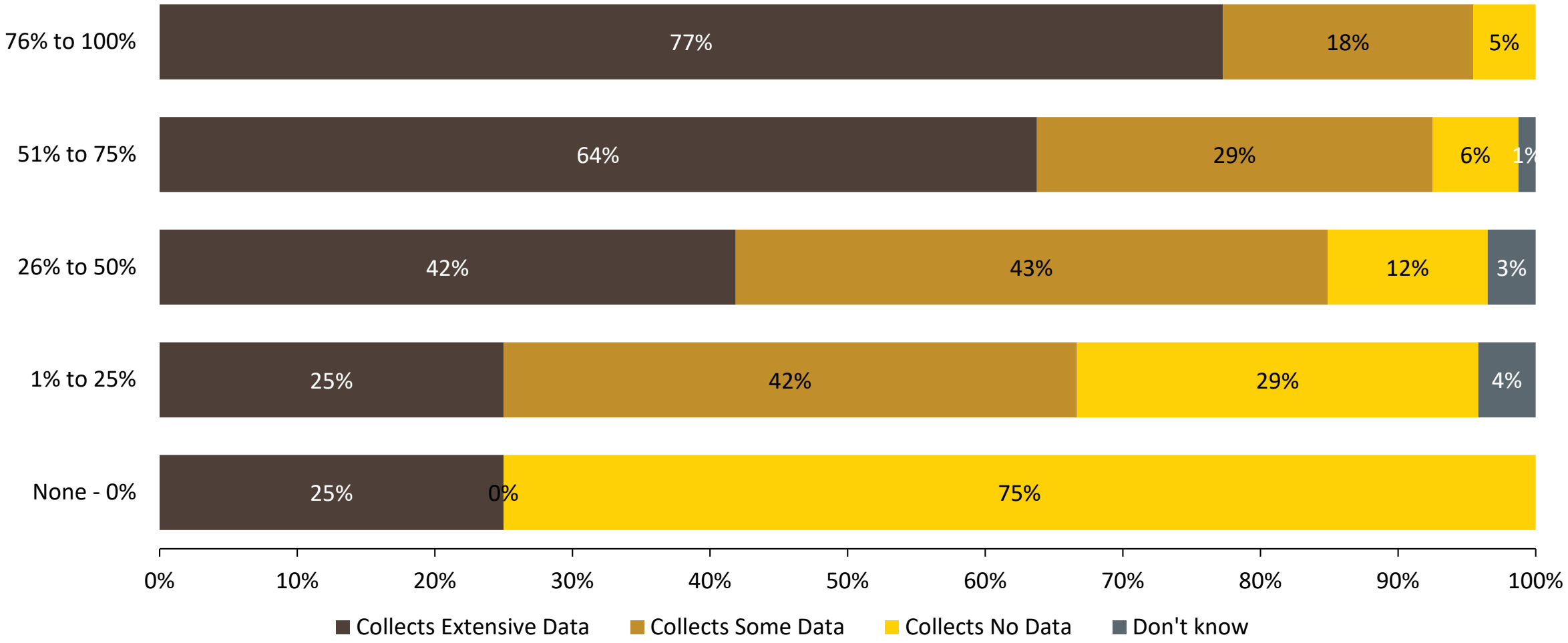
% of Decision Made on Data Analytics by The Extent Data is Collected – Outbound Logistics



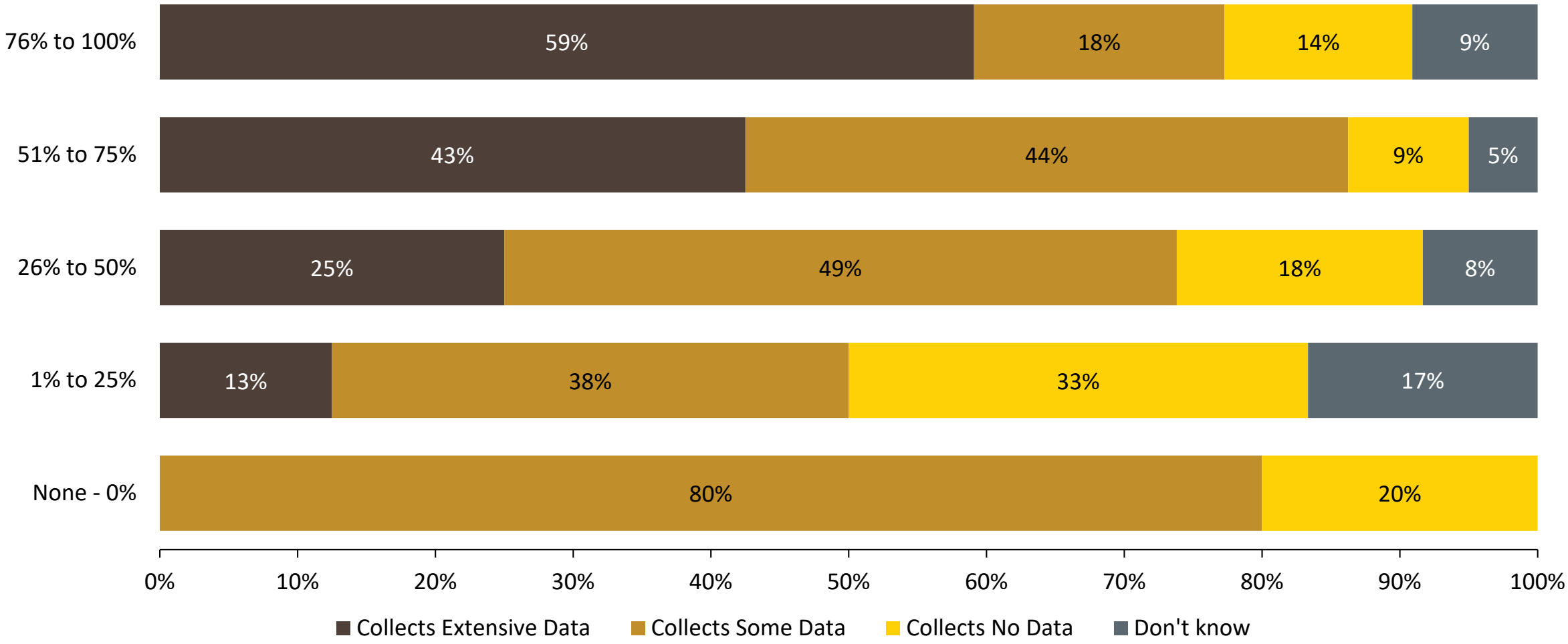
% of Decision Made on Data Analytics by The Extent Data is Collected - Marketing



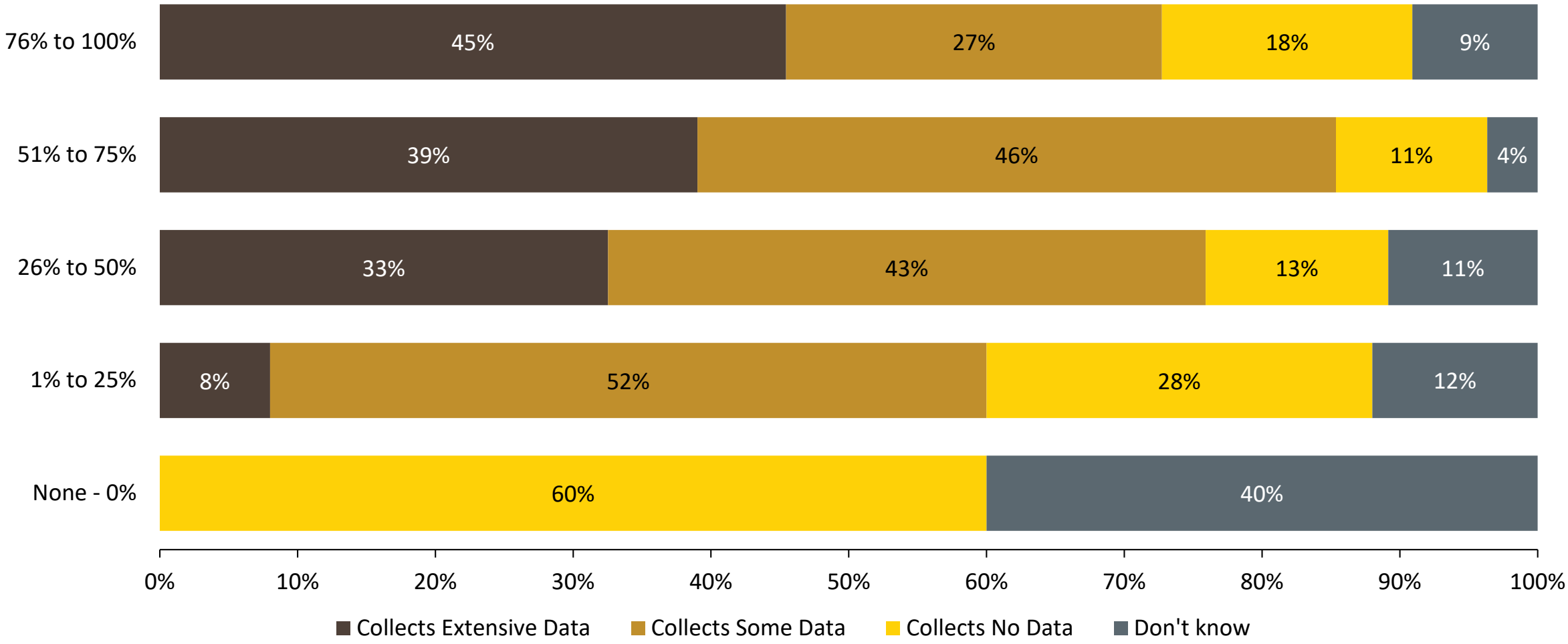
% of Decision Made on Data Analytics by The Extent Data is Collected - Sales



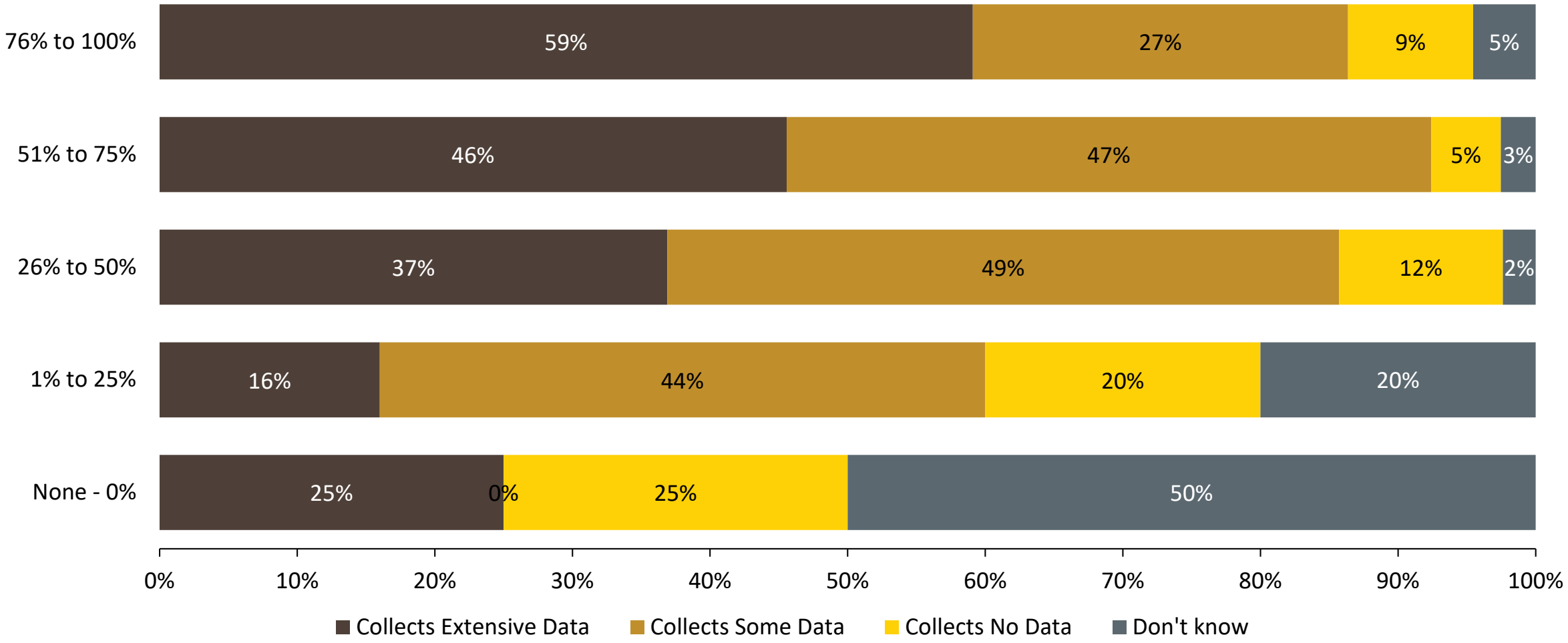
% of Decision Made on Data Analytics by The Extent Data is Collected - Service



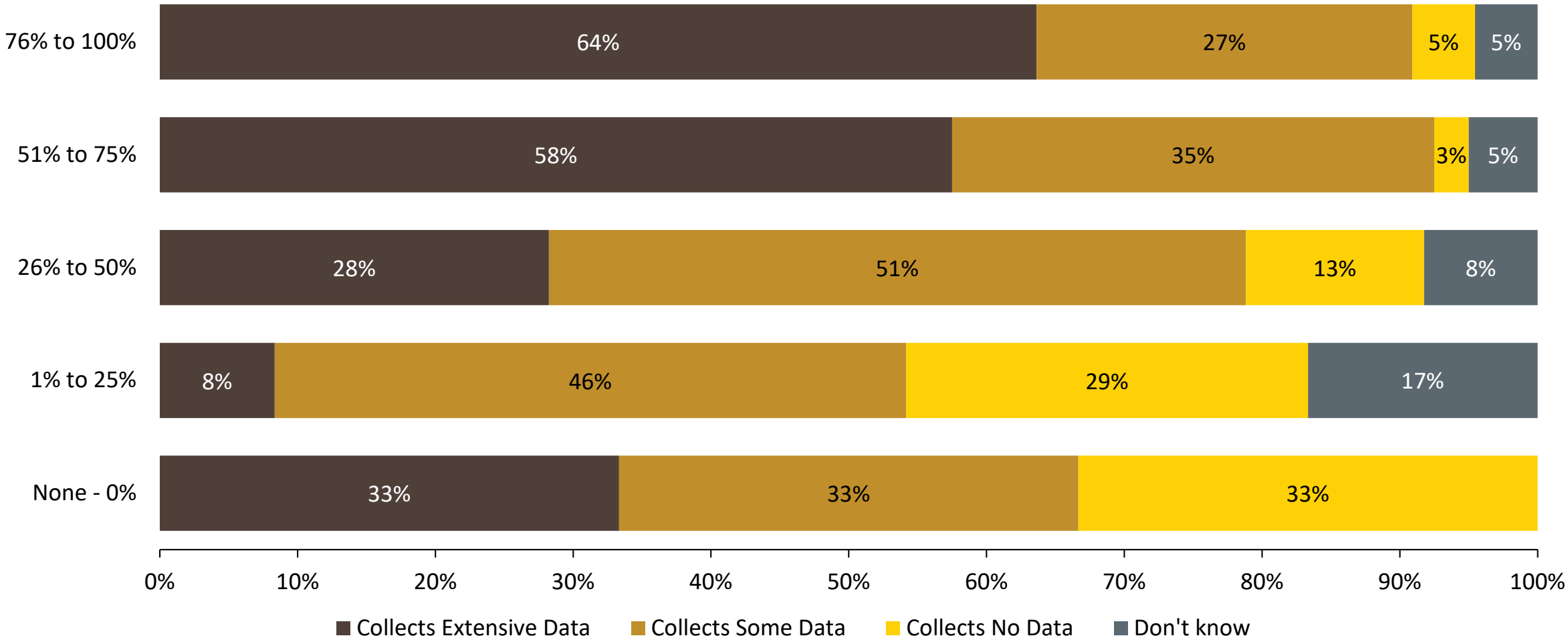
% of Decision Made on Data Analytics by The Extent Data is Collected – HR Management



% of Decision Made on Data Analytics by The Extent Data is Collected – Procurement



% of Decision Made on Data Analytics by The Extent Data is Collected – Regulatory Compliance



Data Analytics Survey Results

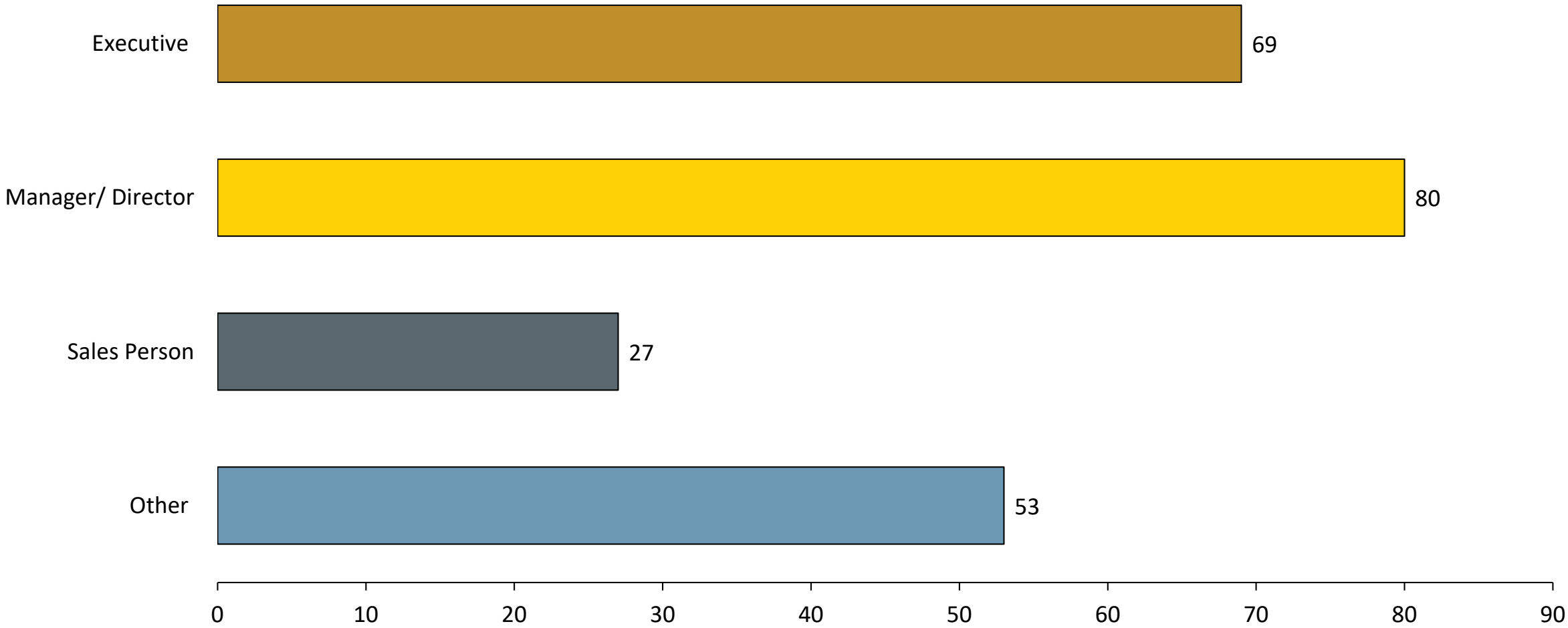
Food Manufactures

PURDUE UNIVERSITY

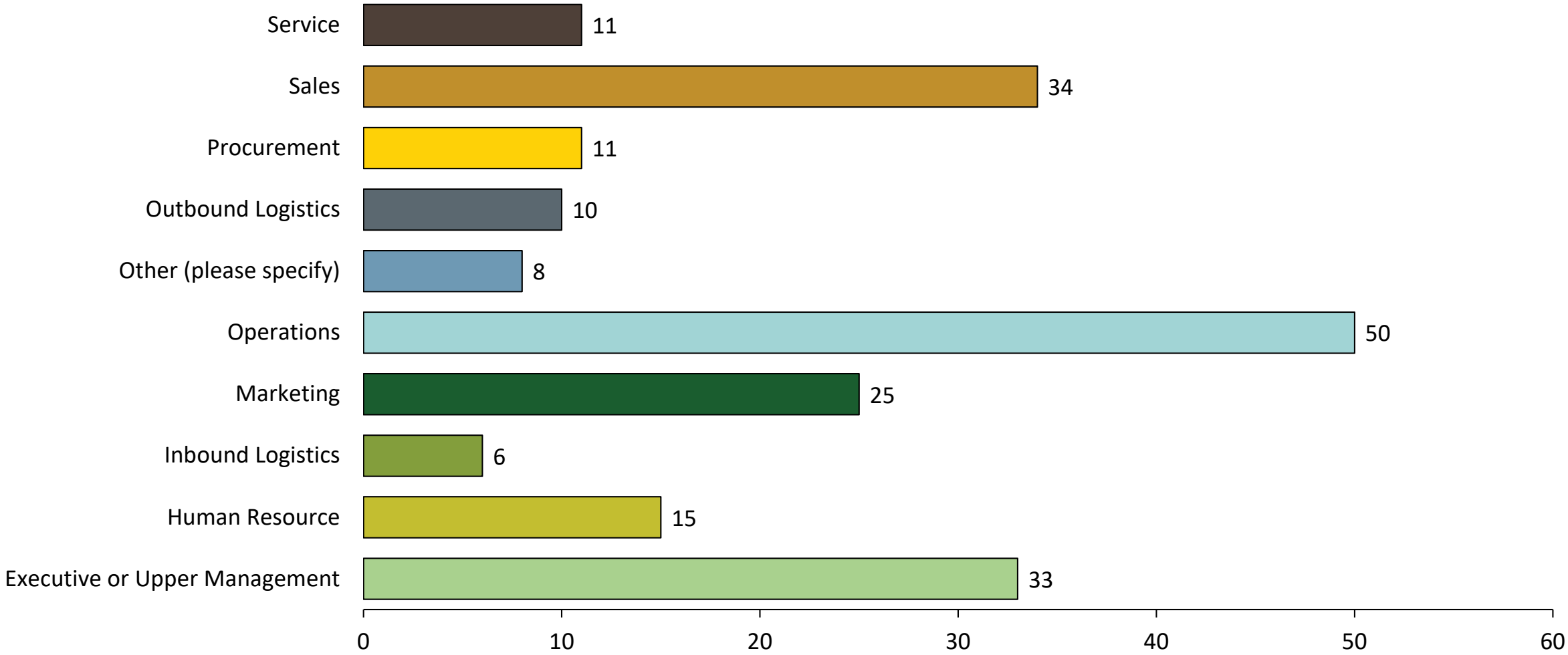
Center for Food and Agricultural Business
COLLEGE OF AGRICULTURE

Demographics

Respondents by Role



Respondents by Business Function

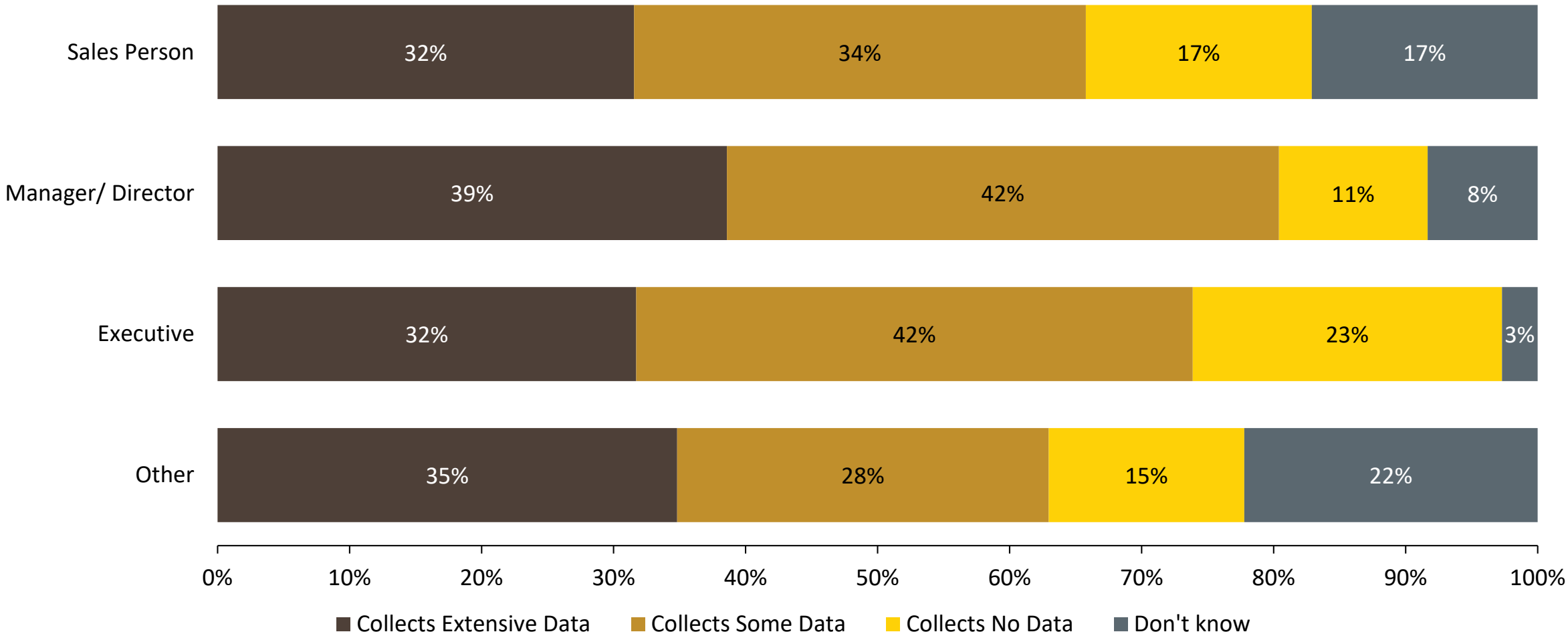


The Extent Data is Collected - by Role

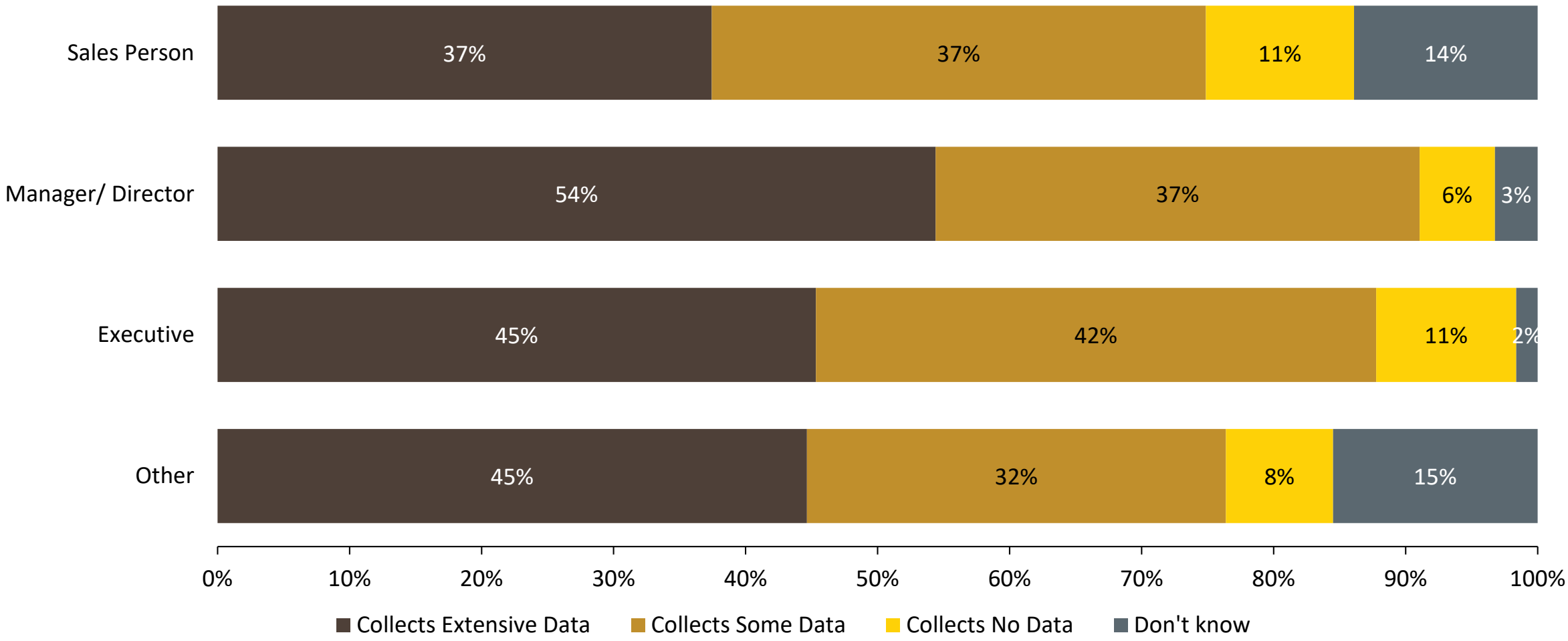
To what extent does your organization **collect data** for the following business functions?

	Don't know	Collects **No** Data	Collects **Some** Data	Collects **Extensive** Data
Inbound Logistics (*e.g. ordering/receiving, inventory replenishment*)	○	○	○	○
Operations (*e.g. production volumes, process details, quality control, efficiency measure*)	○	○	○	○
Outbound Logistics (*e.g. ordering/delivery*)	○	○	○	○
Marketing (*e.g. customer data/CRM, product development, product life-cycle, segmentation*)	○	○	○	○
Sales (*e.g. customer orders, referrals, transactional data*)	○	○	○	○
Service (*e.g. application, repair, tech support*)	○	○	○	○
HR Management (*e.g. goal setting and monitoring, compensation, payroll, benefits*)	○	○	○	○
Procurement (*e.g. input costs, SRM*)	○	○	○	○
Regulatory Compliance (*e.g. labor, environmental standard*)	○	○	○	○

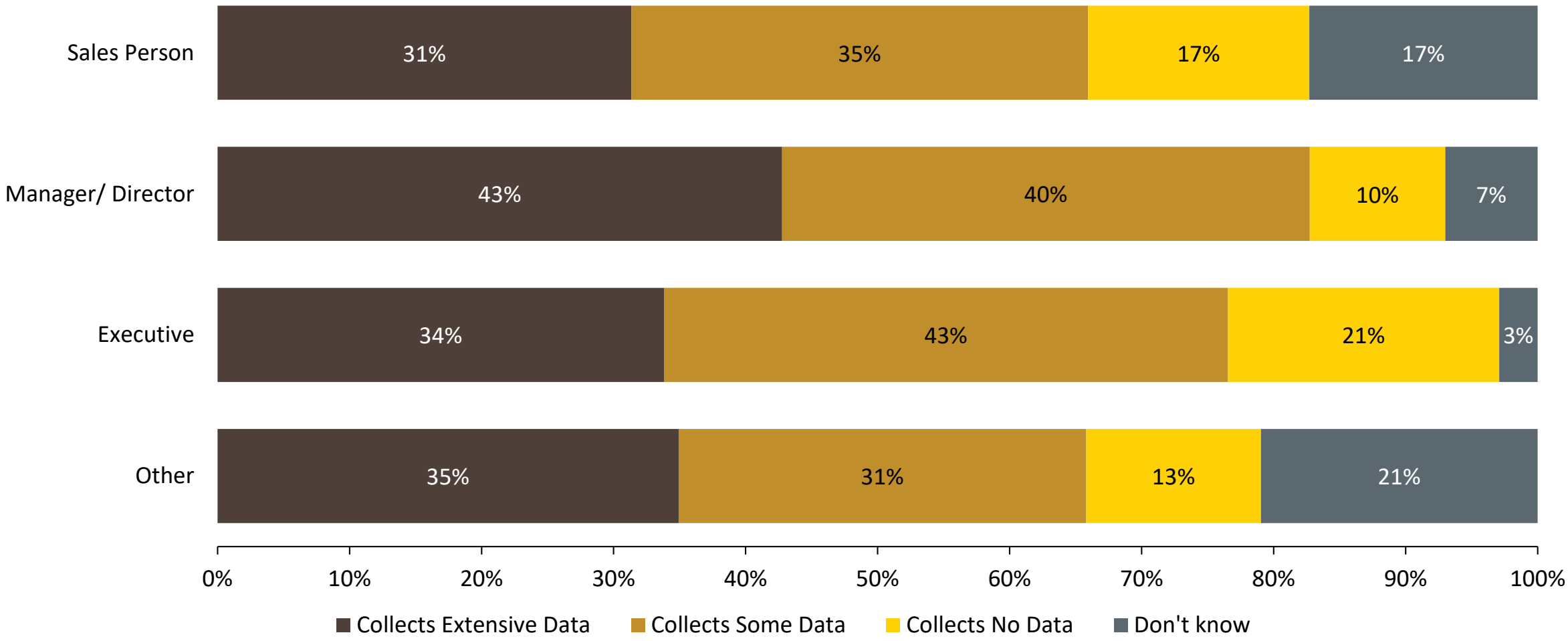
The Extent Data is Collected by Role – Inbound Logistics



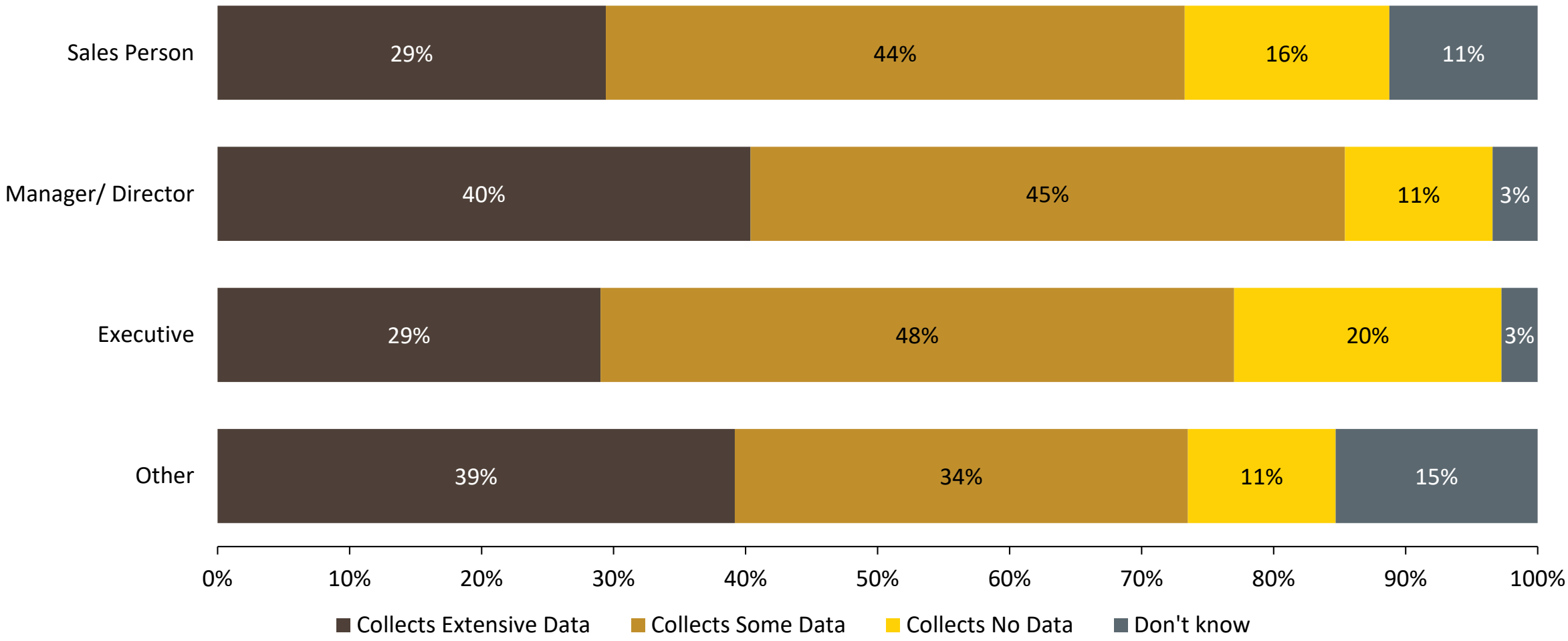
The Extent Data is Collected by Role – Operations



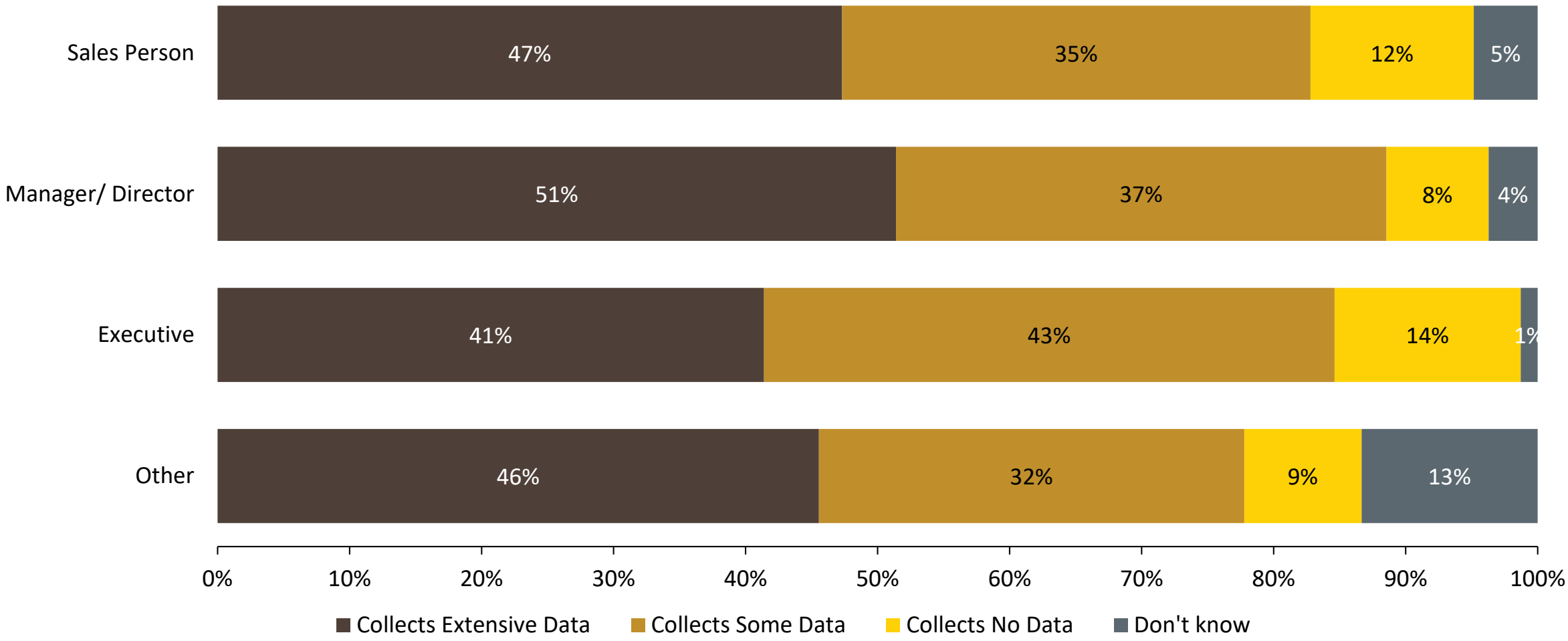
The Extent Data is Collected by Role – Outbound Logistics



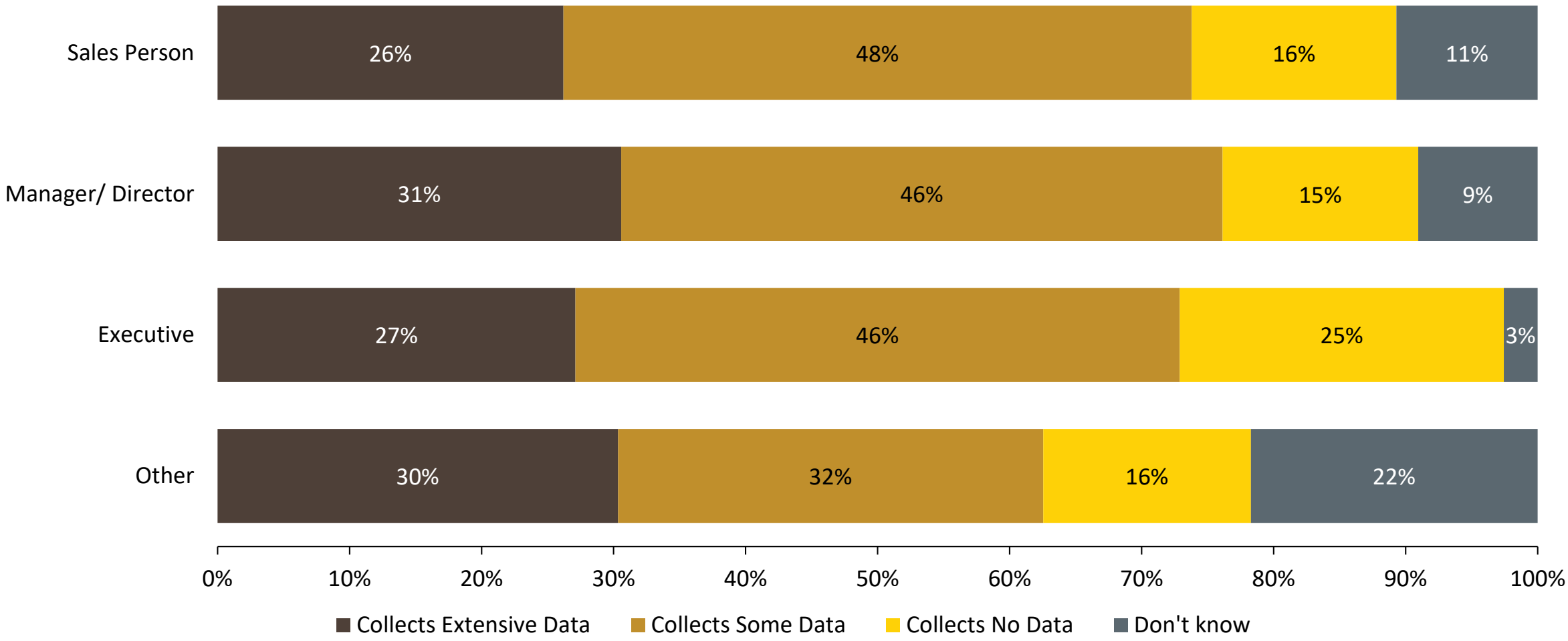
The Extent Data is Collected by Role – Marketing



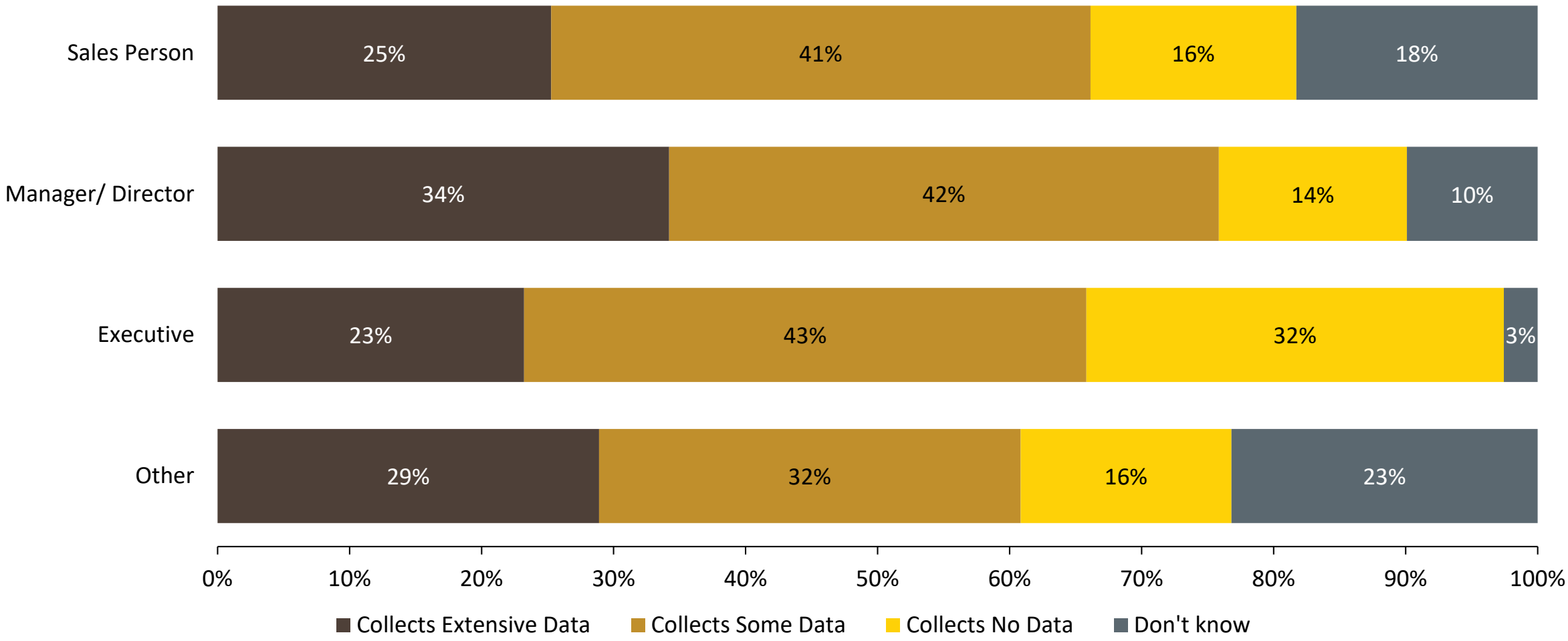
The Extent Data is Collected by Role – Sales



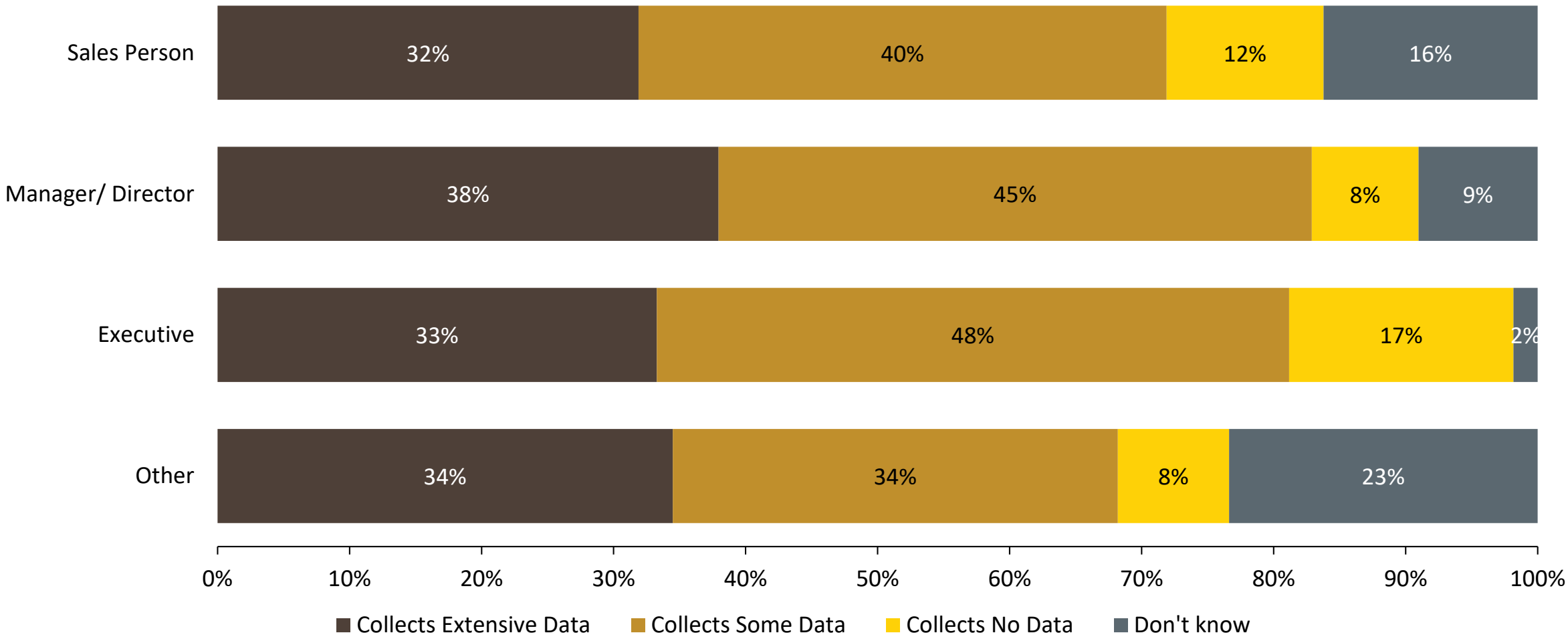
The Extent Data is Collected by Role – Services



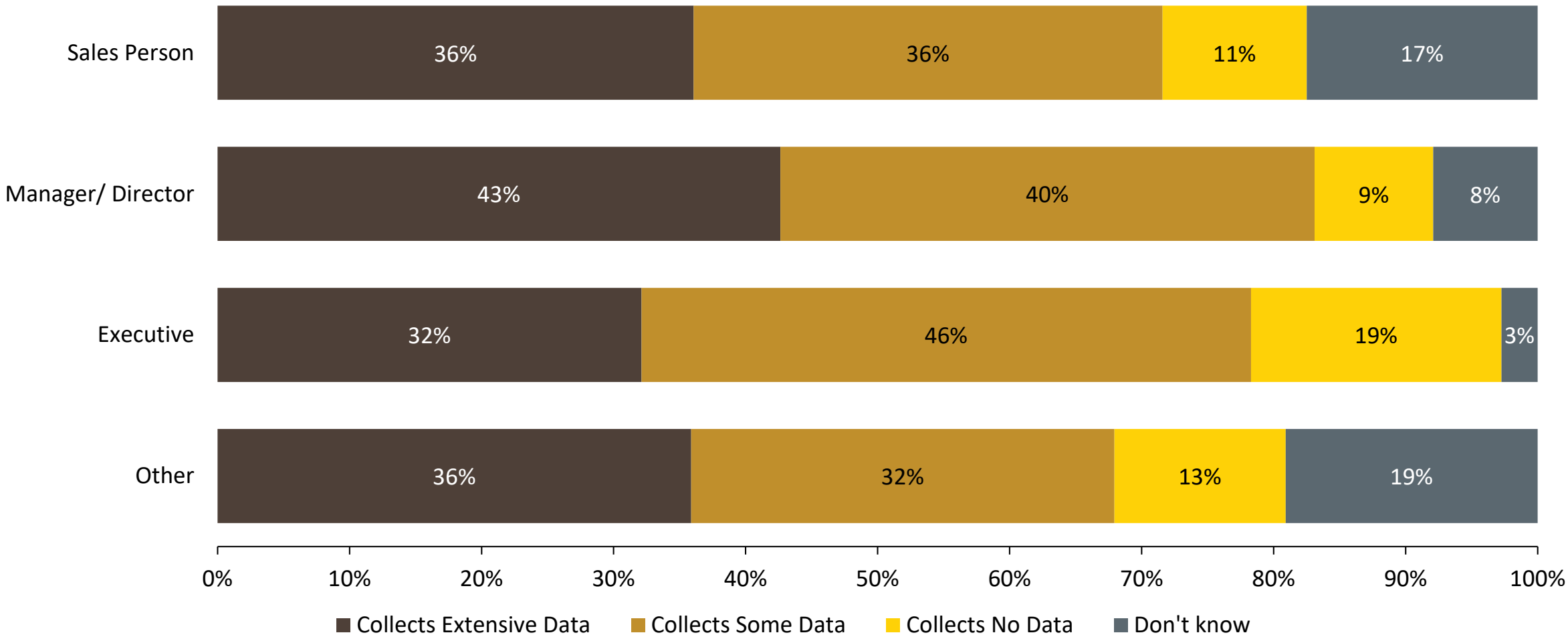
The Extent Data is Collected by Role – HR Management



The Extent Data is Collected by Role – Procurement



The Extent Data is Collected by Role – Regulatory Compliance

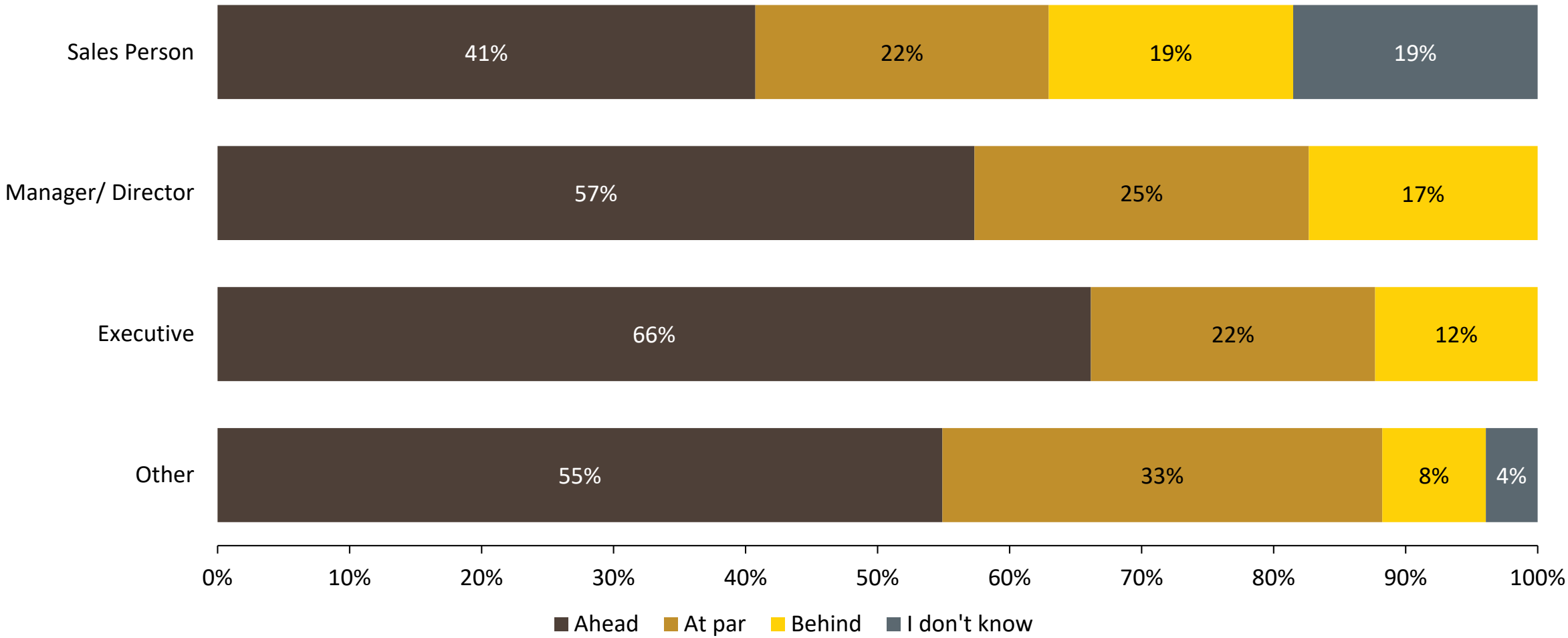


Data Collection and Analytics Compared to Competitors – by Role

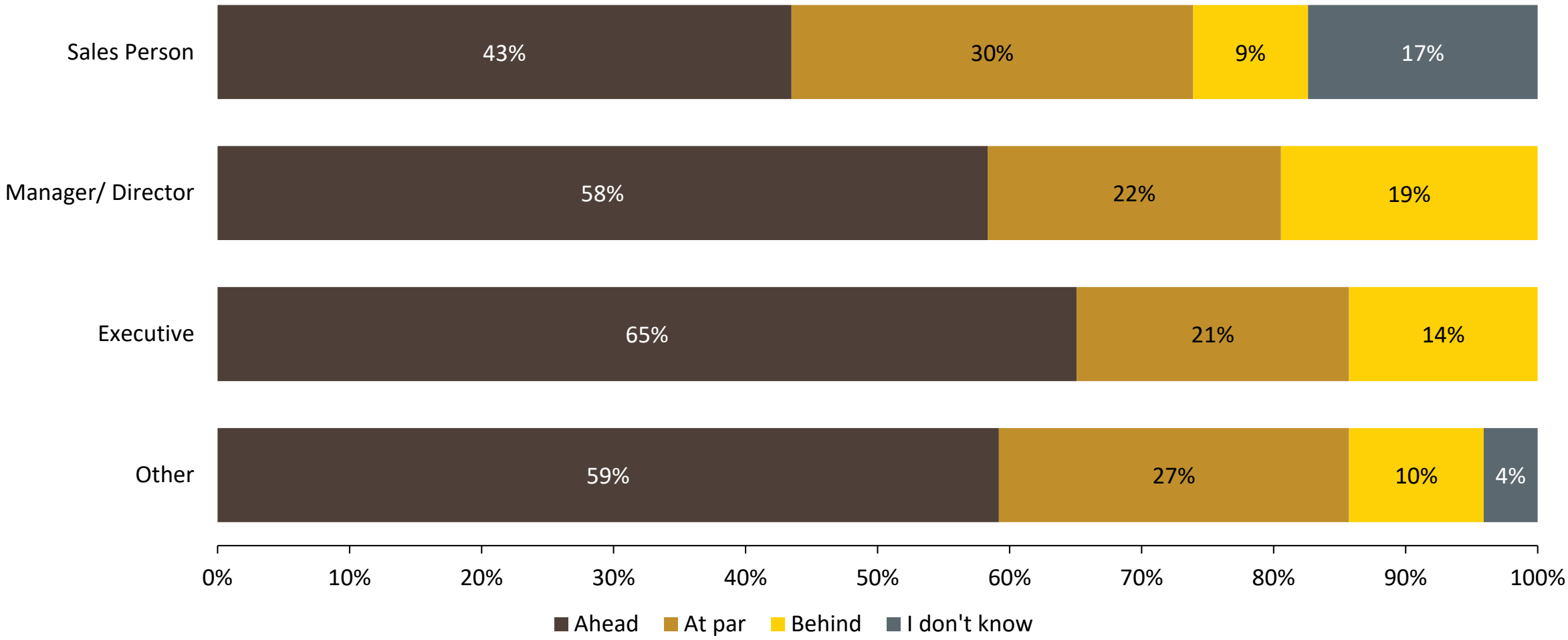
Compared to your competitors, how do you feel about **data collection** in your organization?

- ○ Far ahead
- ○ Somewhat ahead
- ○ At par
- ○ Somewhat behind
- ○ Far behind
- ○ I don't know

Data Collection by Role Compared to Competitors



Data Analytics by Role Compared to Competitors

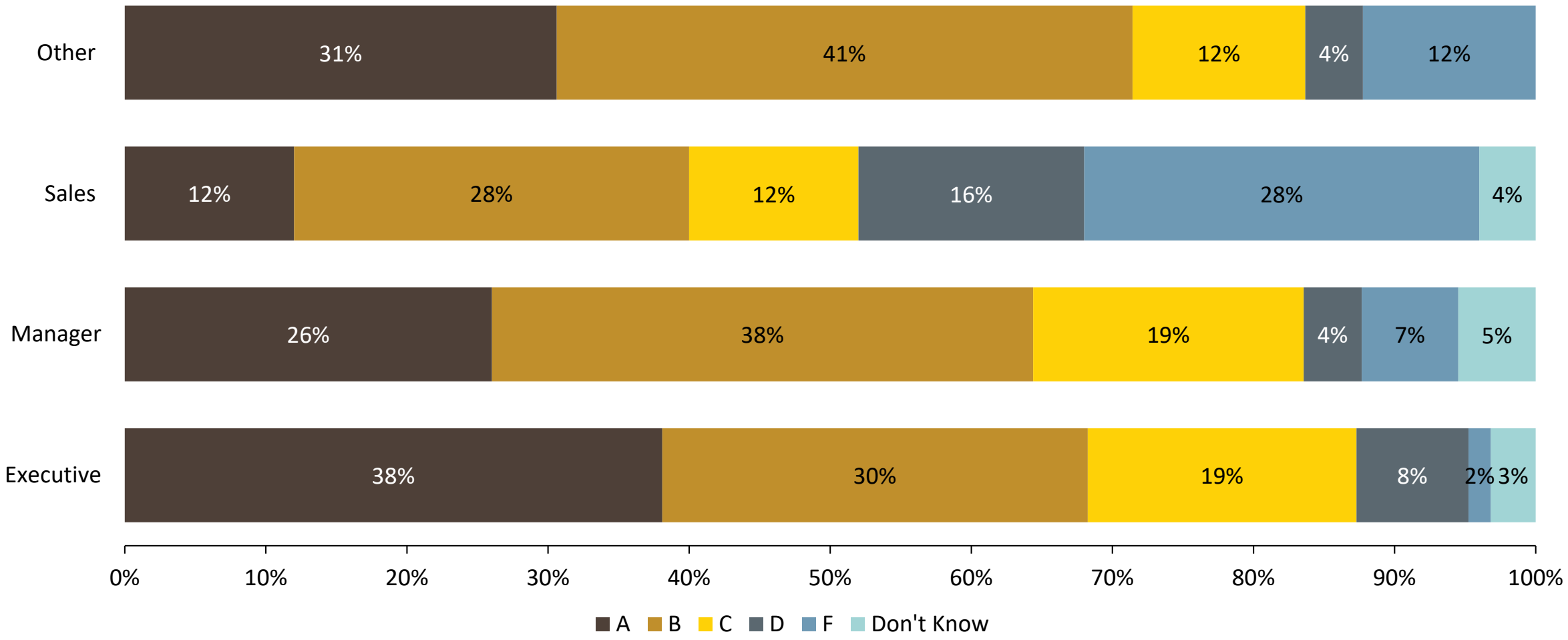


Organization Grade on Data Analytics

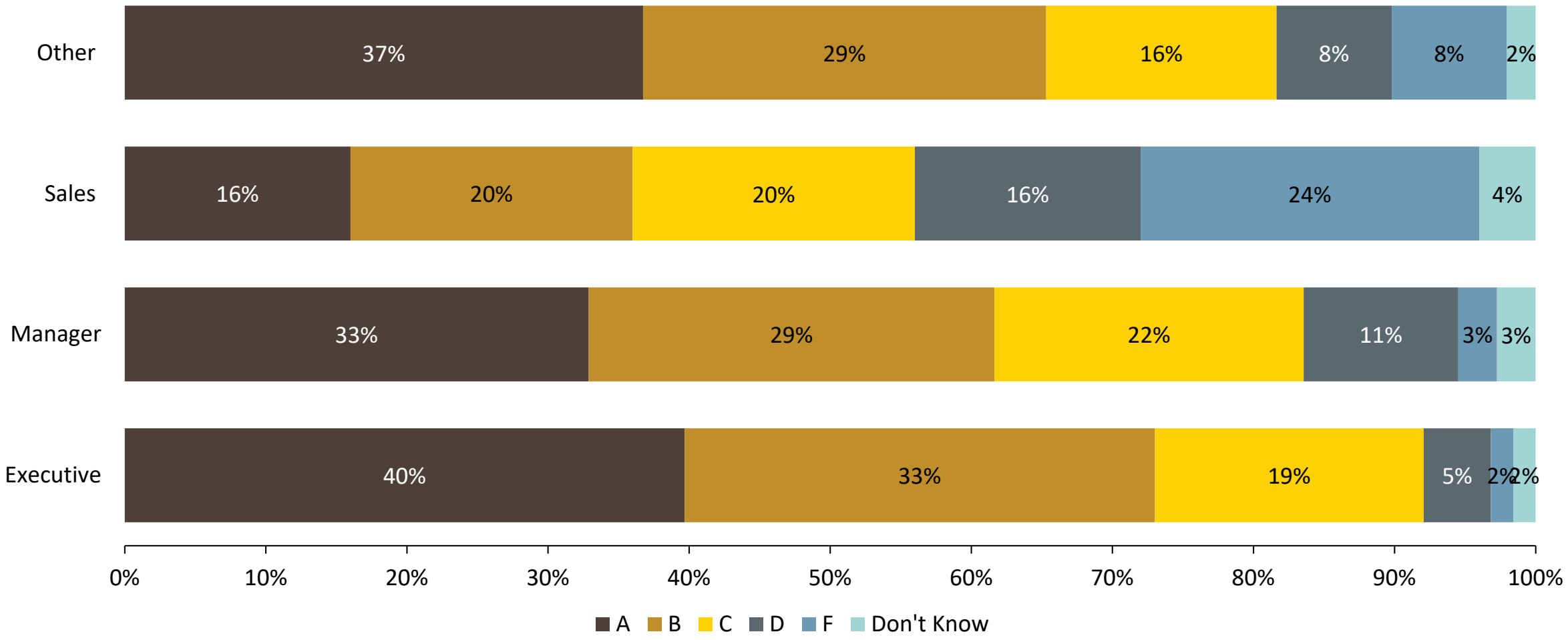
If you were to give your organization a "grade" based on using **data analytics** on decision making, what grade would you give for the following business functions?

	A	B	C	D	F	Don't Know
Inbound Logistics (*e.g. ordering/receiving, inventory replenishment*)	○	○	○	○	○	○
Operations (*e.g. production volumes, process details, quality control, efficiency measure*)	○	○	○	○	○	○
Outbound Logistics (*e.g. ordering/delivery*)	○	○	○	○	○	○
Marketing (*e.g. customer data/CRM, product development, product life-cycle, segmentation*)	○	○	○	○	○	○
Sales (*e.g. customer orders, referrals, transactional data*)	○	○	○	○	○	○
Service (*e.g. application, repair, tech support*)	○	○	○	○	○	○
HR Management (*e.g. goal setting and monitoring, compensation, payroll, benefits*)	○	○	○	○	○	○
Procurement (*e.g. input costs, SRM*)	○	○	○	○	○	○
Regulatory Compliance (*e.g. labor, environmental standard*)	○	○	○	○	○	○
Overall	○	○	○	○	○	○

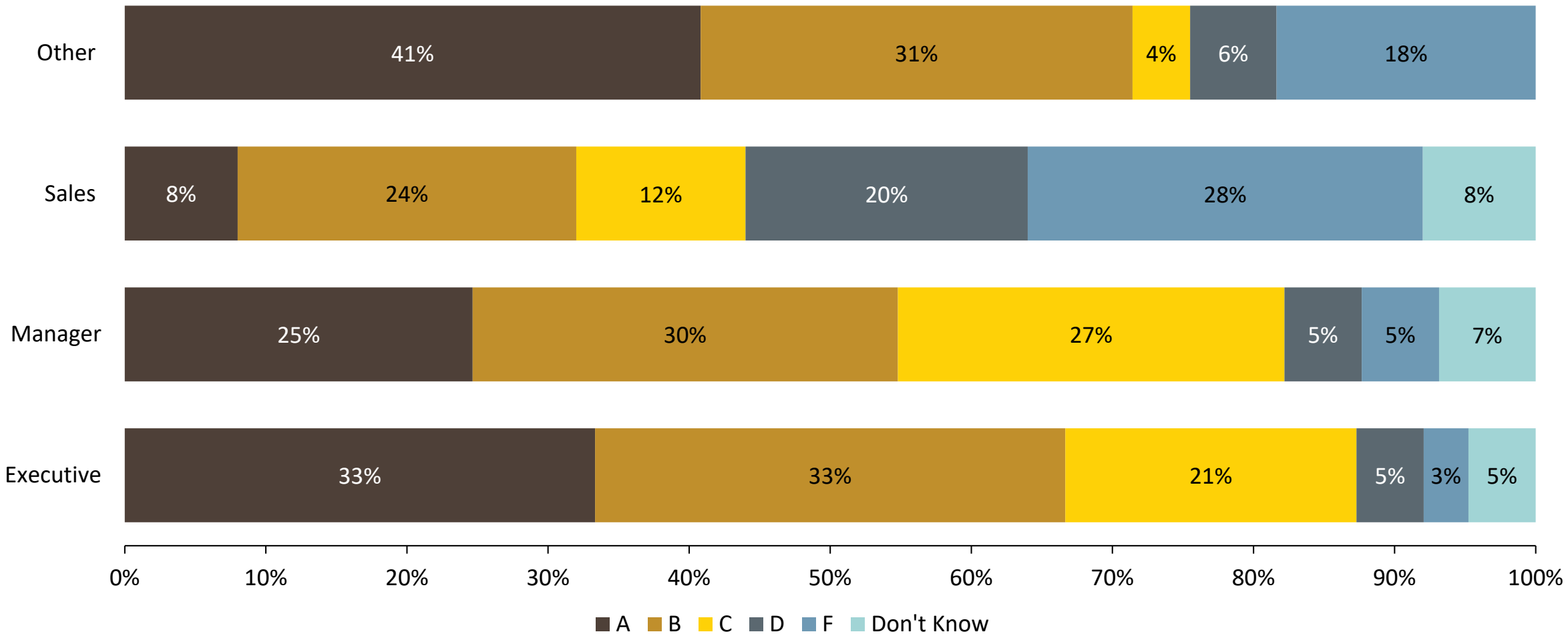
Organization Grade on Data Analytics by Role – Inbound Logistics



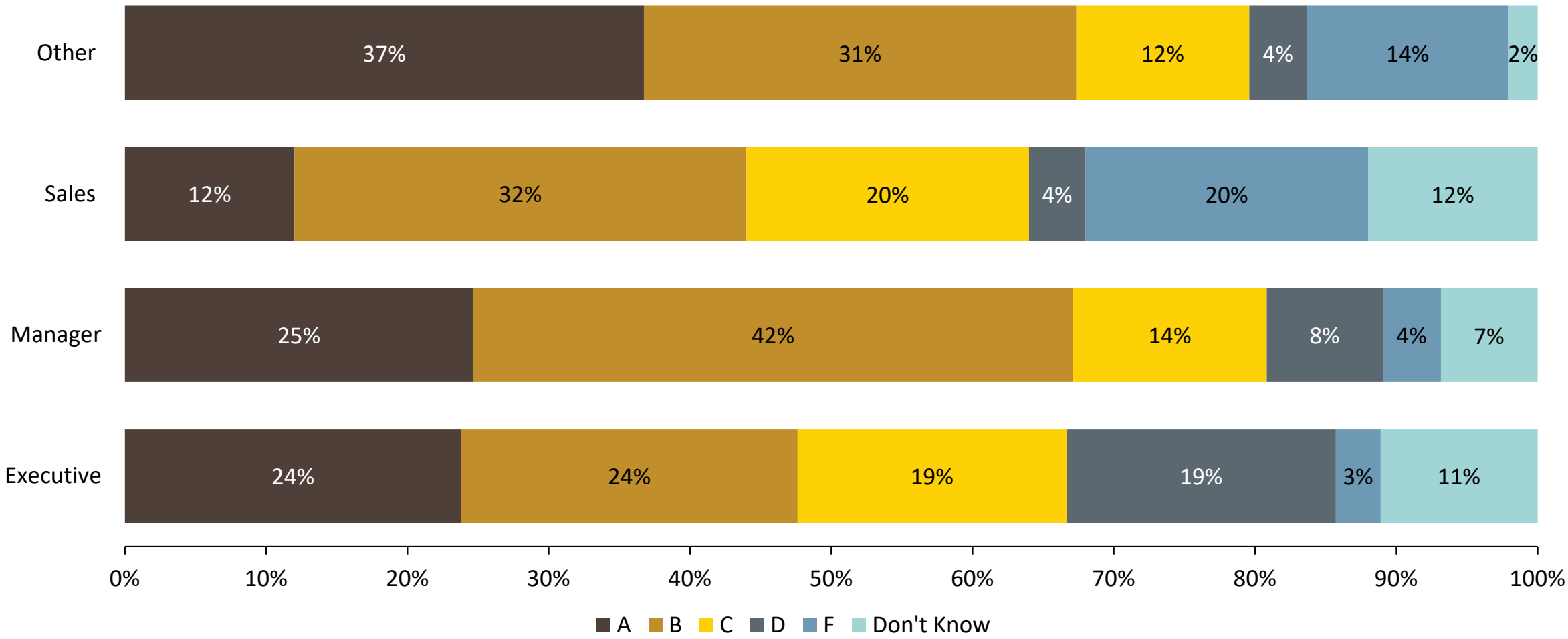
Organization Grade on Data Analytics by Role – Operations



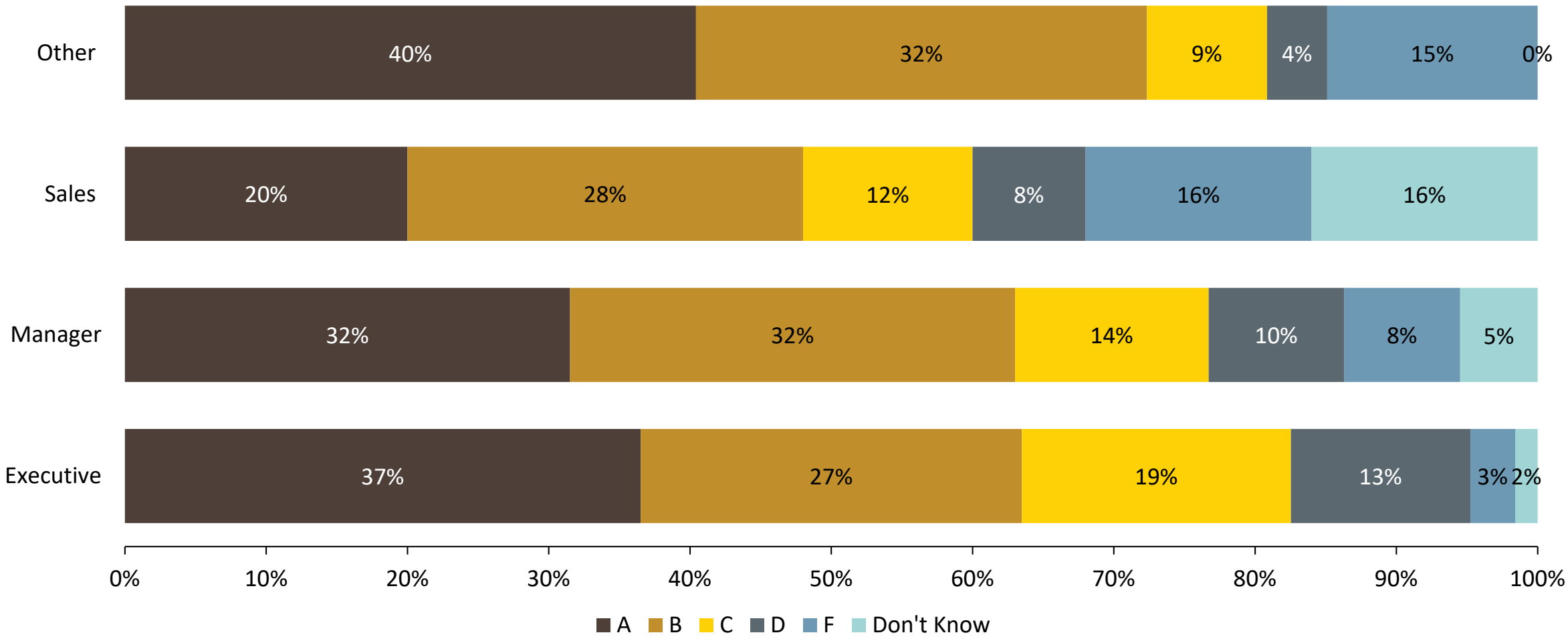
Organization Grade on Data Analytics by Role – Outbound Logistics



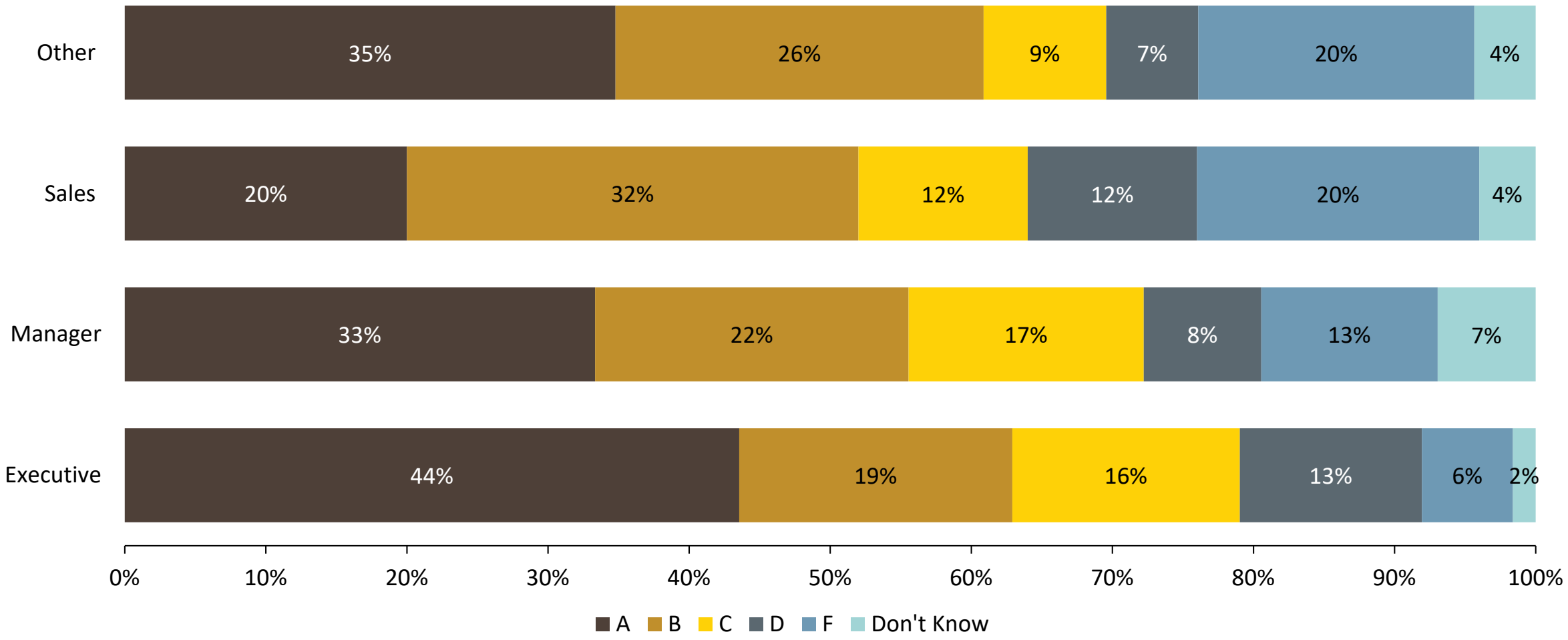
Organization Grade on Data Analytics by Role – Marketing



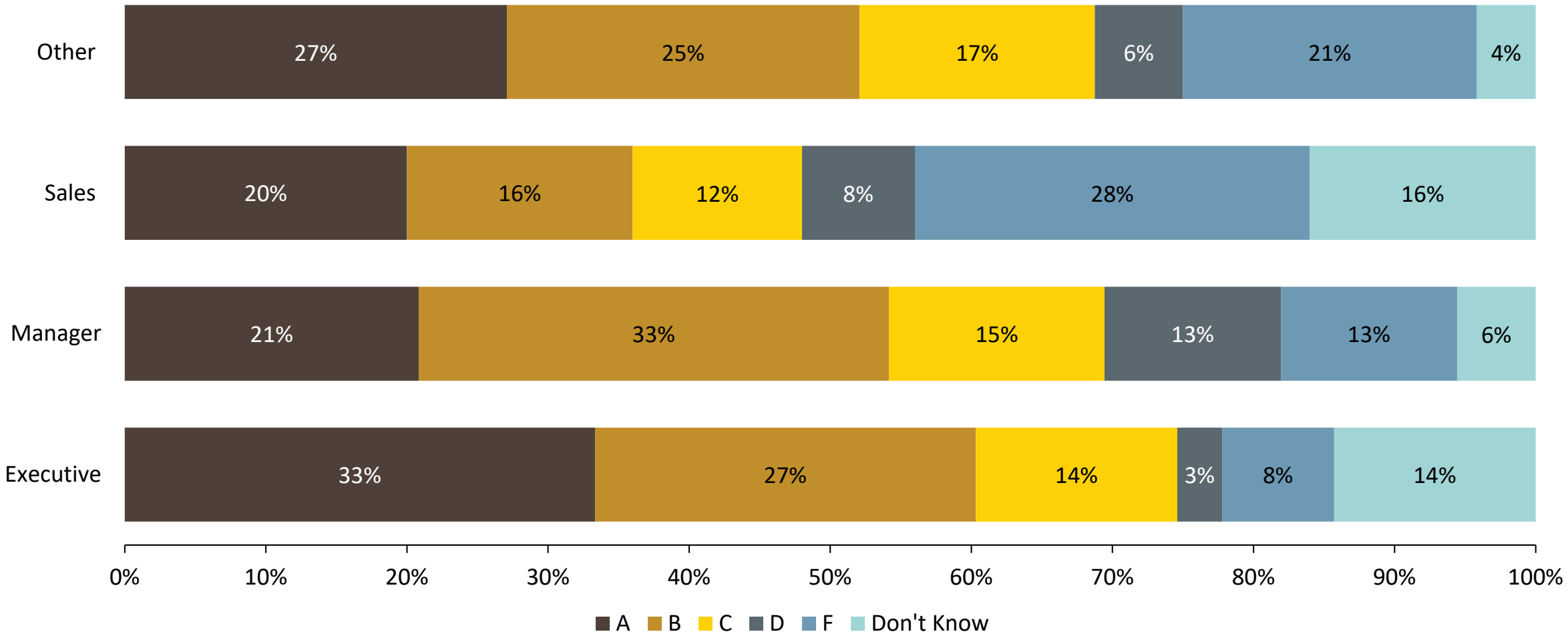
Organization Grade on Data Analytics by Role – Sales



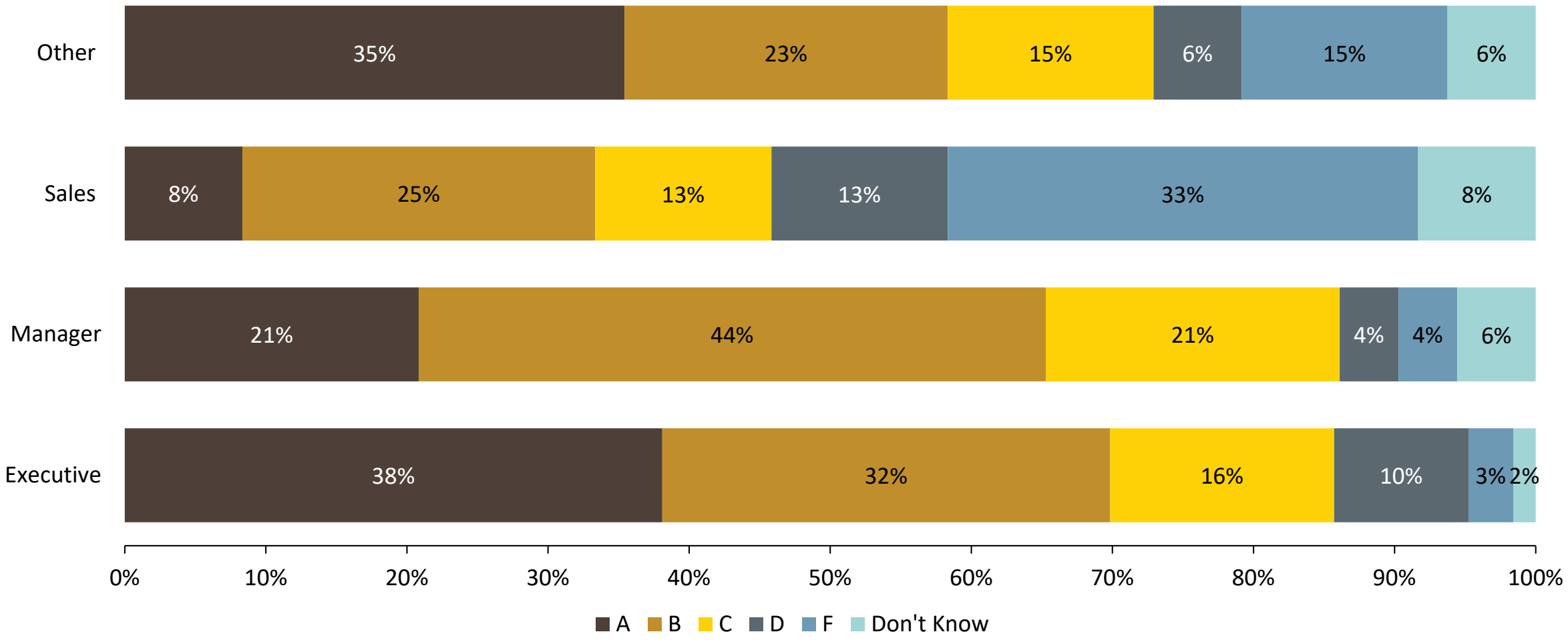
Organization Grade on Data Analytics by Role – Service



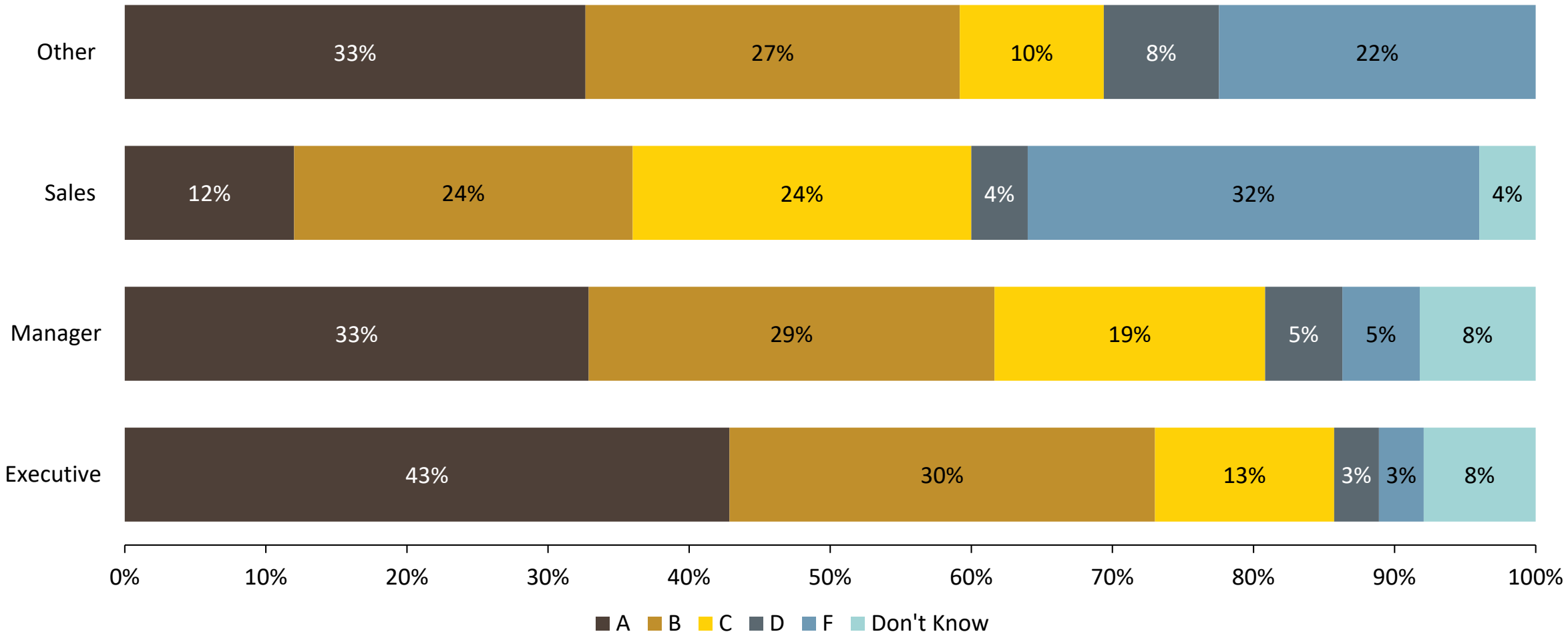
Organization Grade on Data Analytics by Role – HR Management



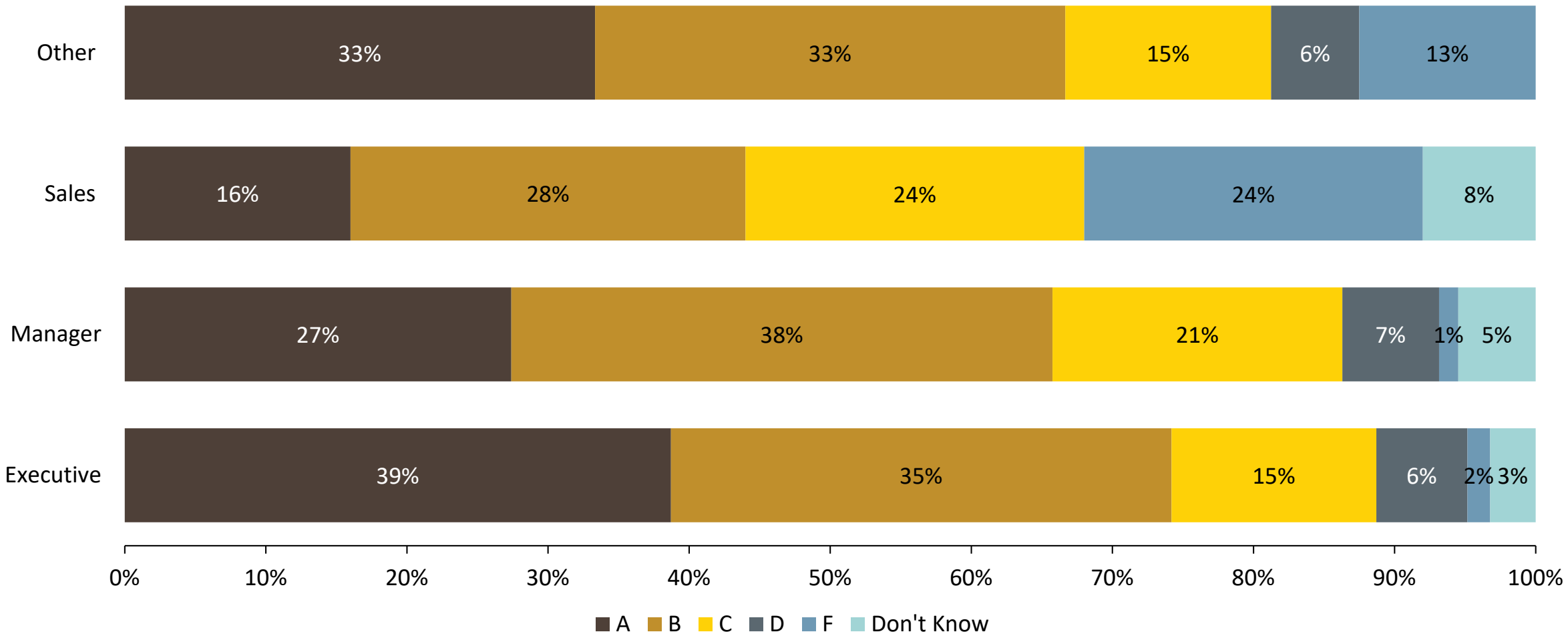
Organization Grade on Data Analytics by Role – Procurement



Organization Grade on Data Analytics by Role – Regulatory Compliance



Organization Grade on Data Analytics by Role – Overall



Most Important Benefits of Data Analytics by Role

What do you see as the most important benefit of data analytics? Please rank the following statements from 1 to 6, where 1 is ***"the most important benefit"*** and 6 is ***"the least important benefit"***. *(Drag each term and drop it to desired rank)*

Improved decision-making

Improved customer satisfaction

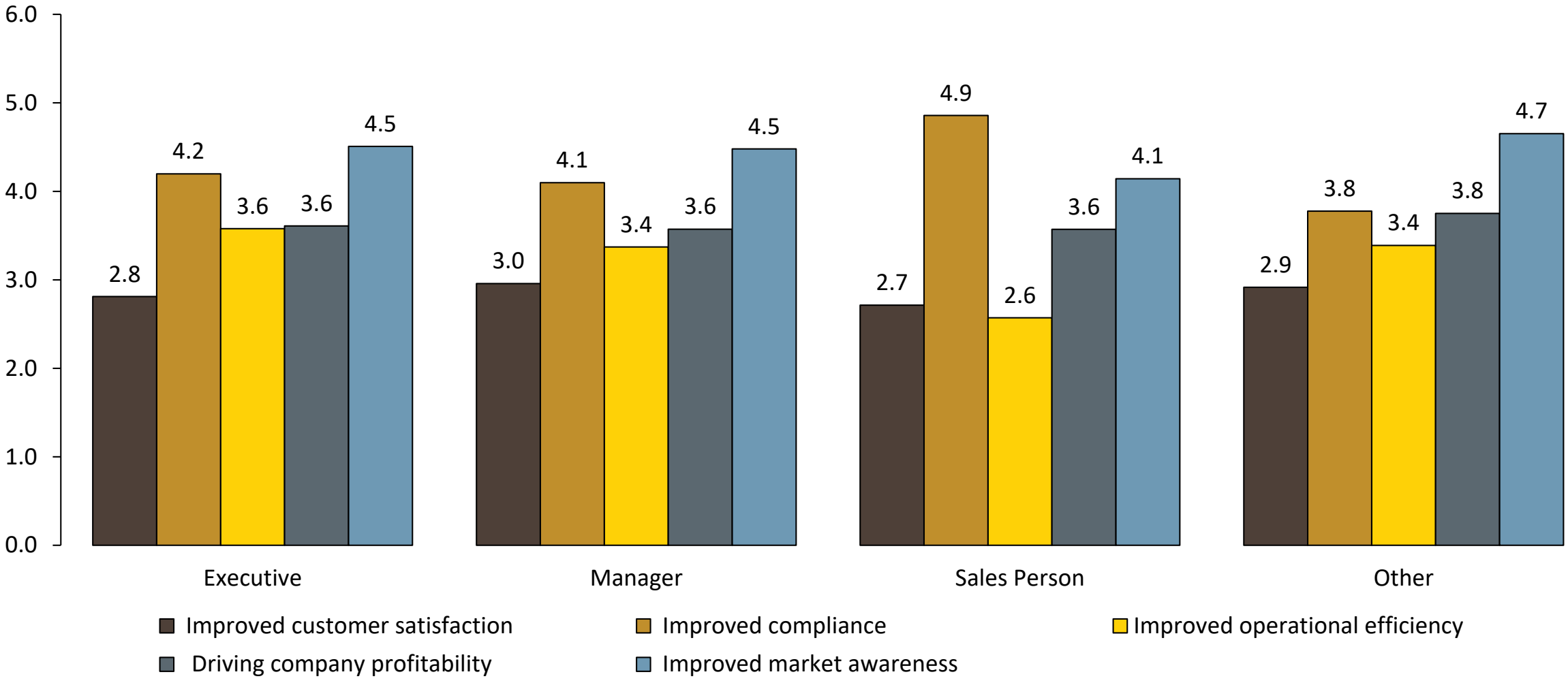
Improved compliance with data protection and privacy regulations

Improved operational efficiency

Driving company profitability

Improved market awareness

Most Important Benefits of Data Analytics by Role



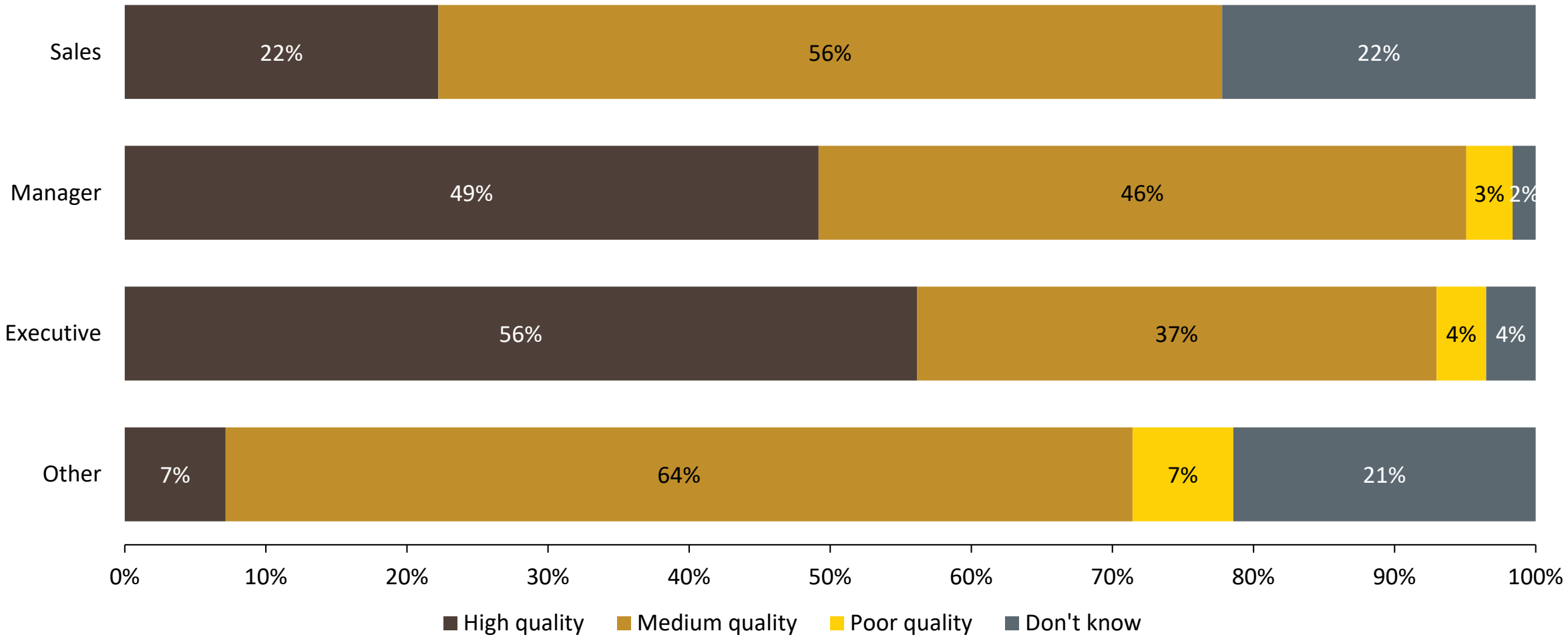
Data Quality by Role

How would you rate your organization on the **quality** of collected data in the following business functions?

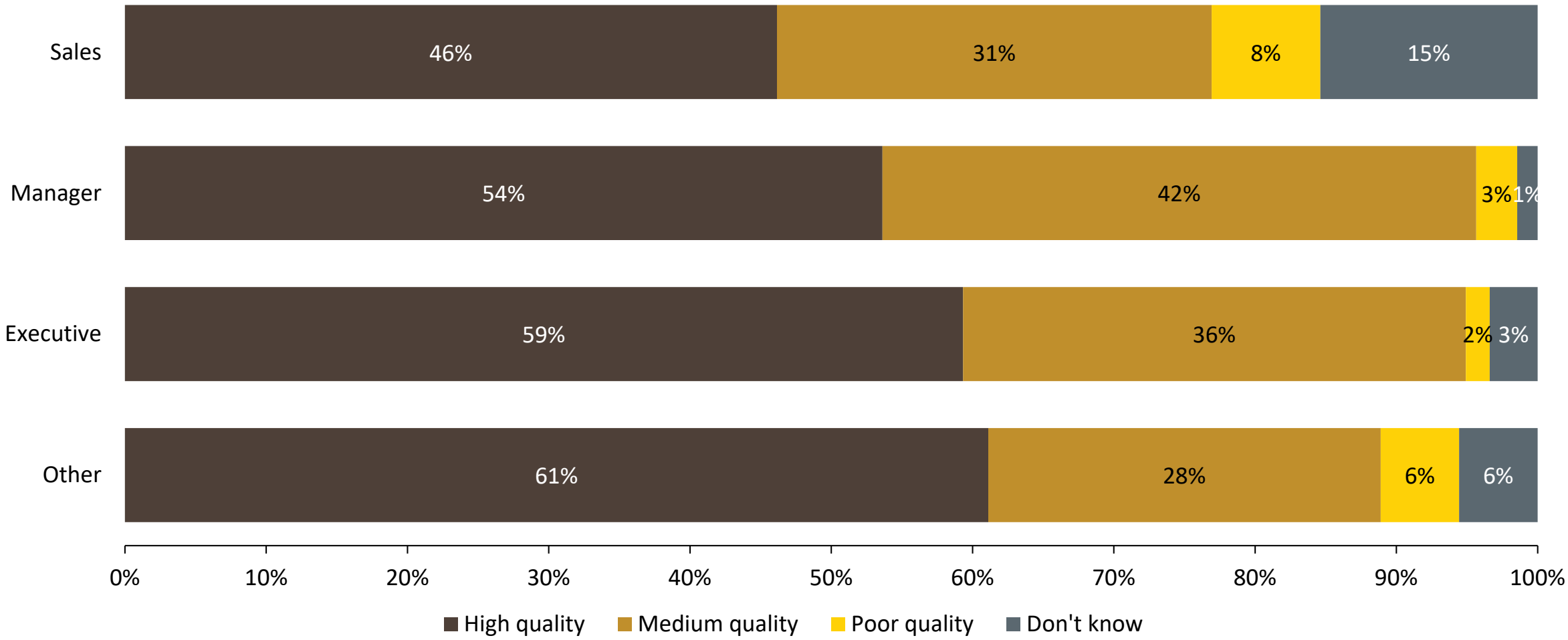
*(**Quality** refers to completeness, validity, consistency, timeliness and accuracy that makes data appropriate for a specific use.)*

	Poor quality	Medium quality	High quality	Don't know
Inbound Logistics (*e.g. ordering/receiving, inventory replenishment*)	○	○	○	○
Operations (*e.g. production volumes, process details, quality control, efficiency measure*)	○	○	○	○
Outbound Logistics (*e.g. ordering/delivery*)	○	○	○	○
Marketing (*e.g. customer data/CRM, product development, product life-cycle, segmentation*)	○	○	○	○
Sales (*e.g. customer orders, referrals, transactional data*)	○	○	○	○
Service (*e.g. application, repair, tech support*)	○	○	○	○
HR Management (*e.g. goal setting and monitoring, compensation, payroll, benefits*)	○	○	○	○
Procurement (*e.g. input costs, SRM*)	○	○	○	○
Regulatory Compliance (*e.g. labor, environmental standard*)	○	○	○	○

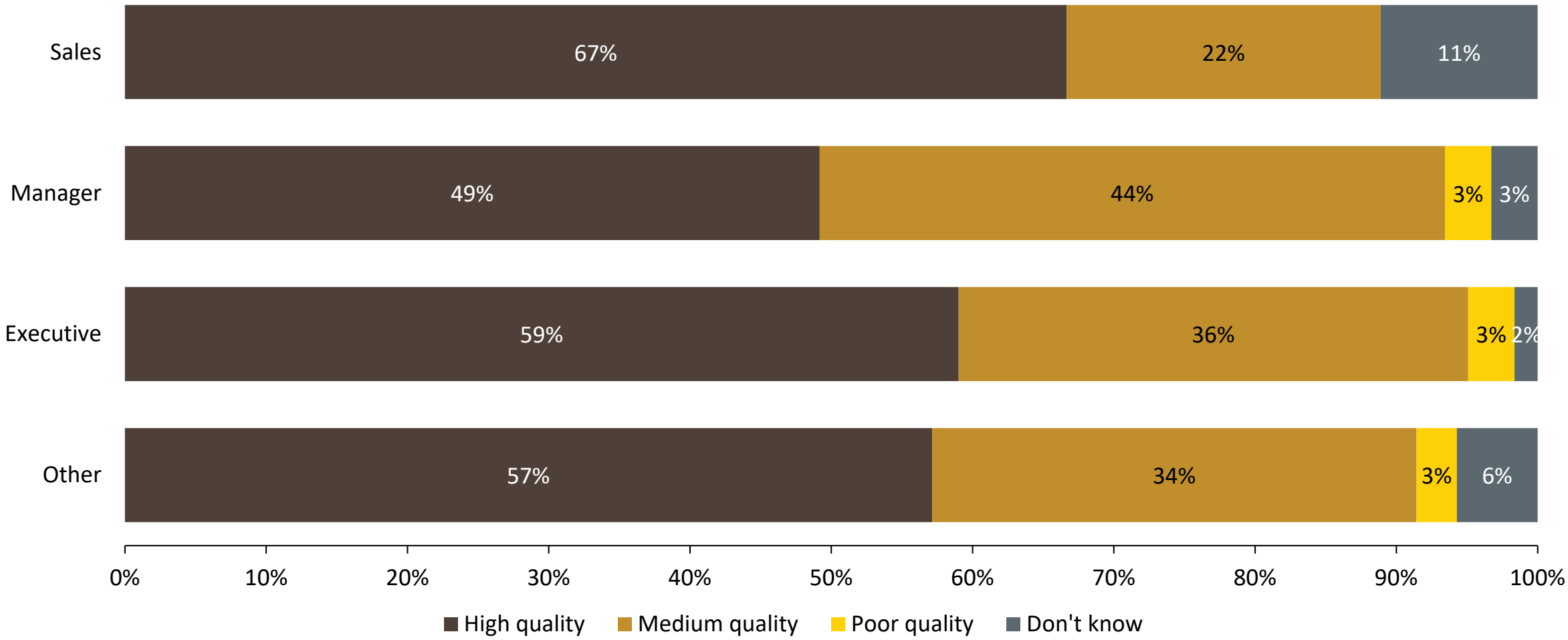
Data Quality by Role – Inbound Logistics



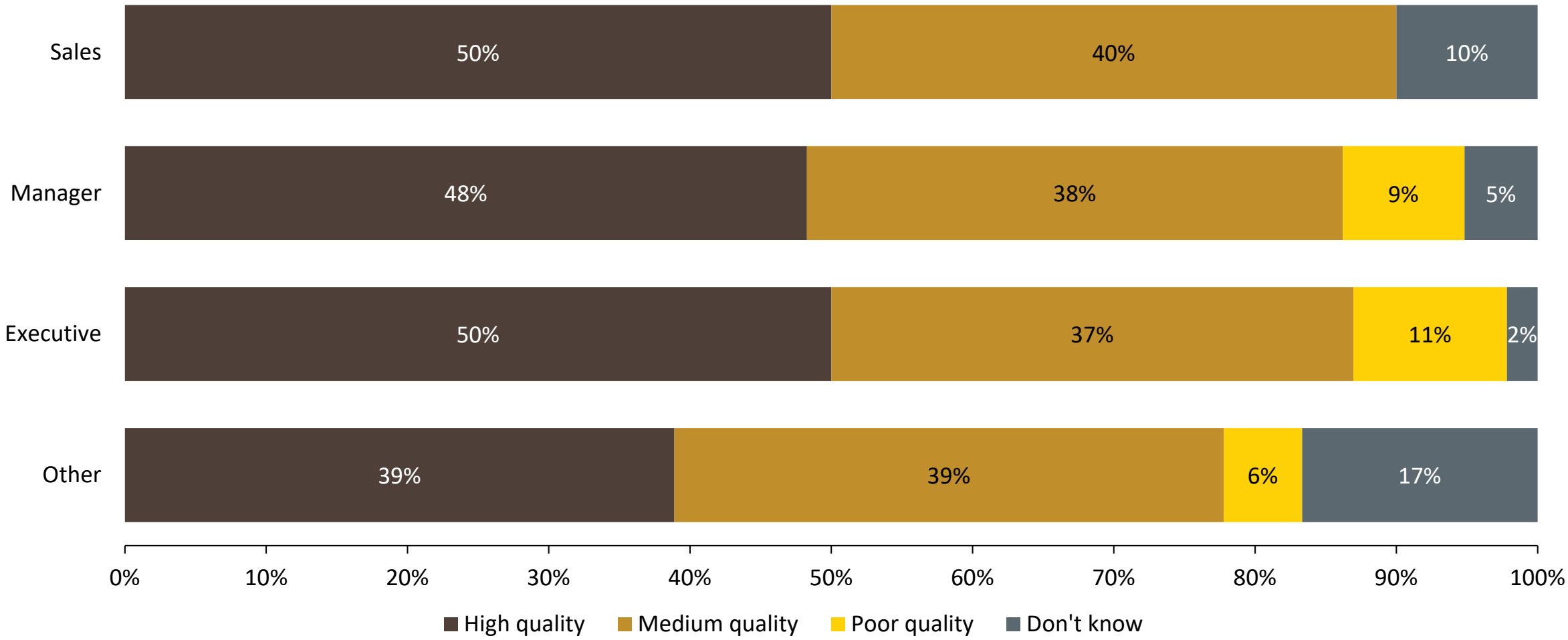
Data Quality by Role – Operations



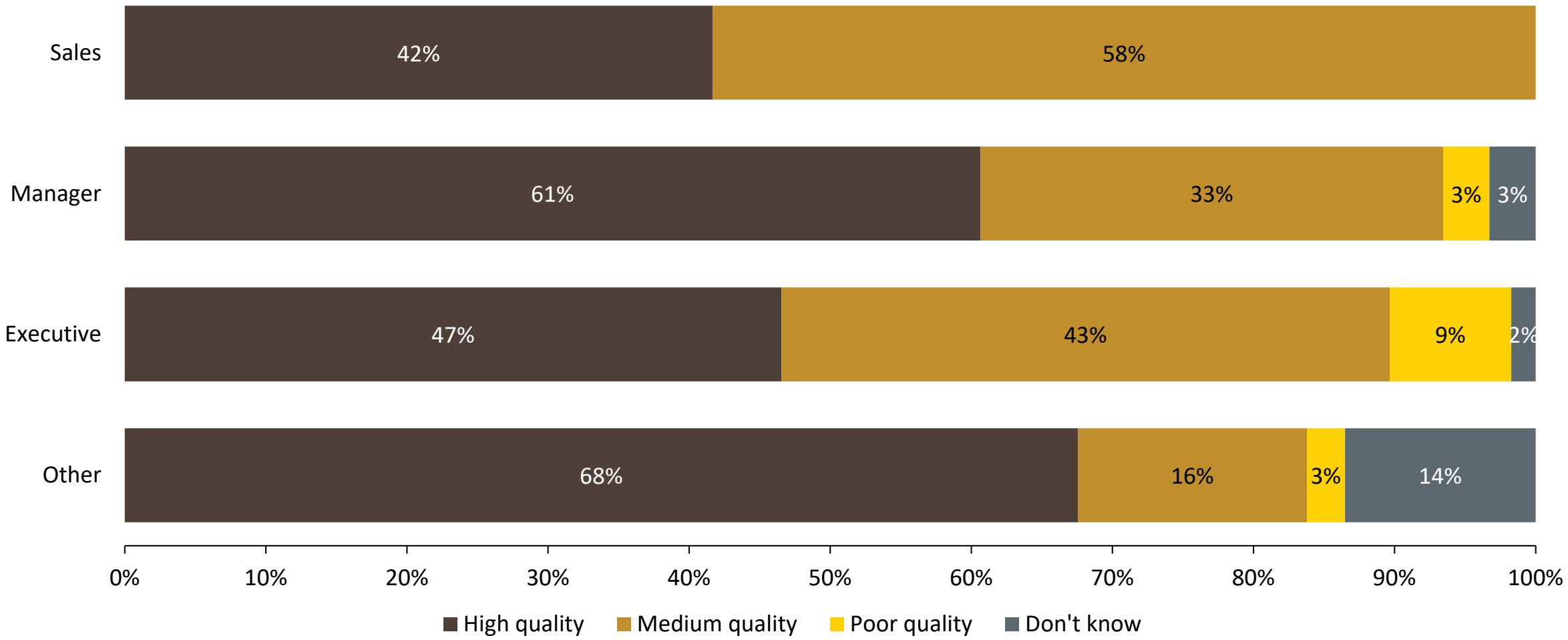
Data Quality by Role – Outbound Logistics



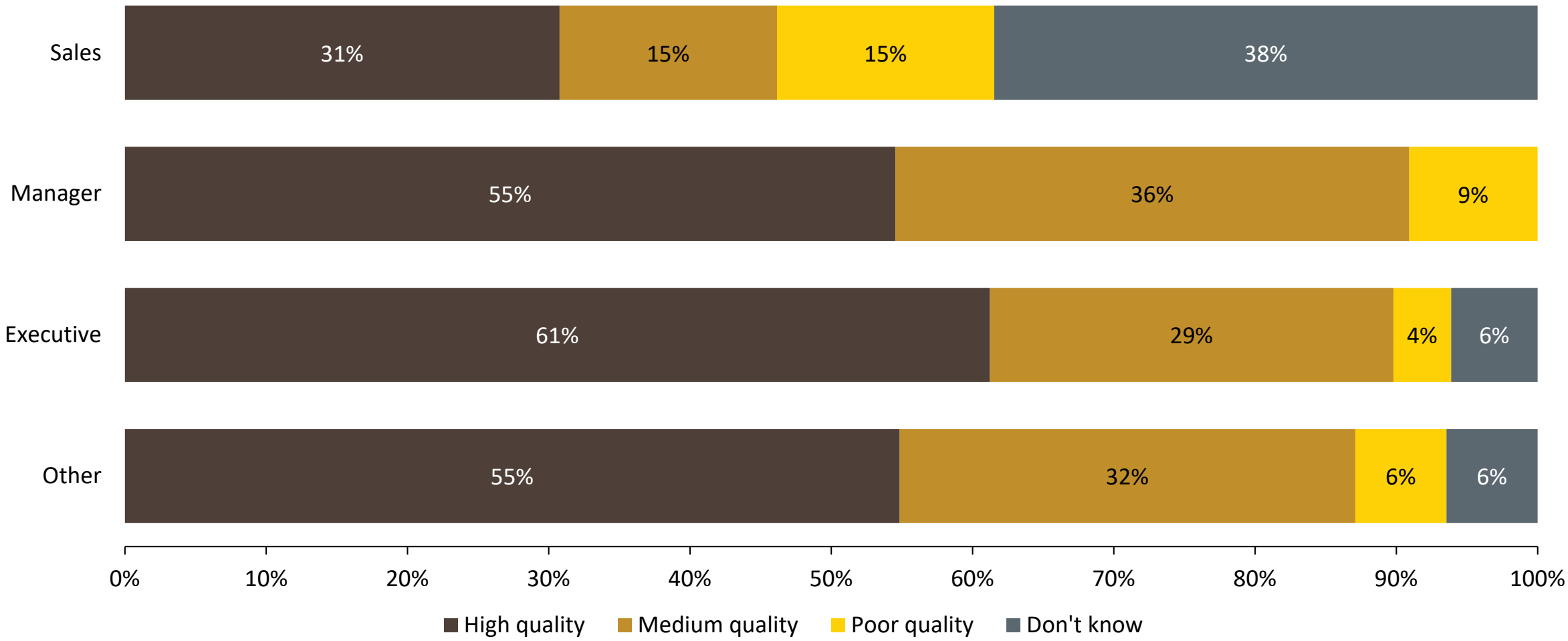
Data Quality by Role – Marketing



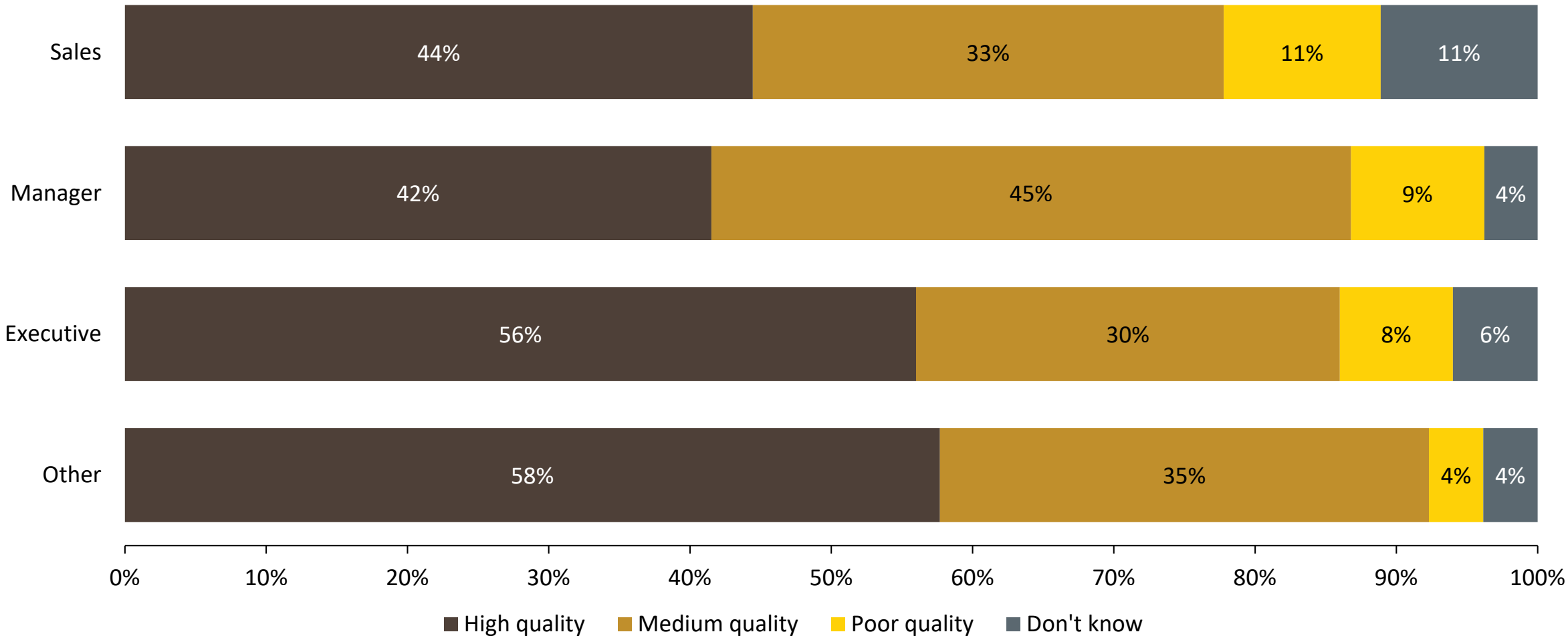
Data Quality by Role – Sales



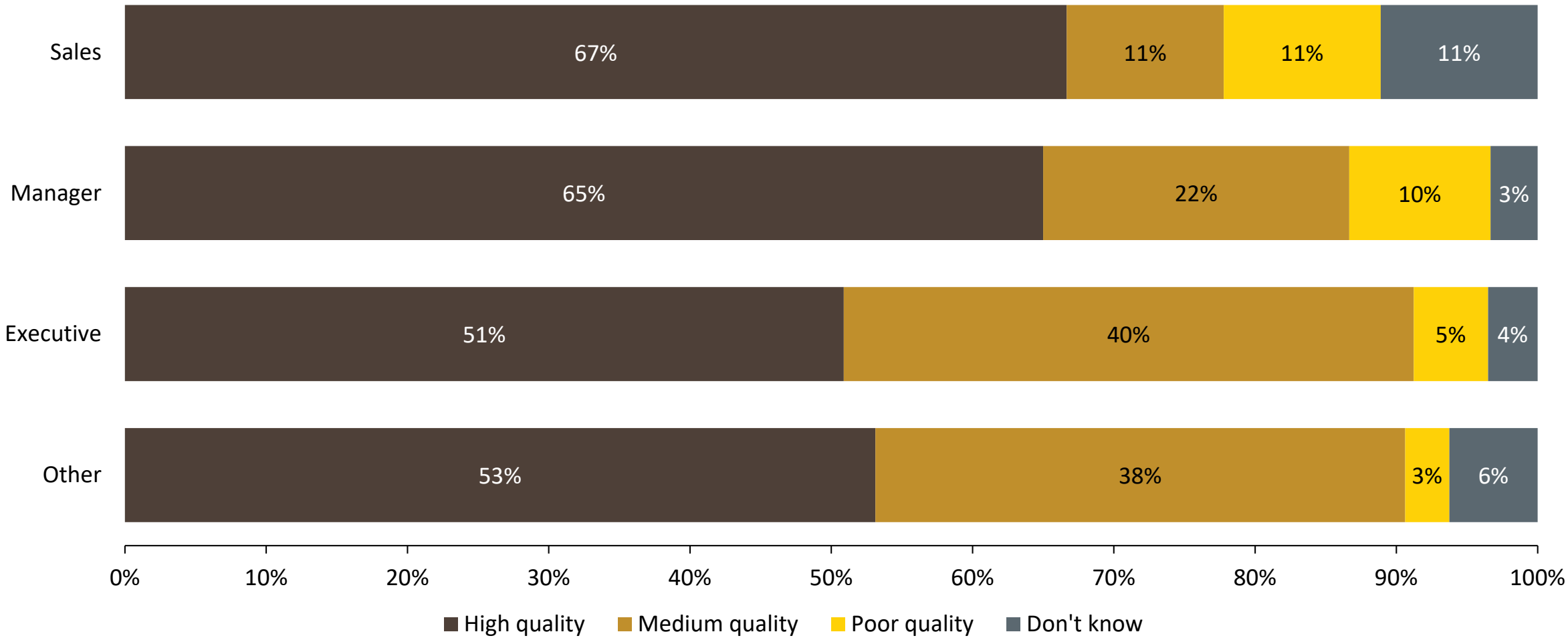
Data Quality by Role – Services



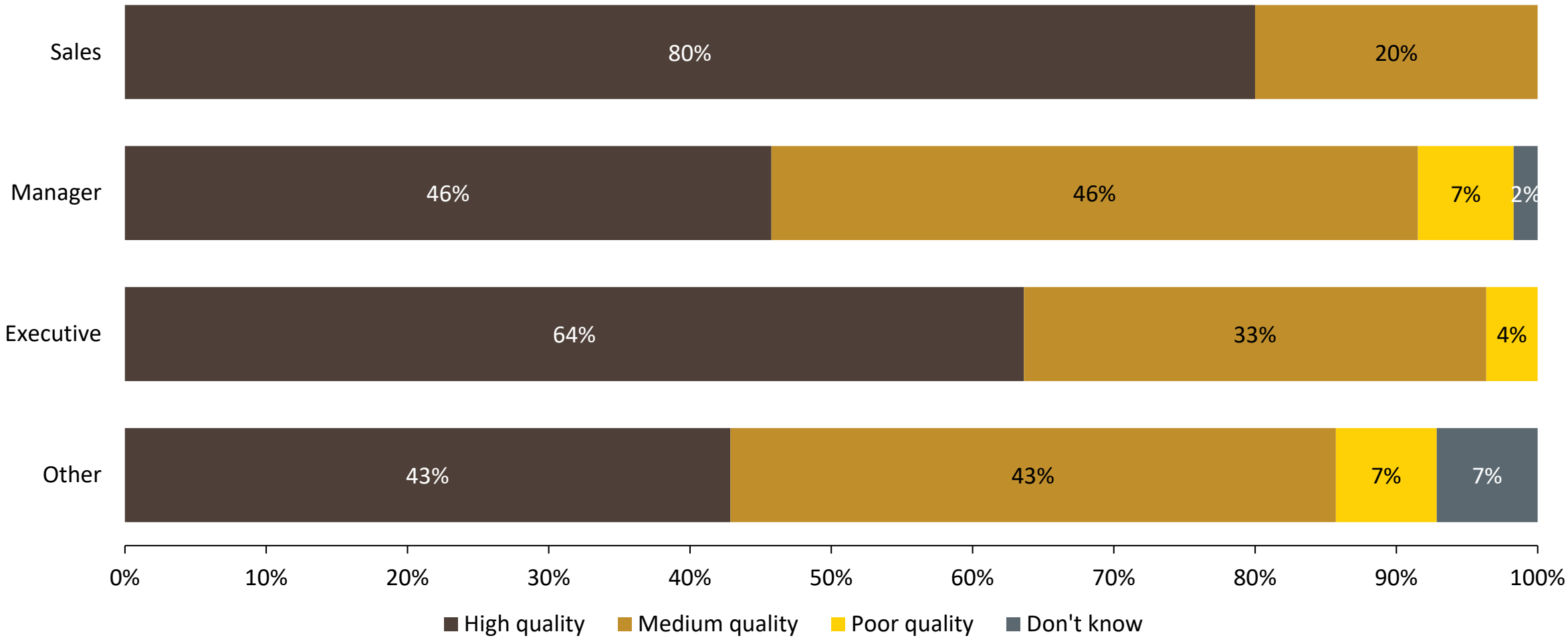
Data Quality by Role – HR Management



Data Quality by Role – Procurement



Data Quality by Role – Regulatory Compliance

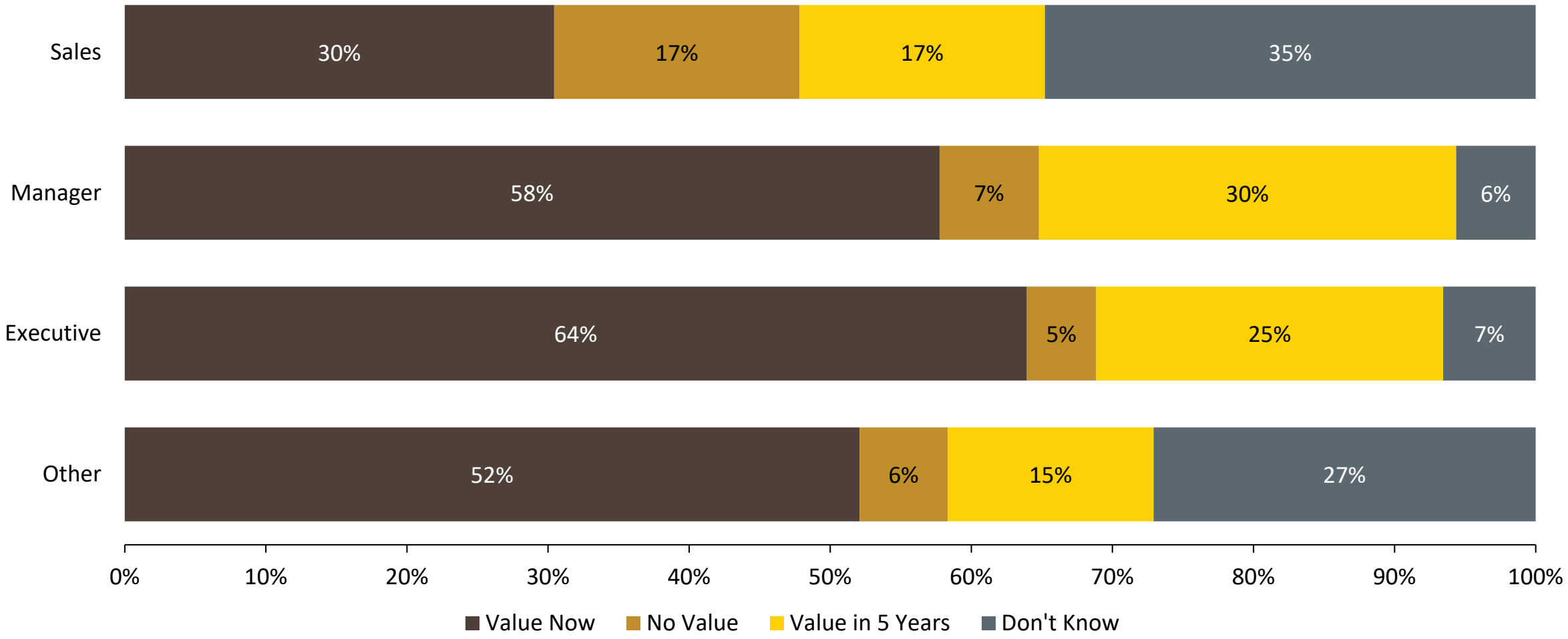


Value Creation by Role

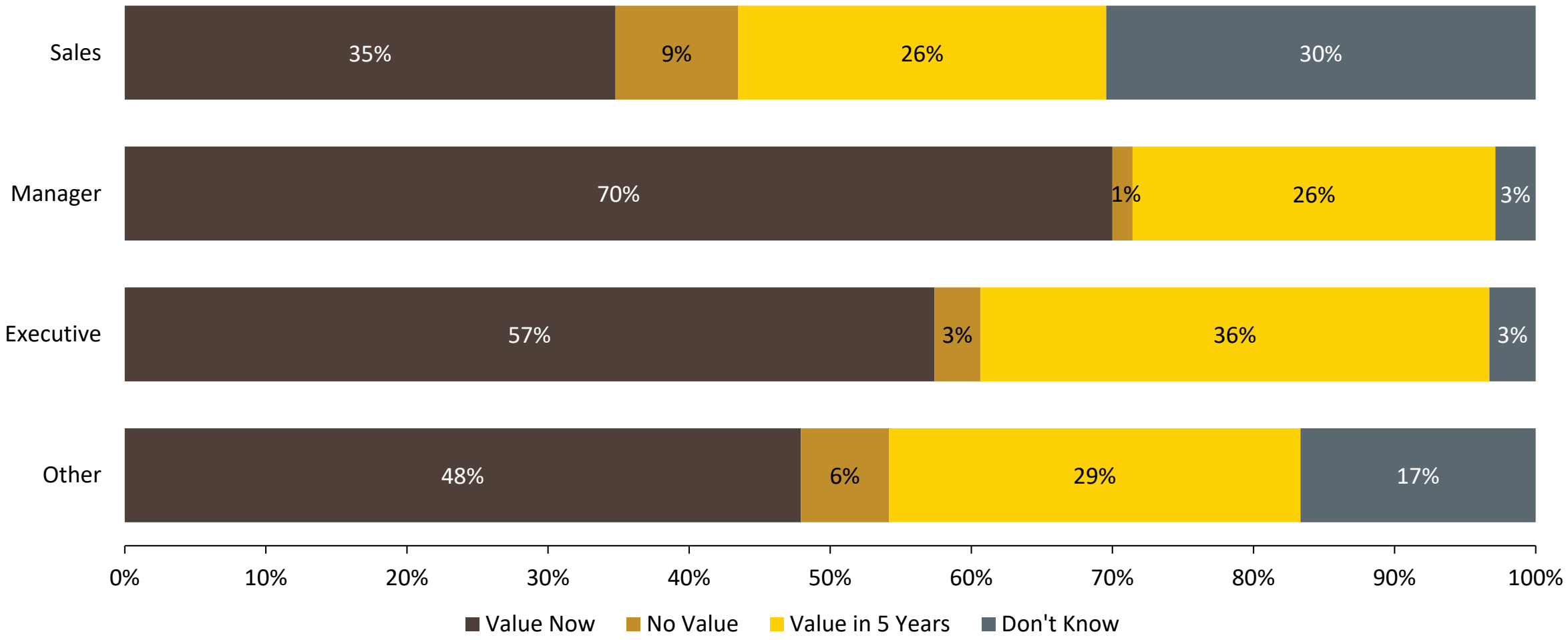
Does **data analytics** create, or is it expected to create, **value** in the following business functions of your organization?

	Creates Value **Now**	Expected to Create Value **in 5 Years**	**Does Not** Create Value in This Way	Don't Know
Inbound Logistics (*e.g. ordering/receiving, inventory replenishment*)	○	○	○	○
Operations (*e.g. production volumes, process details, quality control, efficiency measure*)	○	○	○	○
Outbound Logistics (*e.g. ordering/delivery*)	○	○	○	○
Marketing (*e.g. customer data/CRM, product development, product life-cycle, segmentation*)	○	○	○	○
Sales (*e.g. customer orders, referrals, transactional data*)	○	○	○	○
Service (*e.g. application, repair, tech support*)	○	○	○	○
HR Management (*e.g. goal setting and monitoring, compensation, payroll, benefits*)	○	○	○	○
Procurement (*e.g. input costs, SRM*)	○	○	○	○
Regulatory Compliance (*e.g. labor, environmental standard*)	○	○	○	○

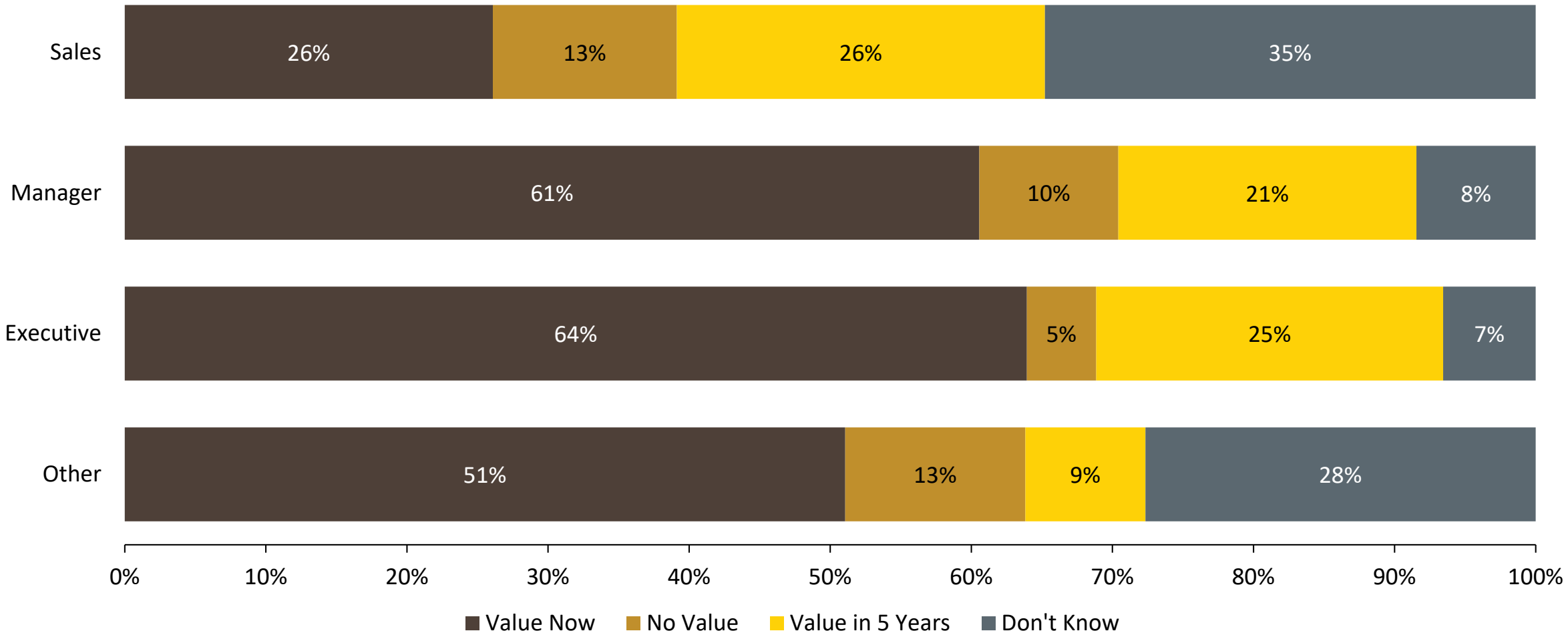
Value Creation by Role – Inbound Logistics



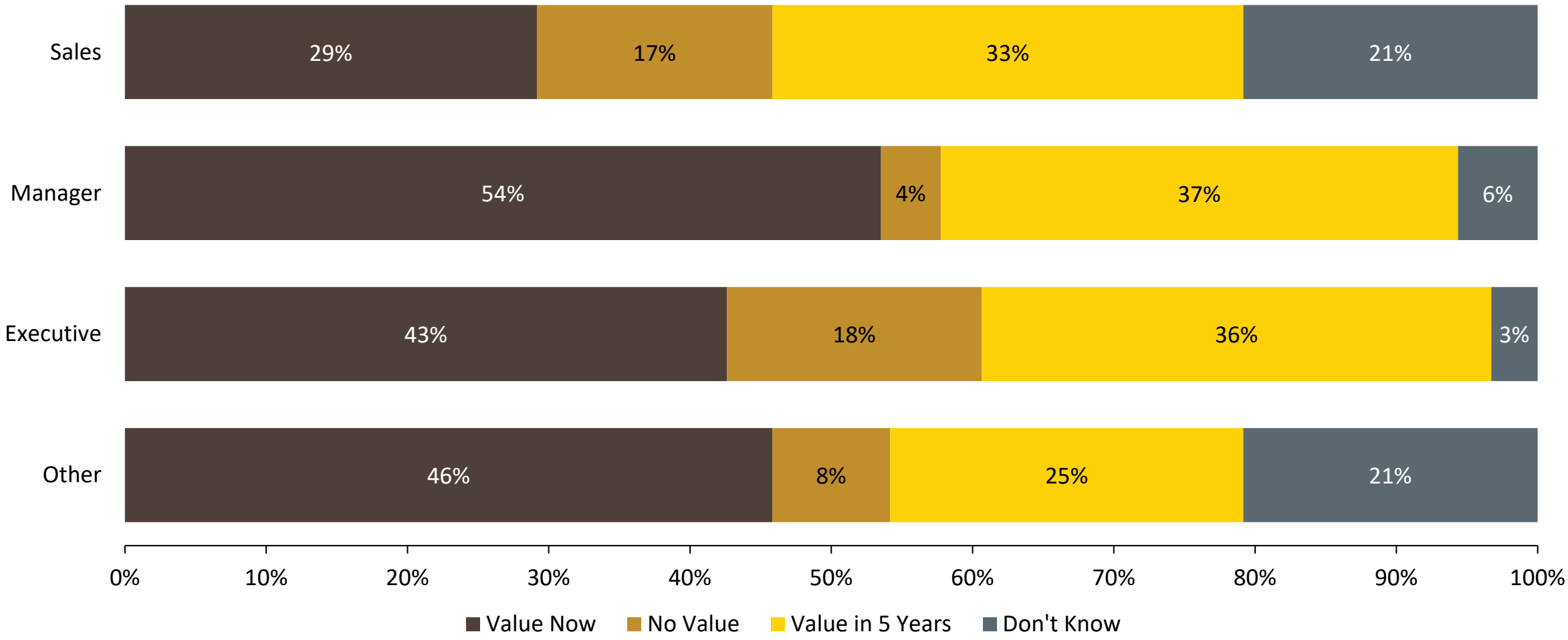
Value Creation by Role – Operations



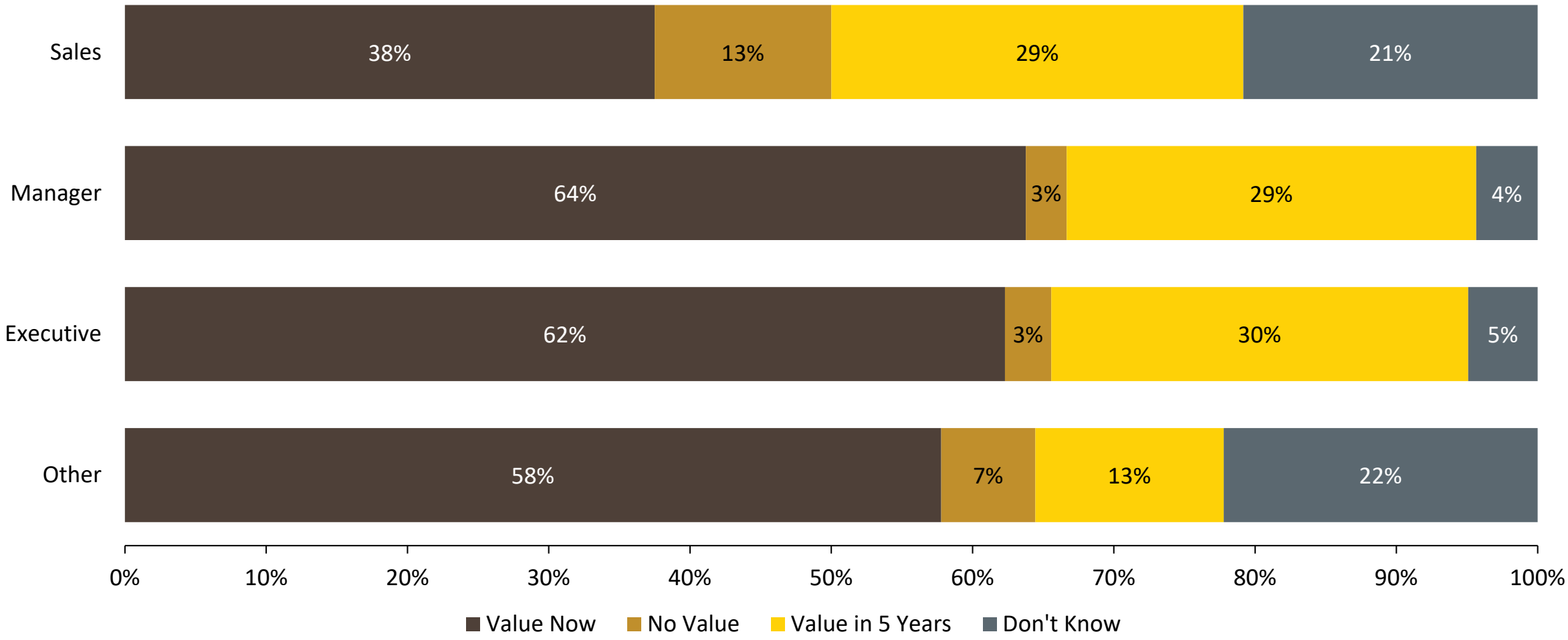
Value Creation by Role – Outbound Logistics



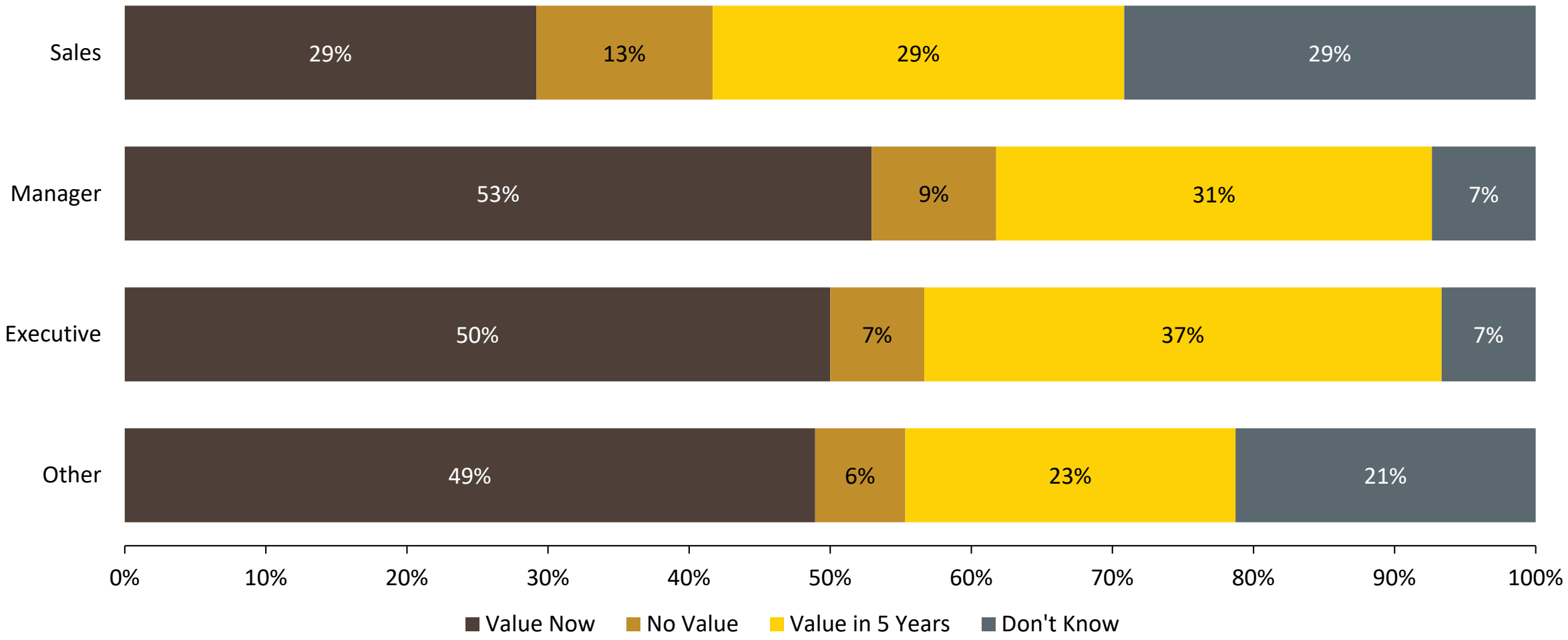
Value Creation by Role – Marketing



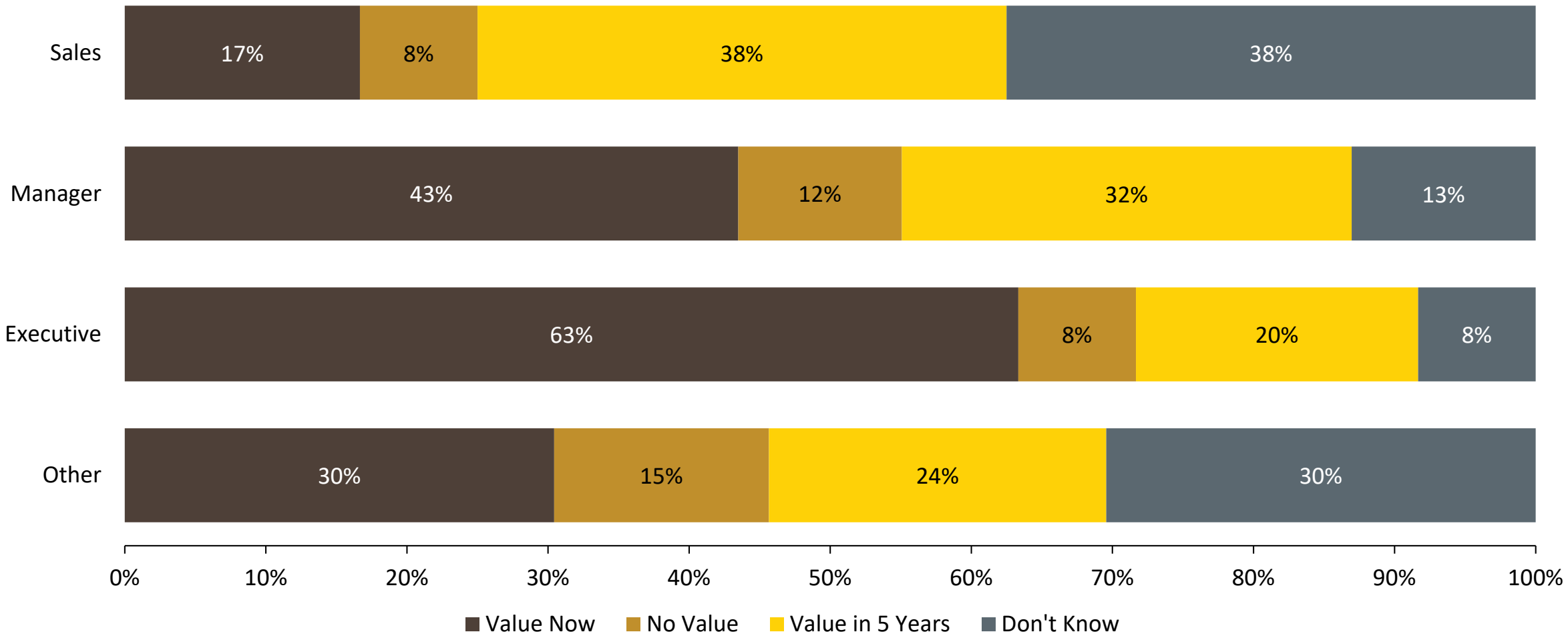
Value Creation by Role – Sales



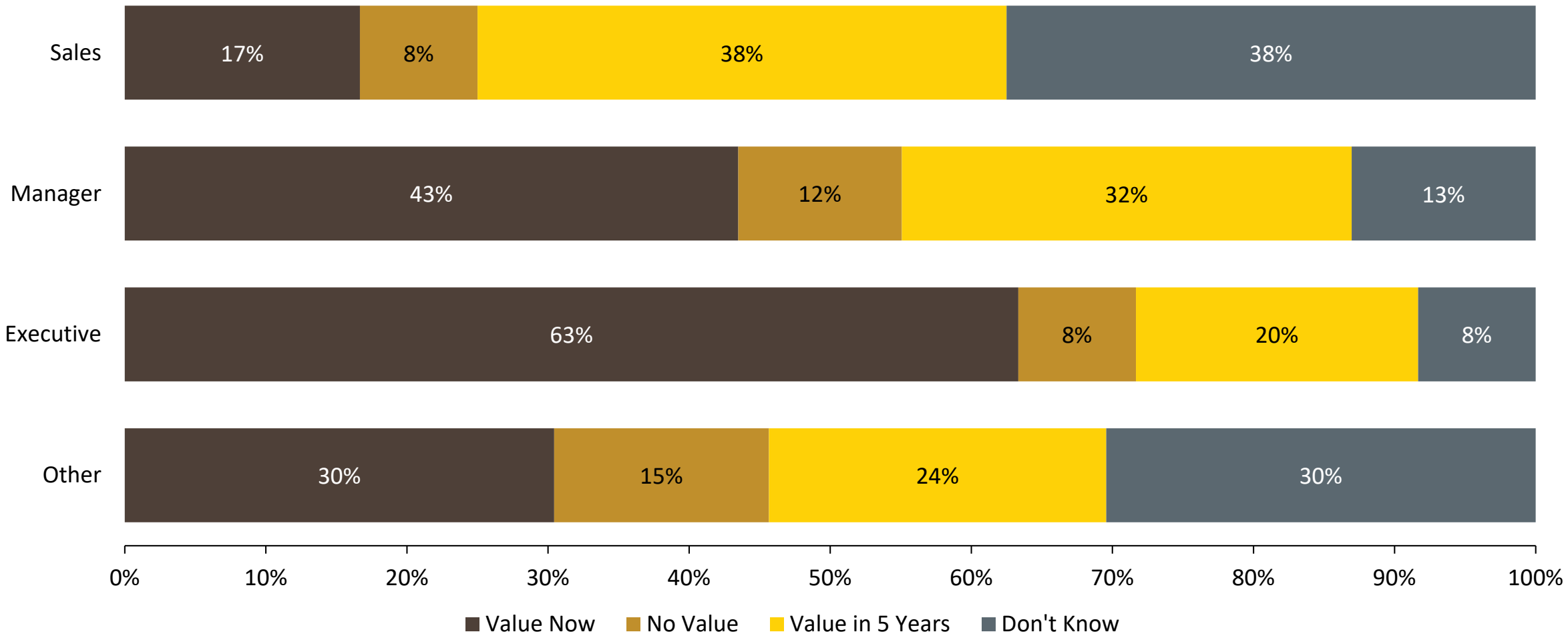
Value Creation by Role – Services



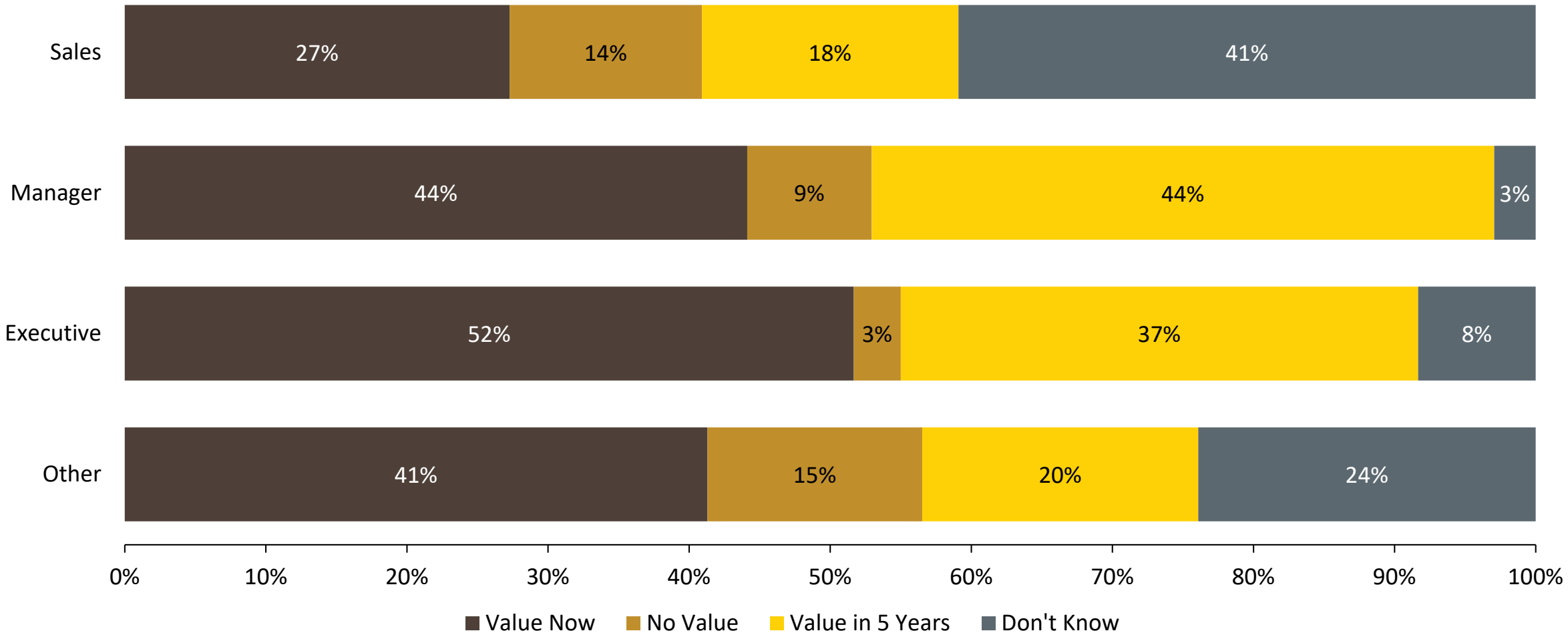
Value Creation by Role – HR Management



Value Creation by Role – Procurement

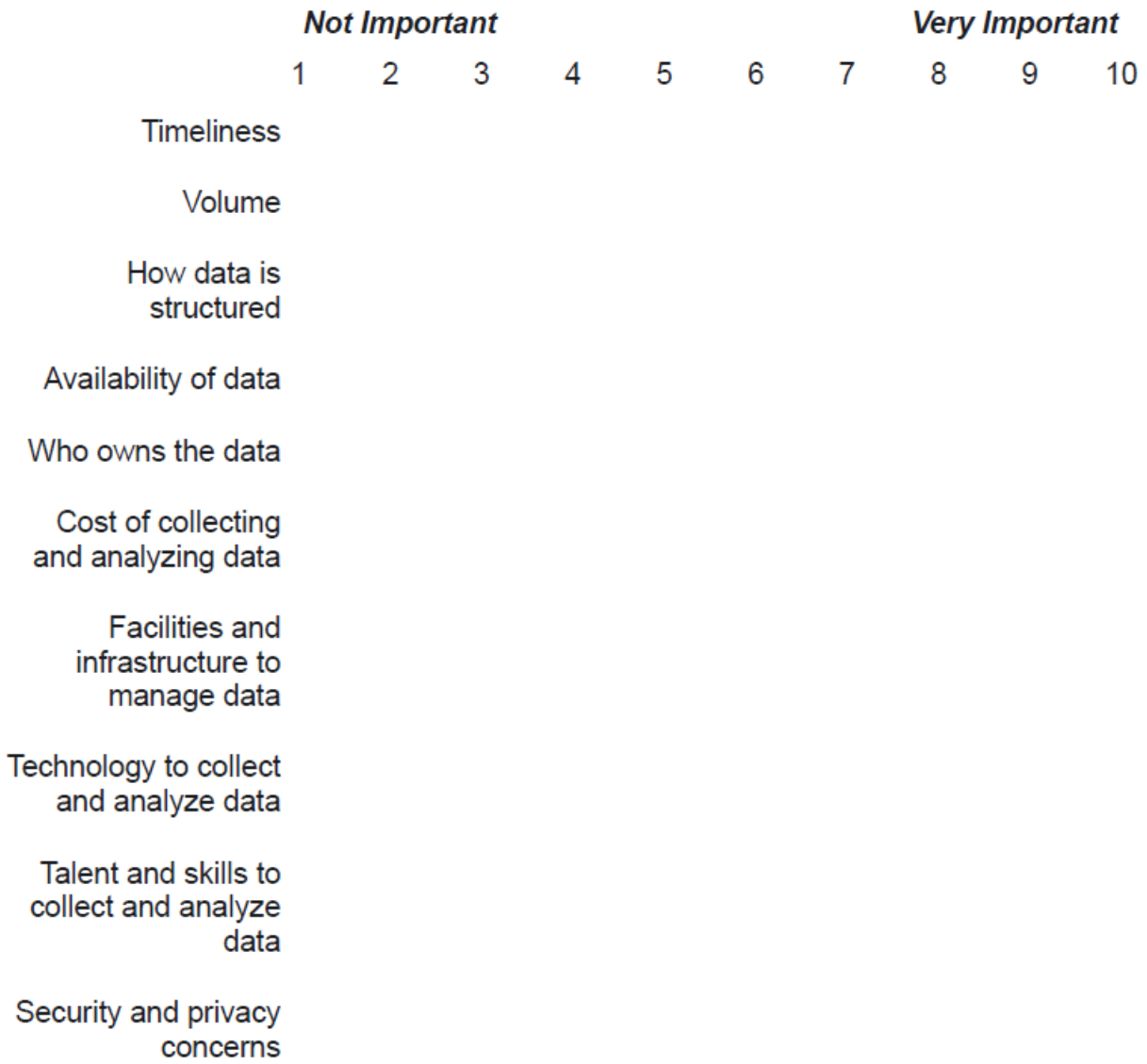


Value Creation by Role – Regulatory Compliance

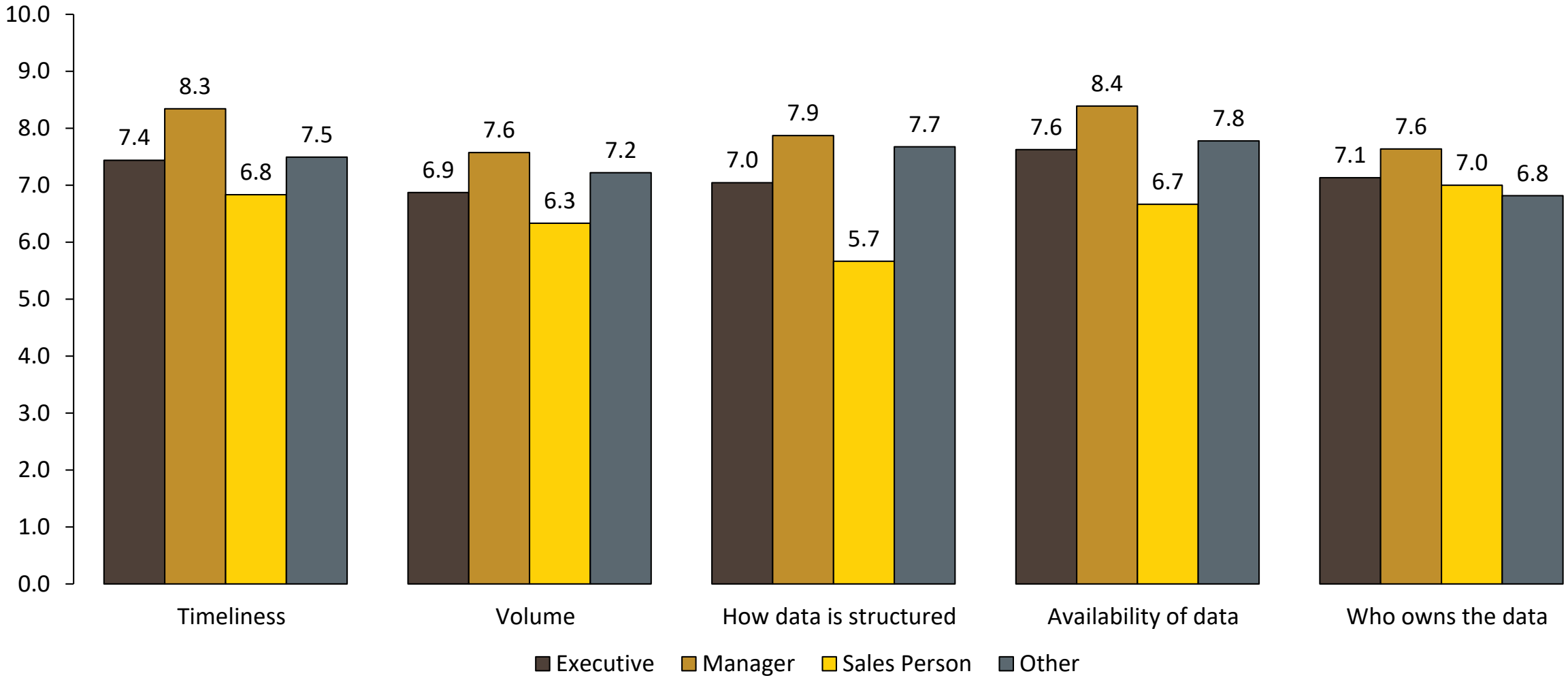


Data Collection Challenges

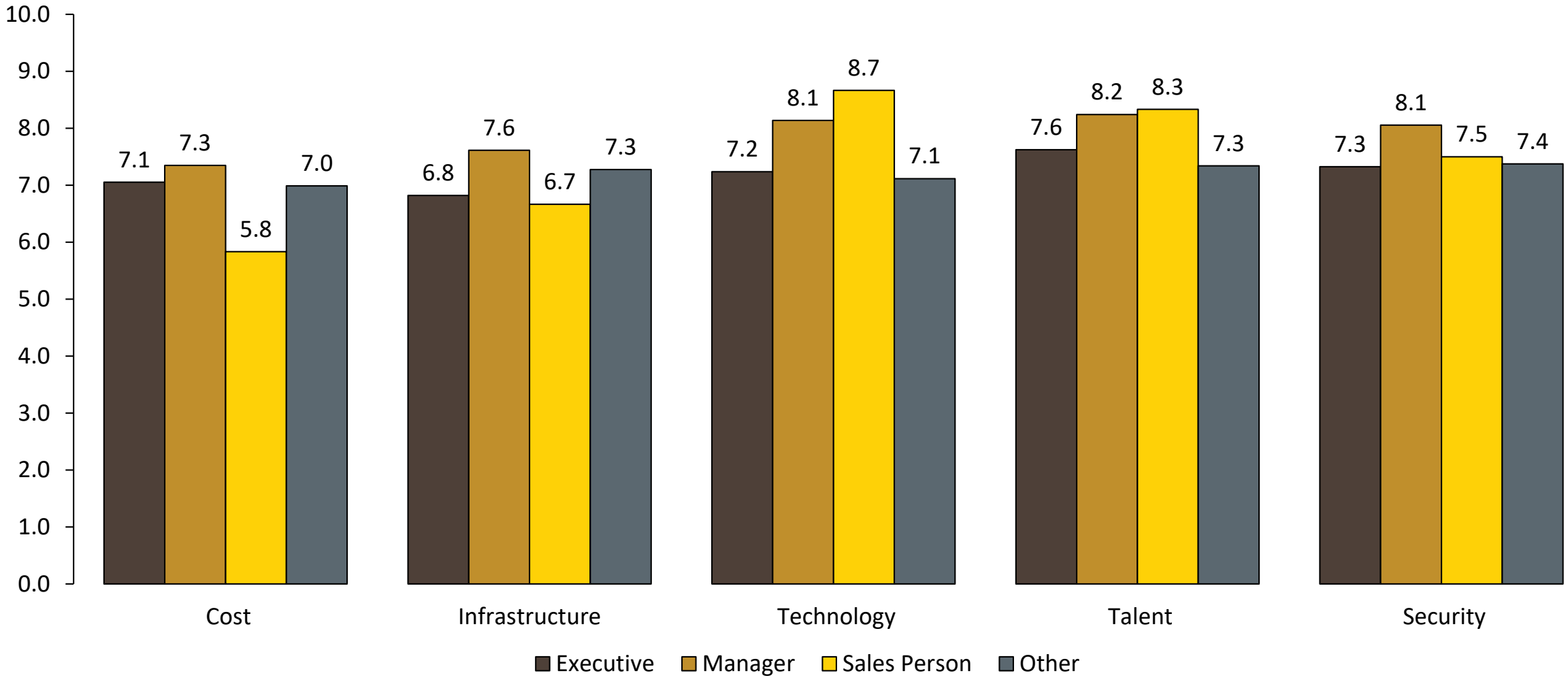
On a scale of 1 to 10, where 1 means ***"not important"*** and 10 means ***"very important"***, please rate the importance of the following data-related challenges in your organization. *(Use the slider to select your rating.)*



Data Collection Challenges by Role

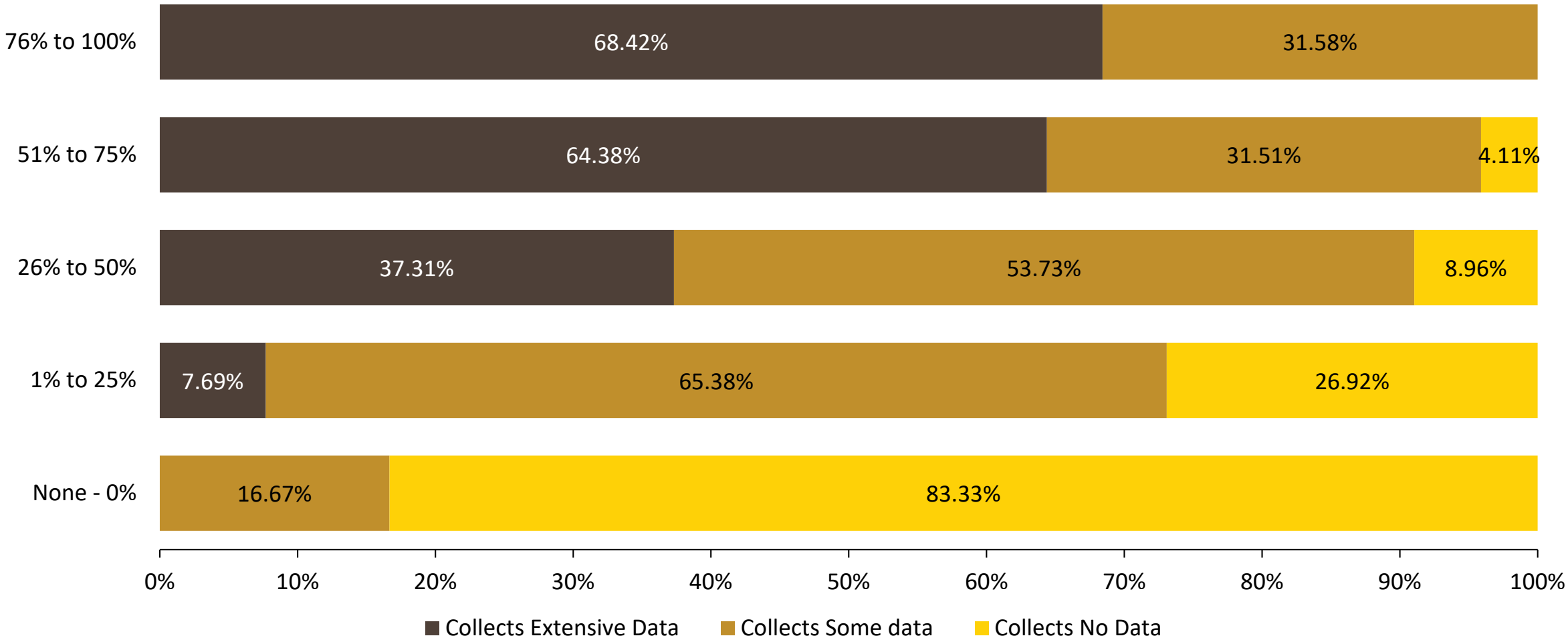


Data Collection Challenges by Role

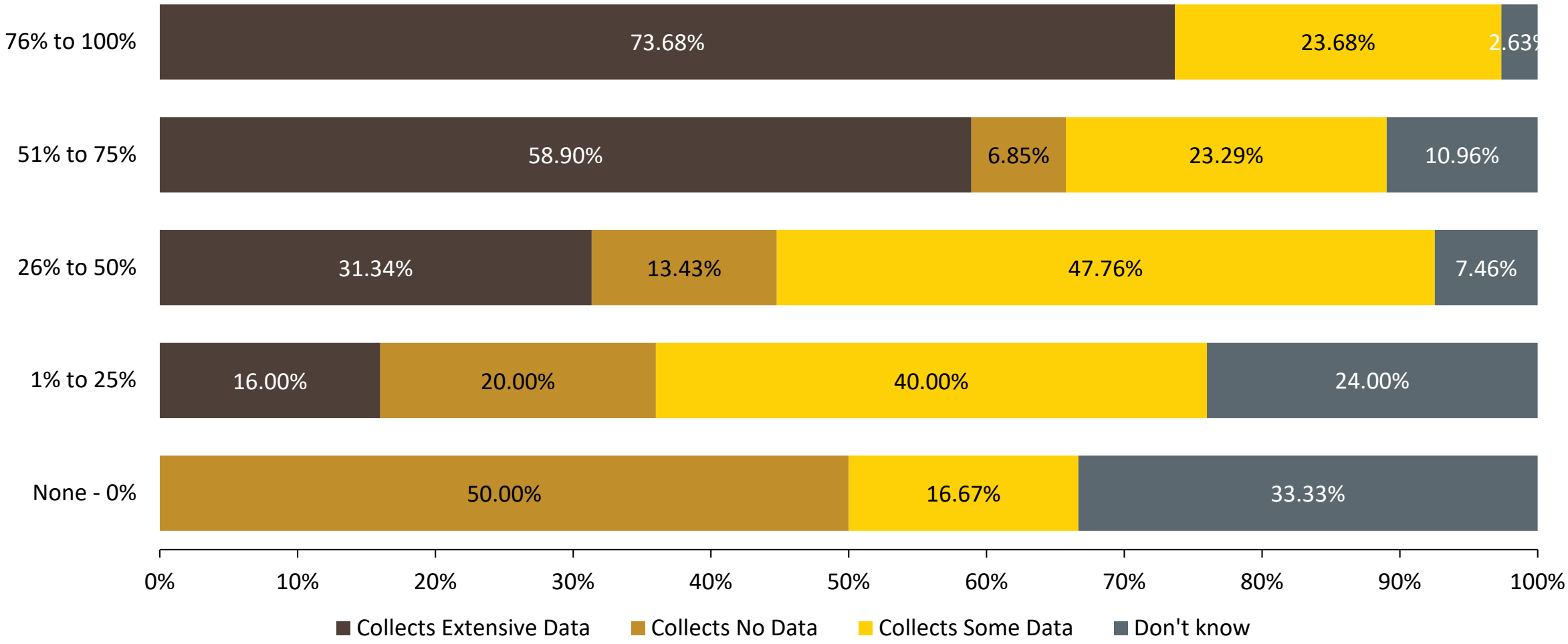


Decision Made on Data Analytics by The Extent Data is Collected

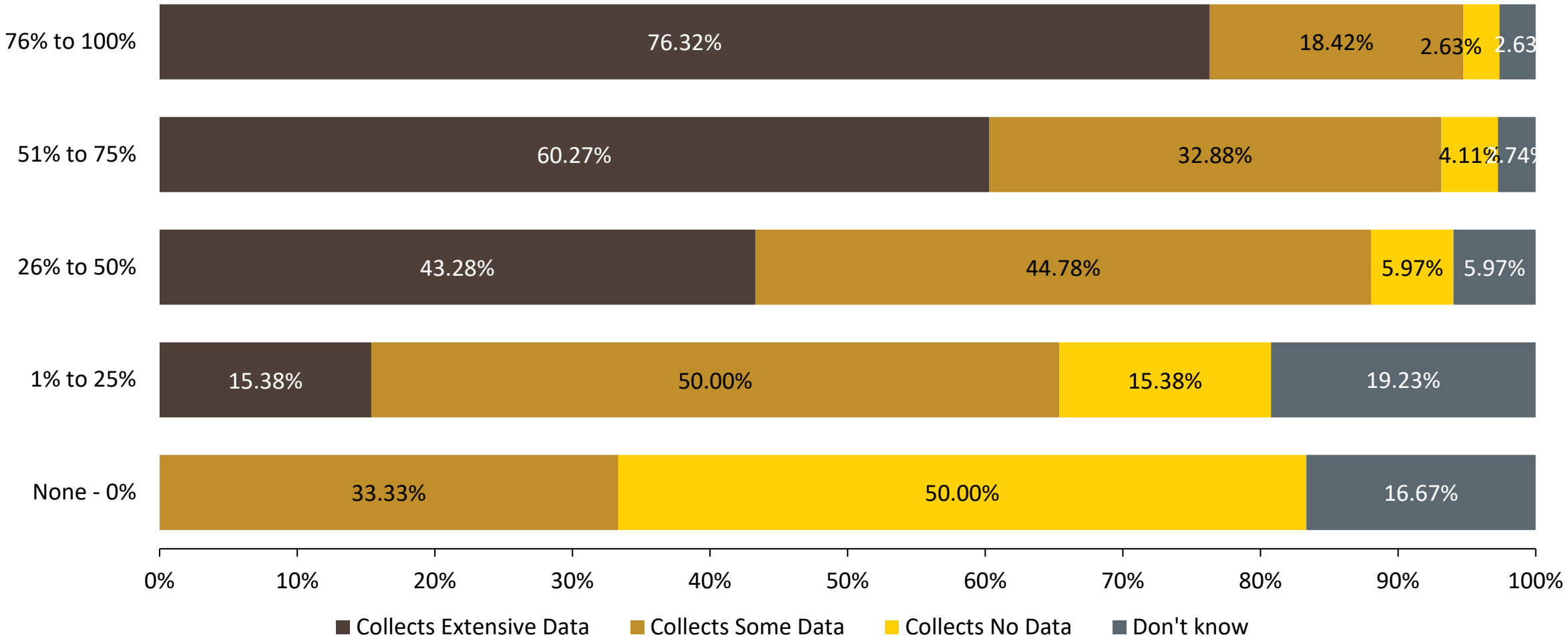
% of Decision Made on Data Analytics by The Extent Data is Collected - Overall



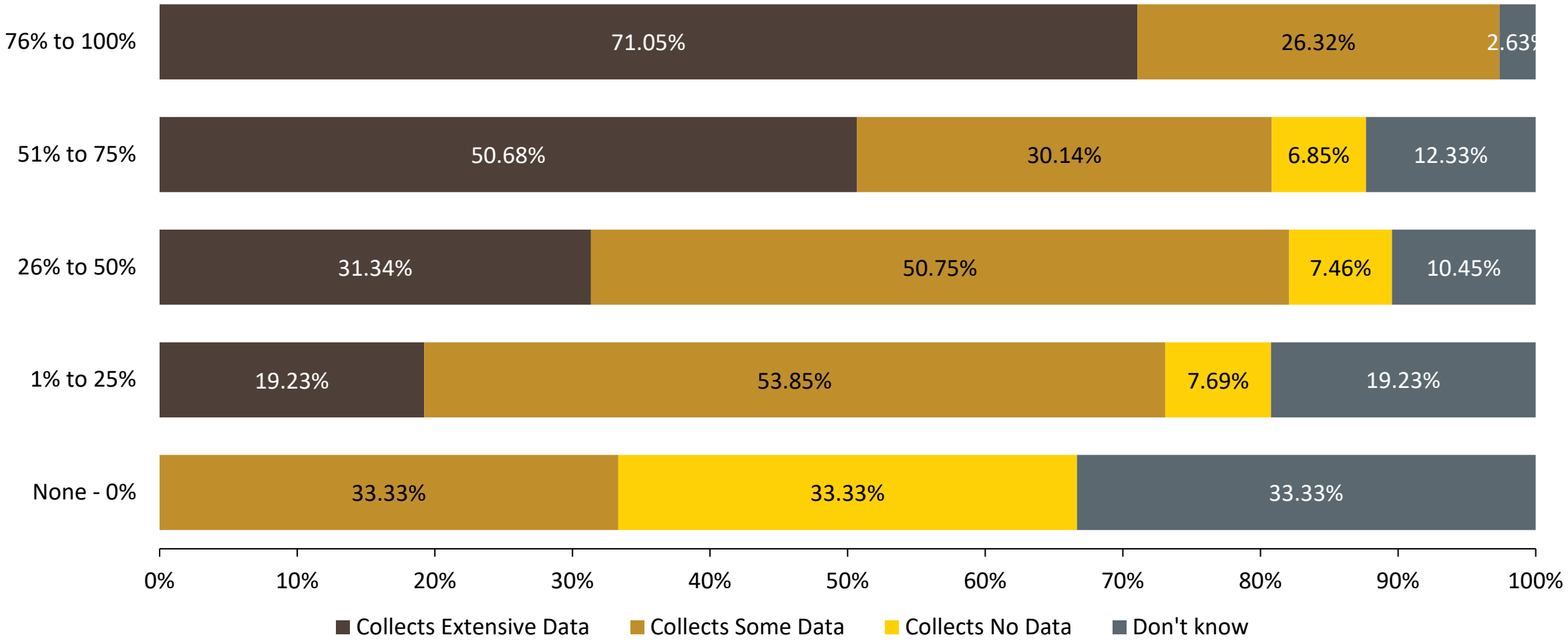
% of Decision Made on Data Analytics by The Extent Data is Collected – Inbound Logistics



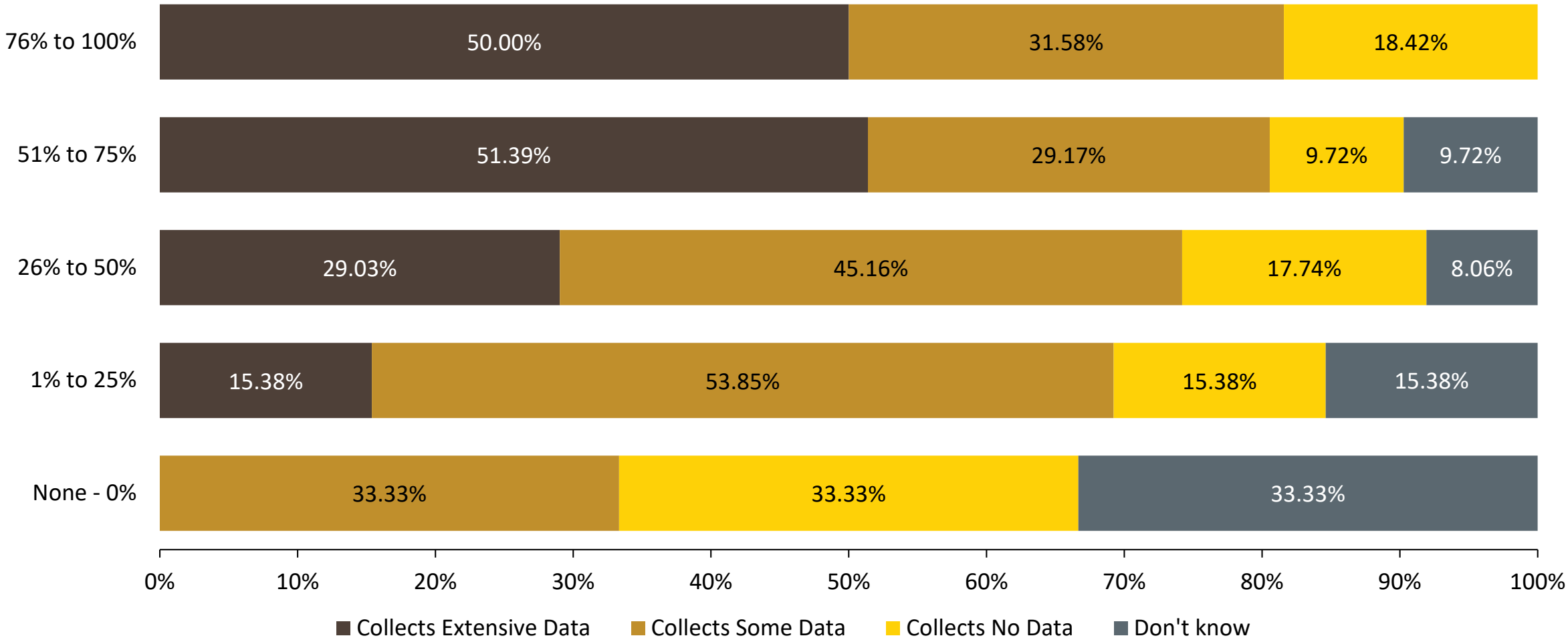
% of Decision Made on Data Analytics by The Extent Data is Collected - Operations



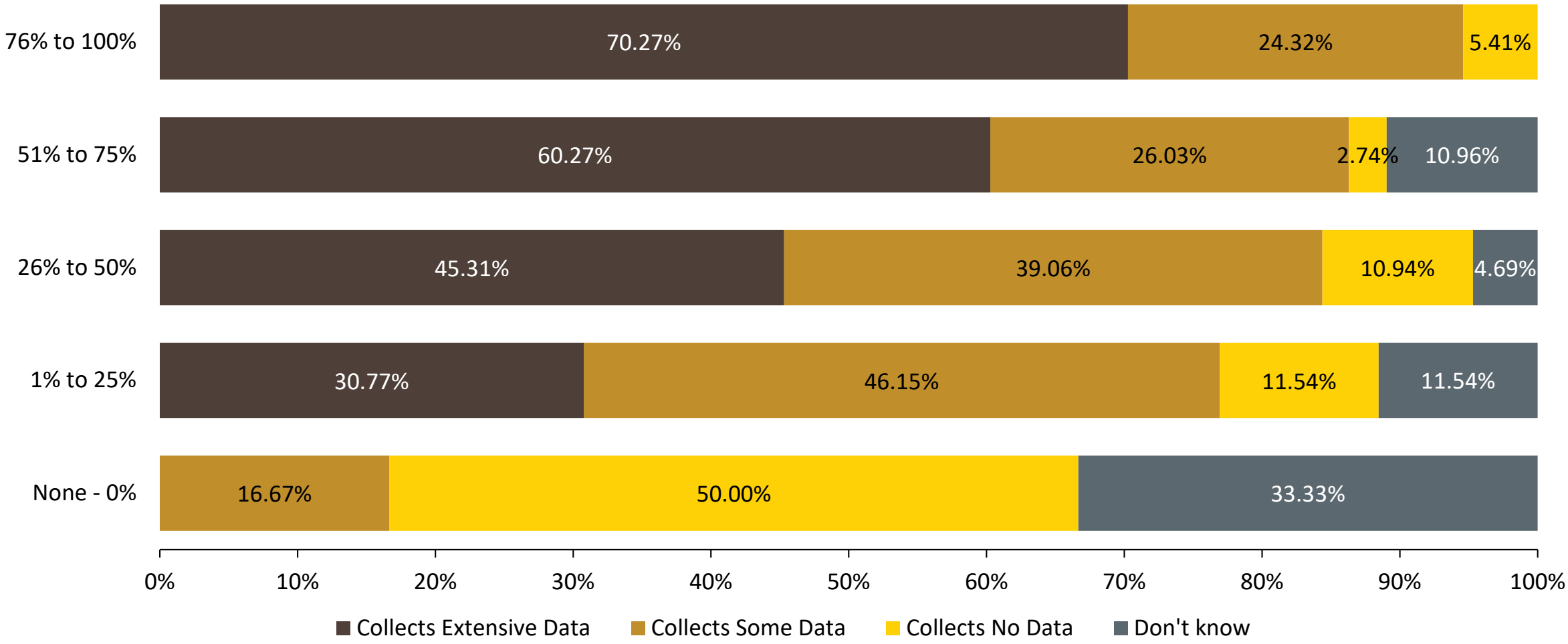
% of Decision Made on Data Analytics by The Extent Data is Collected – Outbound Logistics



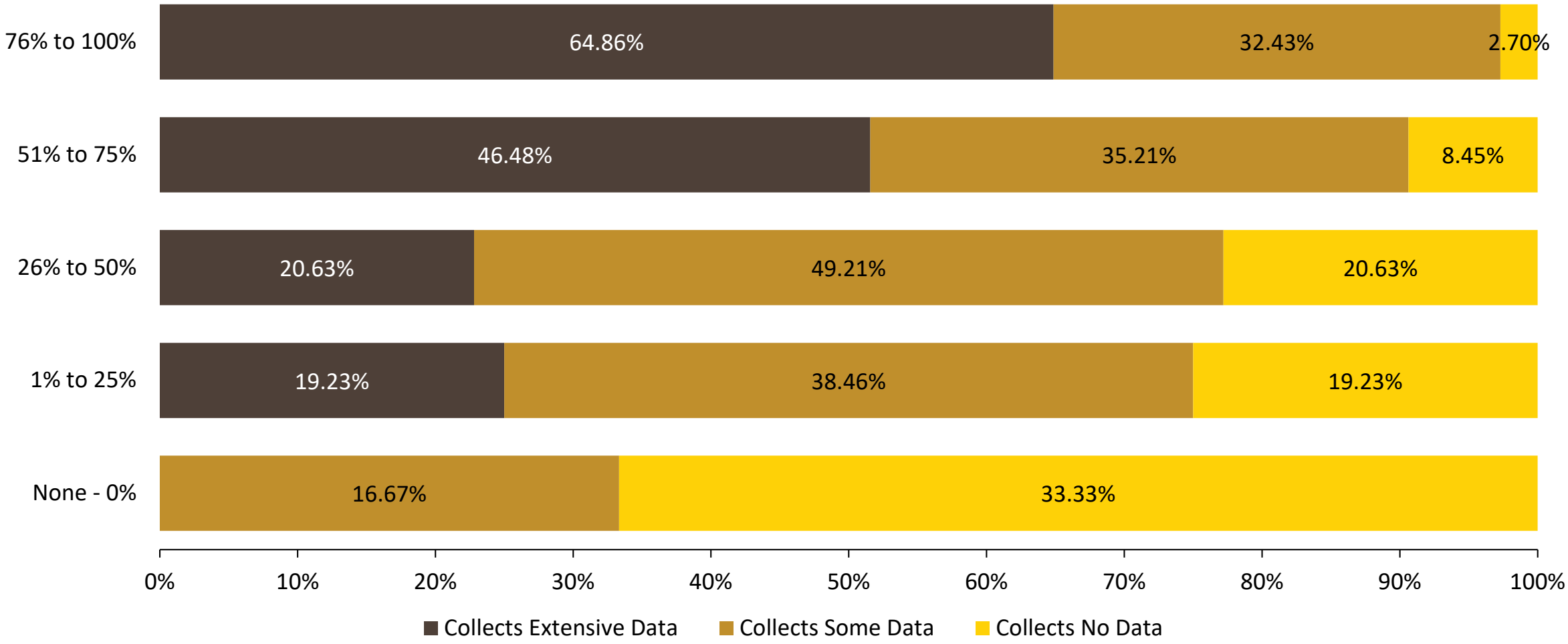
% of Decision Made on Data Analytics by The Extent Data is Collected - Marketing



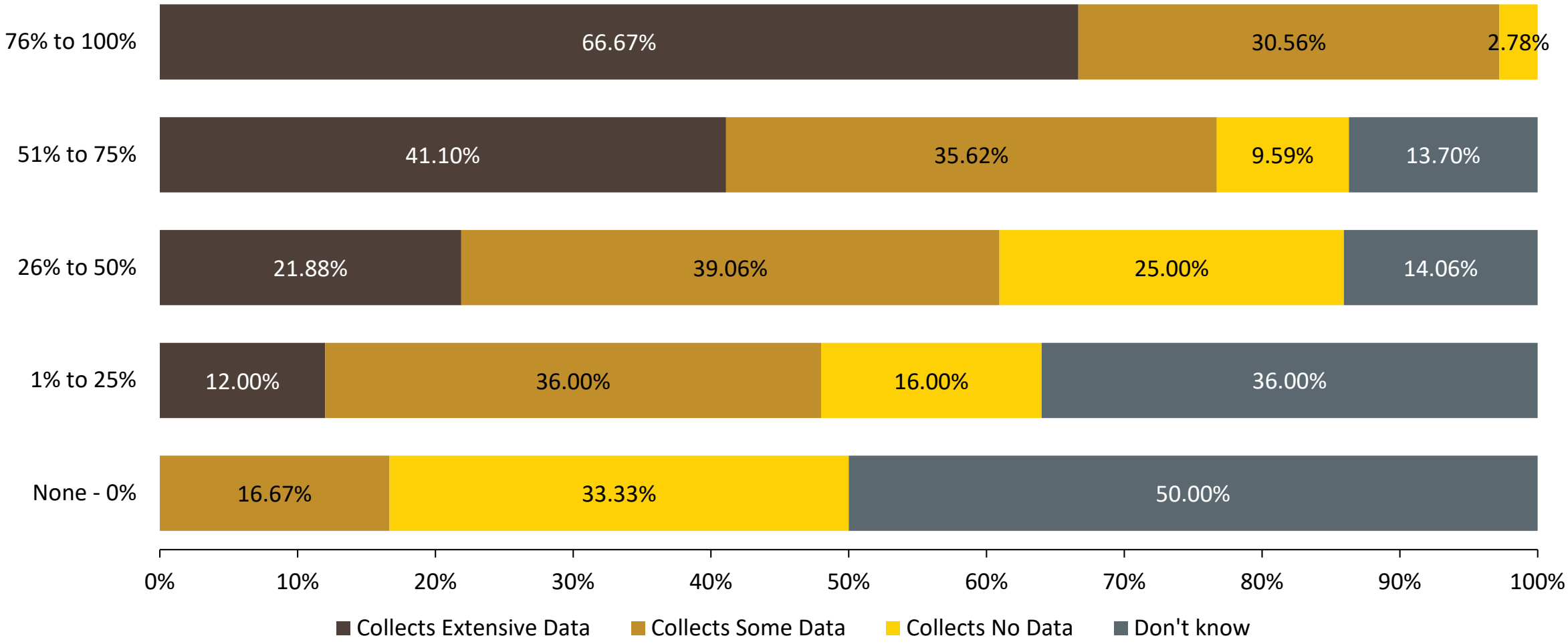
% of Decision Made on Data Analytics by The Extent Data is Collected - Sales



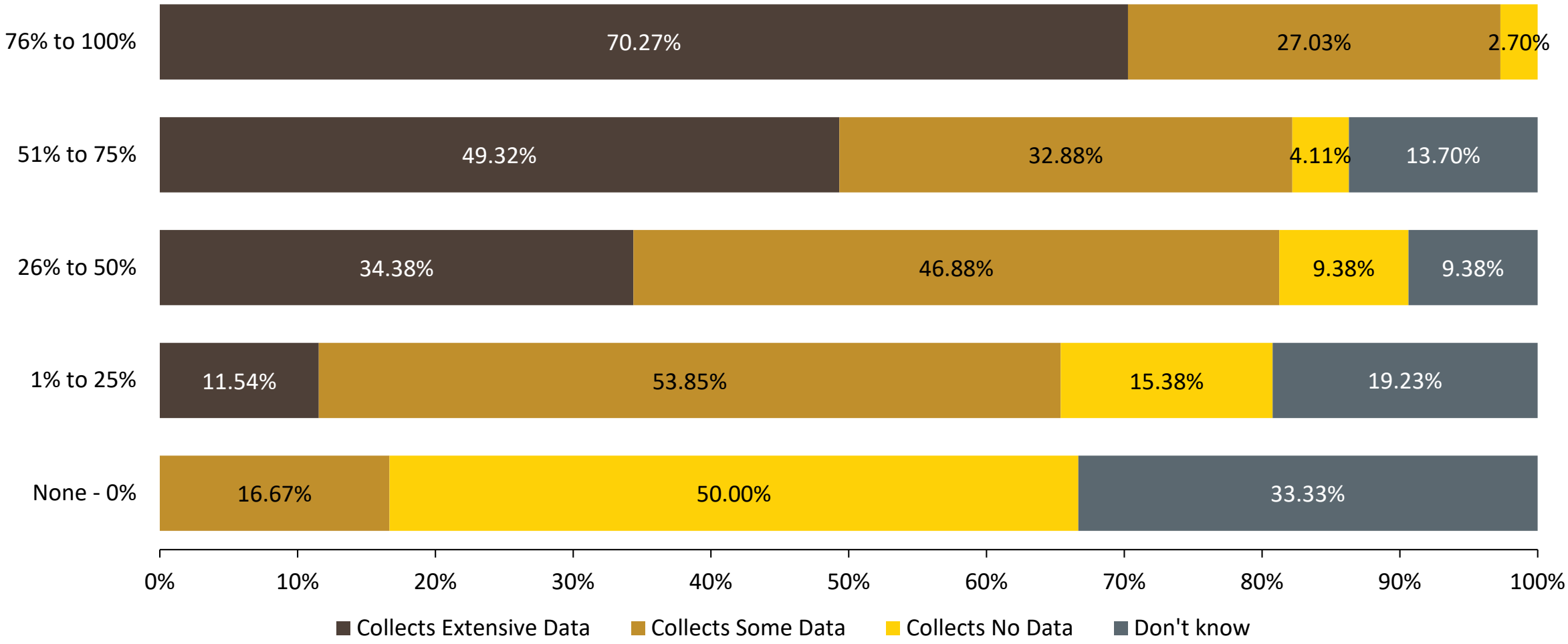
% of Decision Made on Data Analytics by The Extent Data is Collected - Service



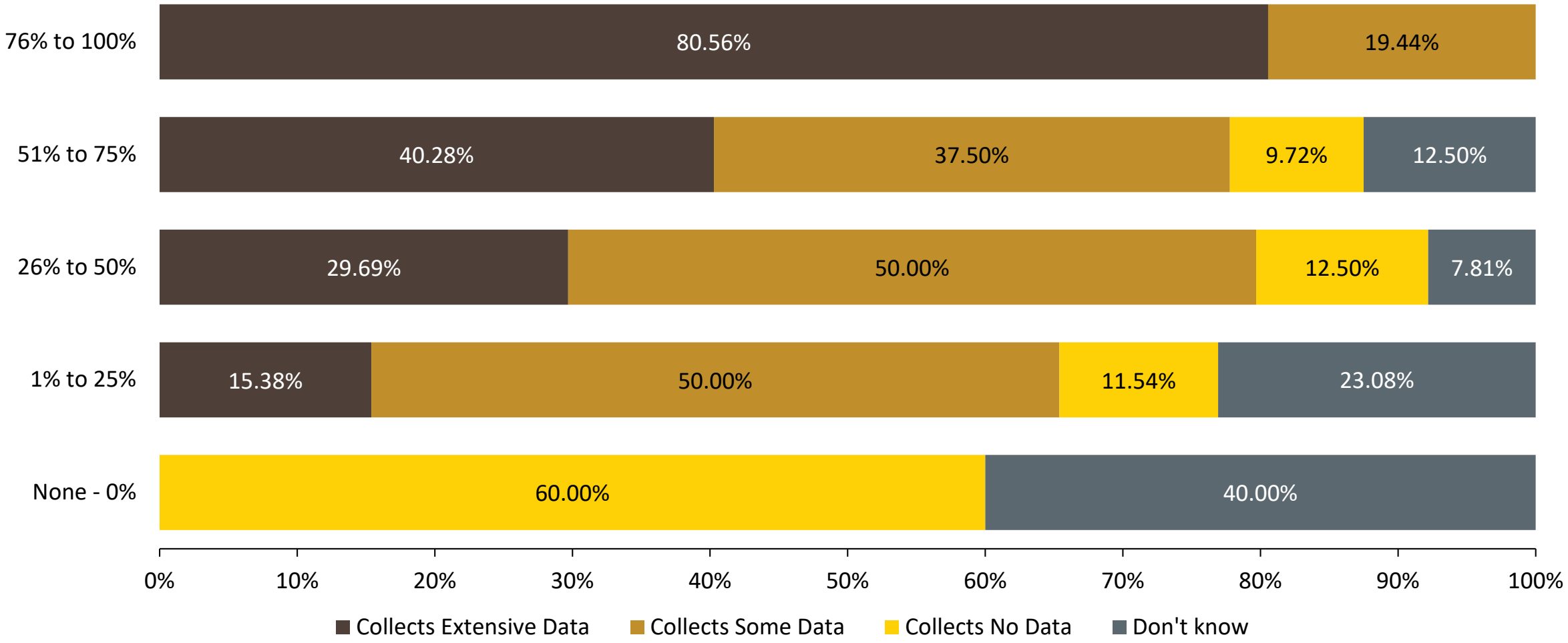
% of Decision Made on Data Analytics by The Extent Data is Collected – HR Management



% of Decision Made on Data Analytics by The Extent Data is Collected - Procurement



% of Decision Made on Data Analytics by The Extent Data is Collected – Regulatory Compliance



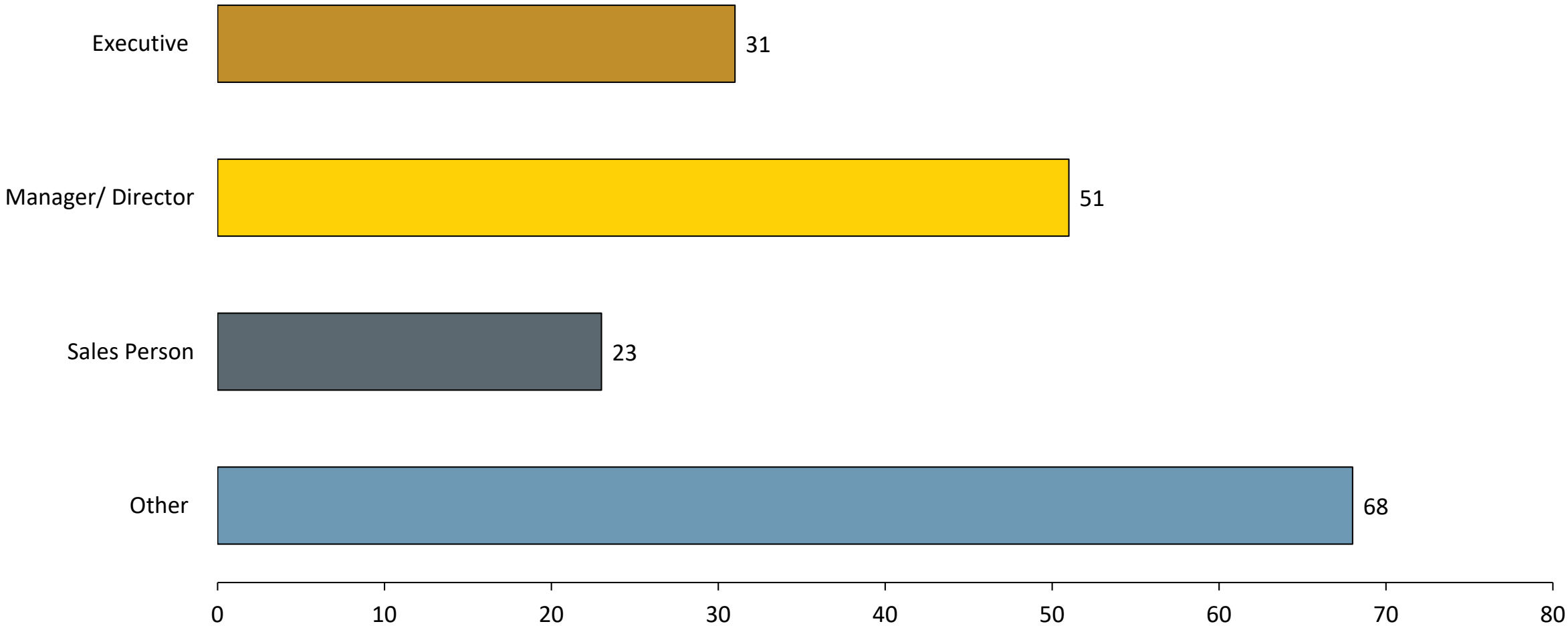
Data Analytics Survey Results

Food Retailer

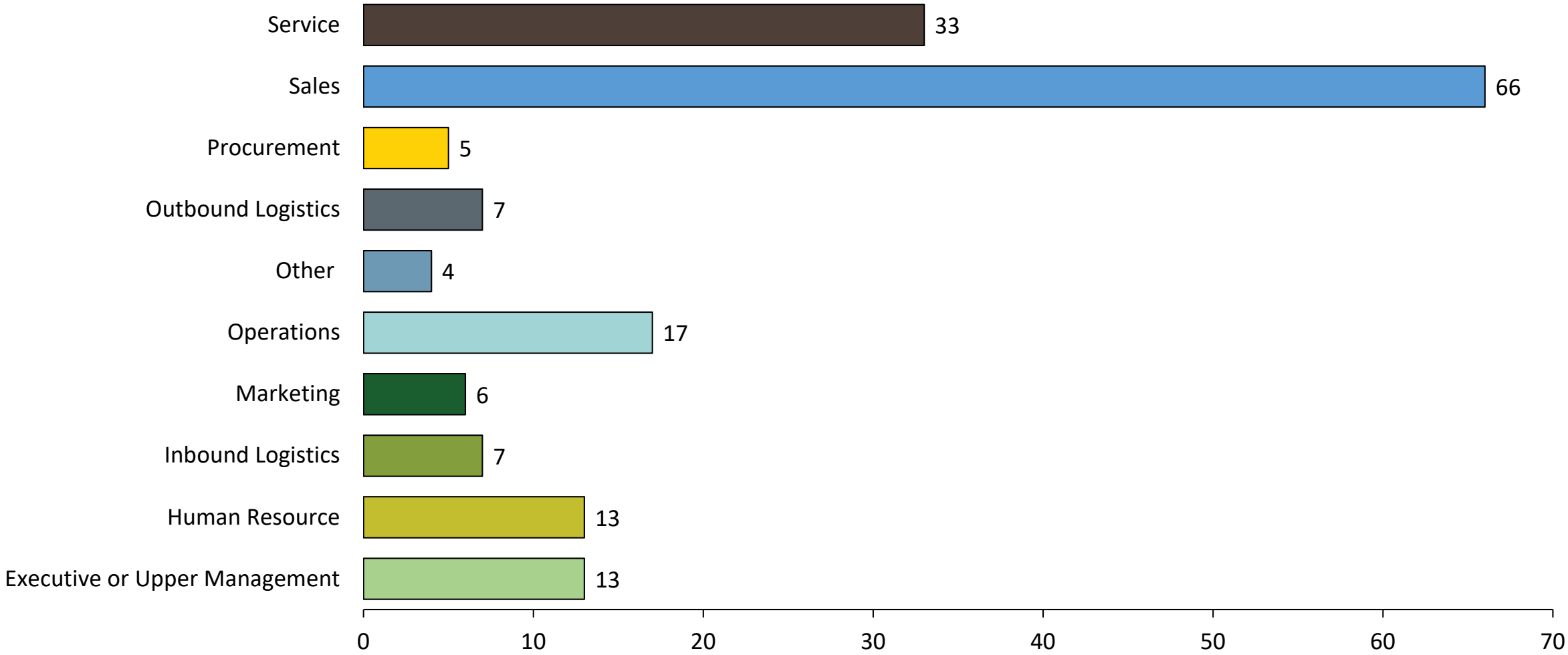
PURDUE UNIVERSITY
Center for Food and Agricultural Business
COLLEGE OF AGRICULTURE

Demographics

Respondents by Role



Respondents by Business Function

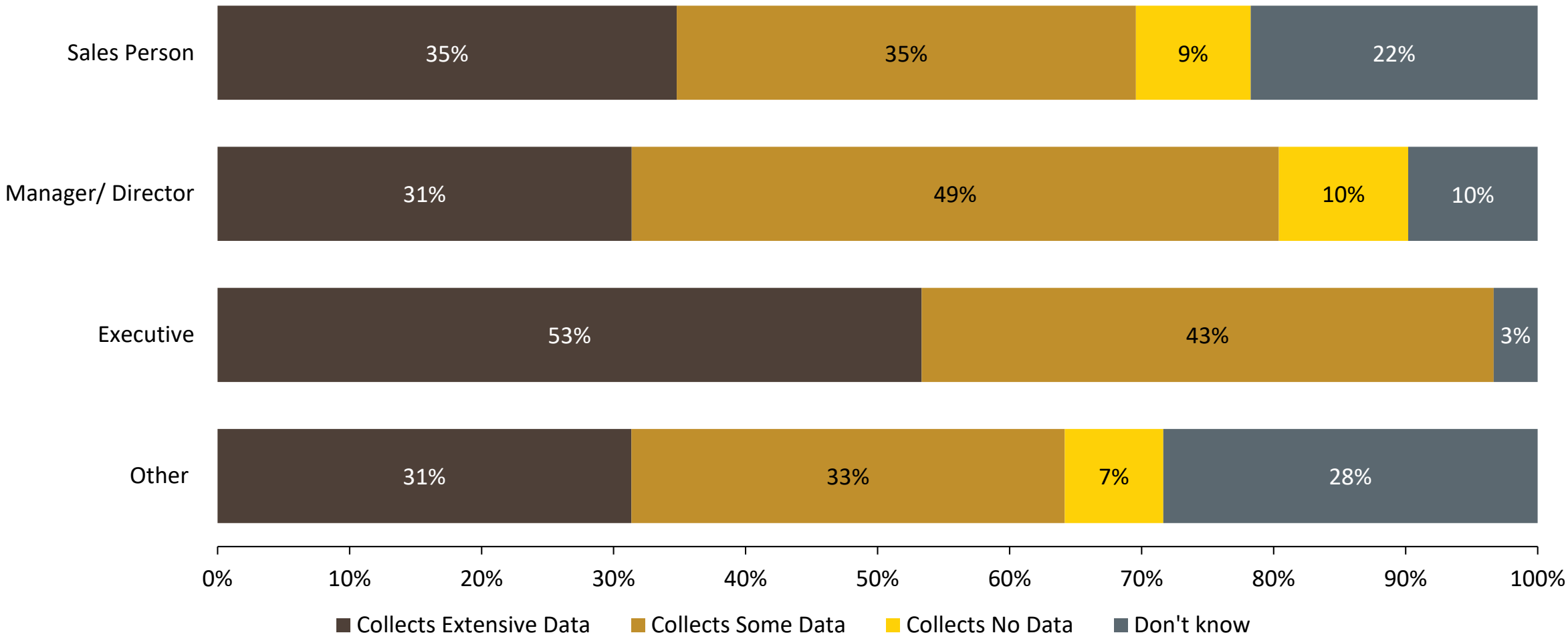


The Extent Data is Collected - by Role

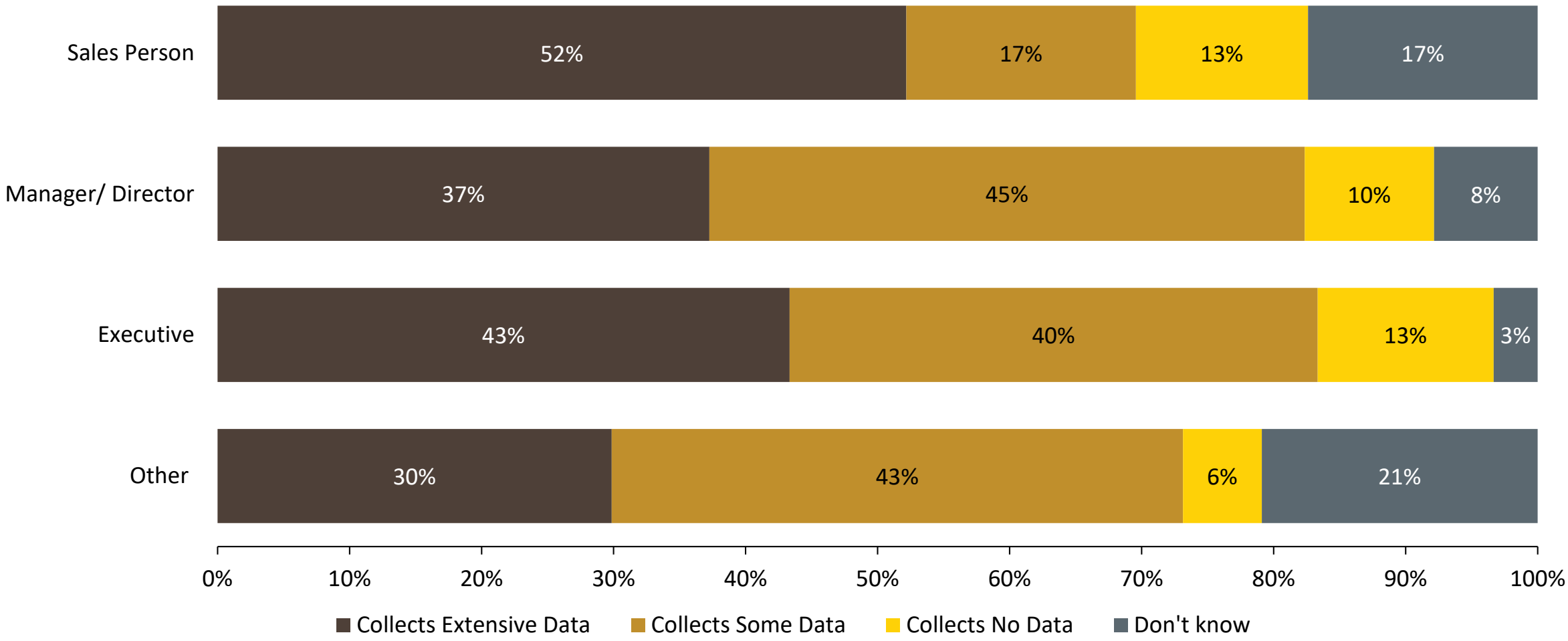
To what extent does your organization **collect data** for the following business functions?

	Don't know	Collects **No** Data	Collects **Some** Data	Collects **Extensive** Data
Inbound Logistics (*e.g. ordering/receiving, inventory replenishment*)	○	○	○	○
Operations (*e.g. production volumes, process details, quality control, efficiency measure*)	○	○	○	○
Outbound Logistics (*e.g. ordering/delivery*)	○	○	○	○
Marketing (*e.g. customer data/CRM, product development, product life-cycle, segmentation*)	○	○	○	○
Sales (*e.g. customer orders, referrals, transactional data*)	○	○	○	○
Service (*e.g. application, repair, tech support*)	○	○	○	○
HR Management (*e.g. goal setting and monitoring, compensation, payroll, benefits*)	○	○	○	○
Procurement (*e.g. input costs, SRM*)	○	○	○	○
Regulatory Compliance (*e.g. labor, environmental standard*)	○	○	○	○

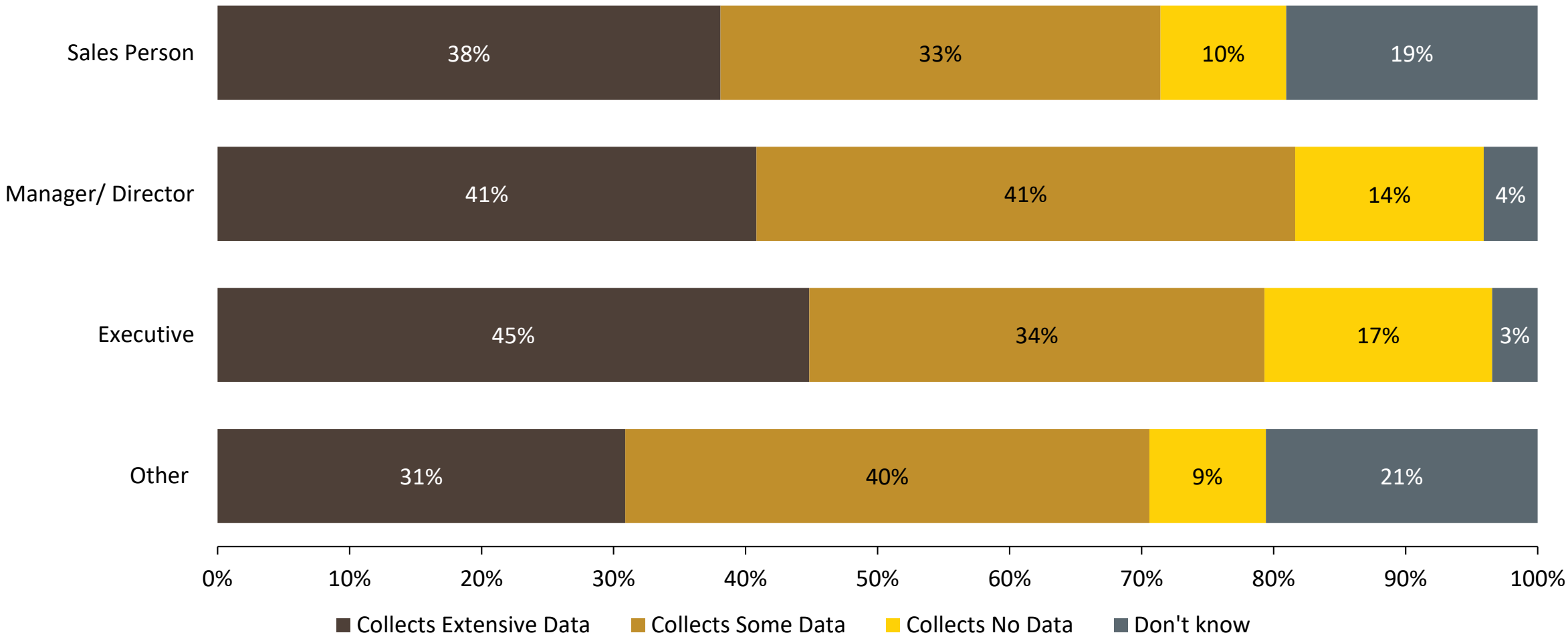
The Extent Data is Collected by Role – Inbound Logistics



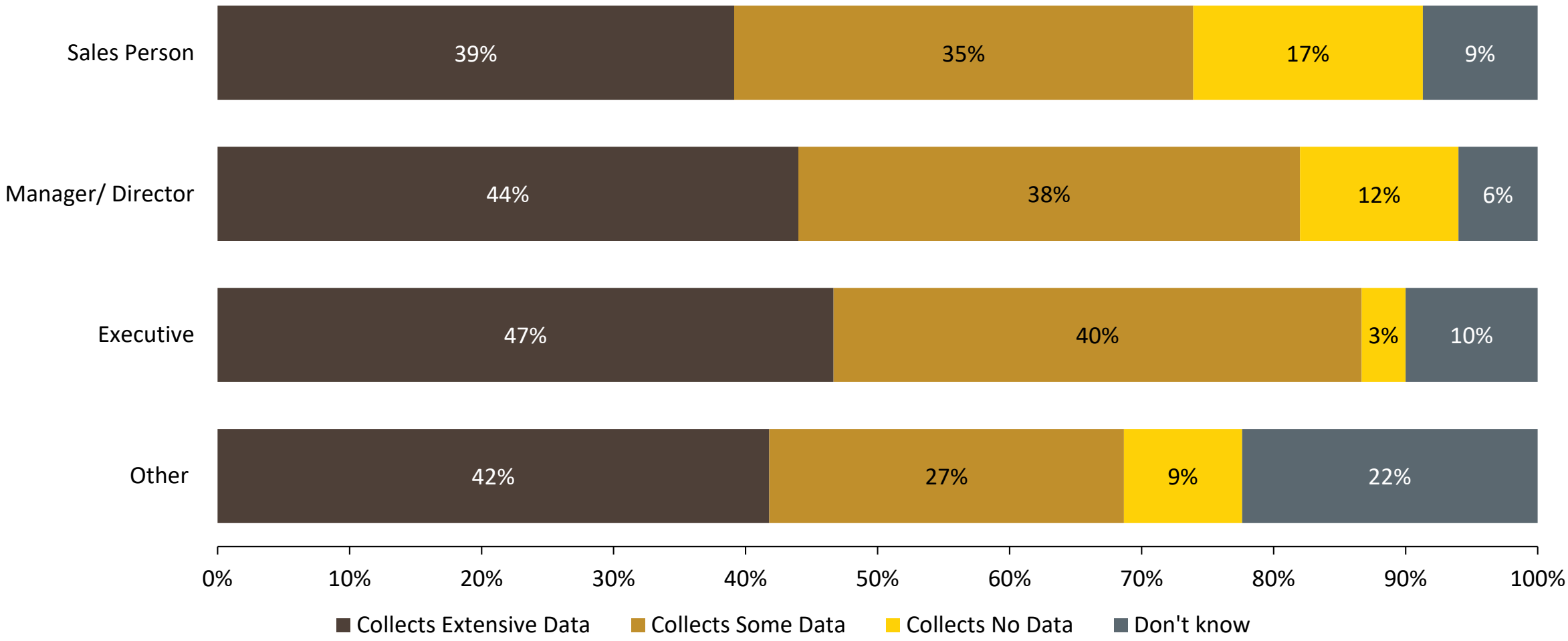
The Extent Data is Collected by Role – Operations



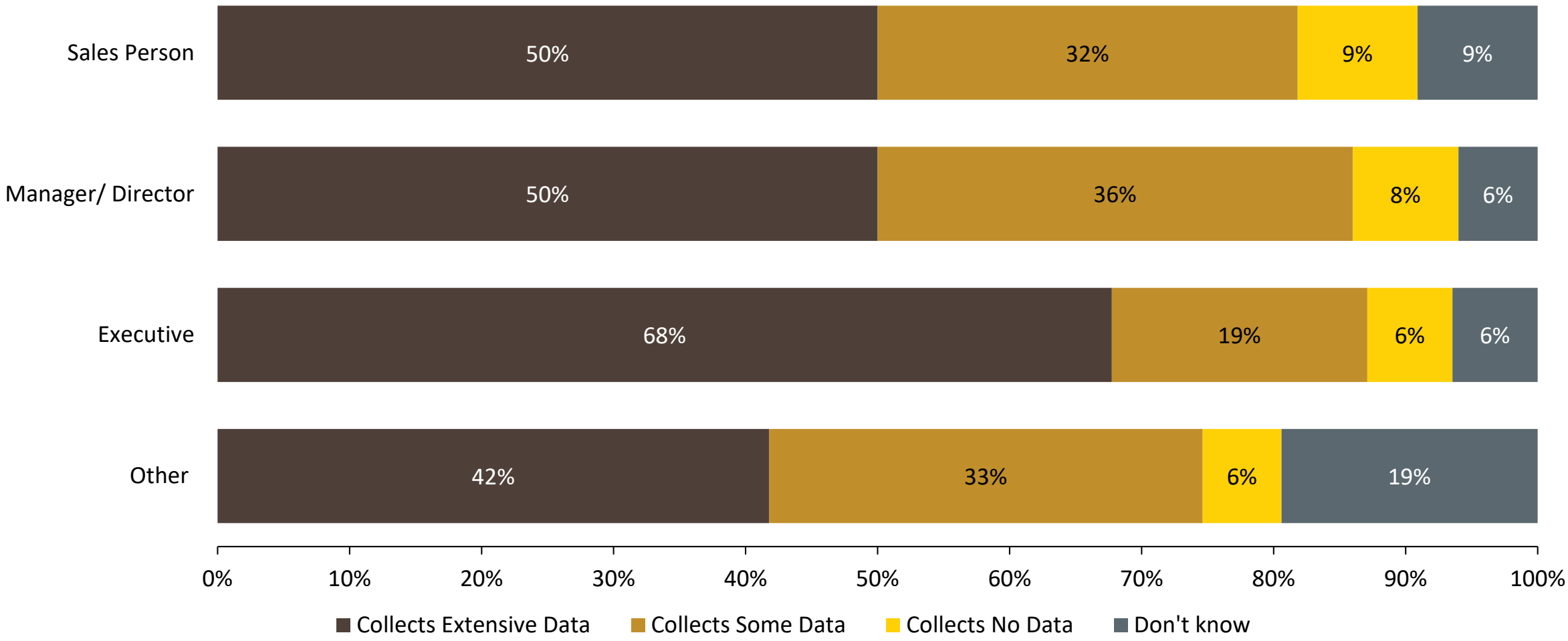
The Extent Data is Collected by Role – Outbound Logistics



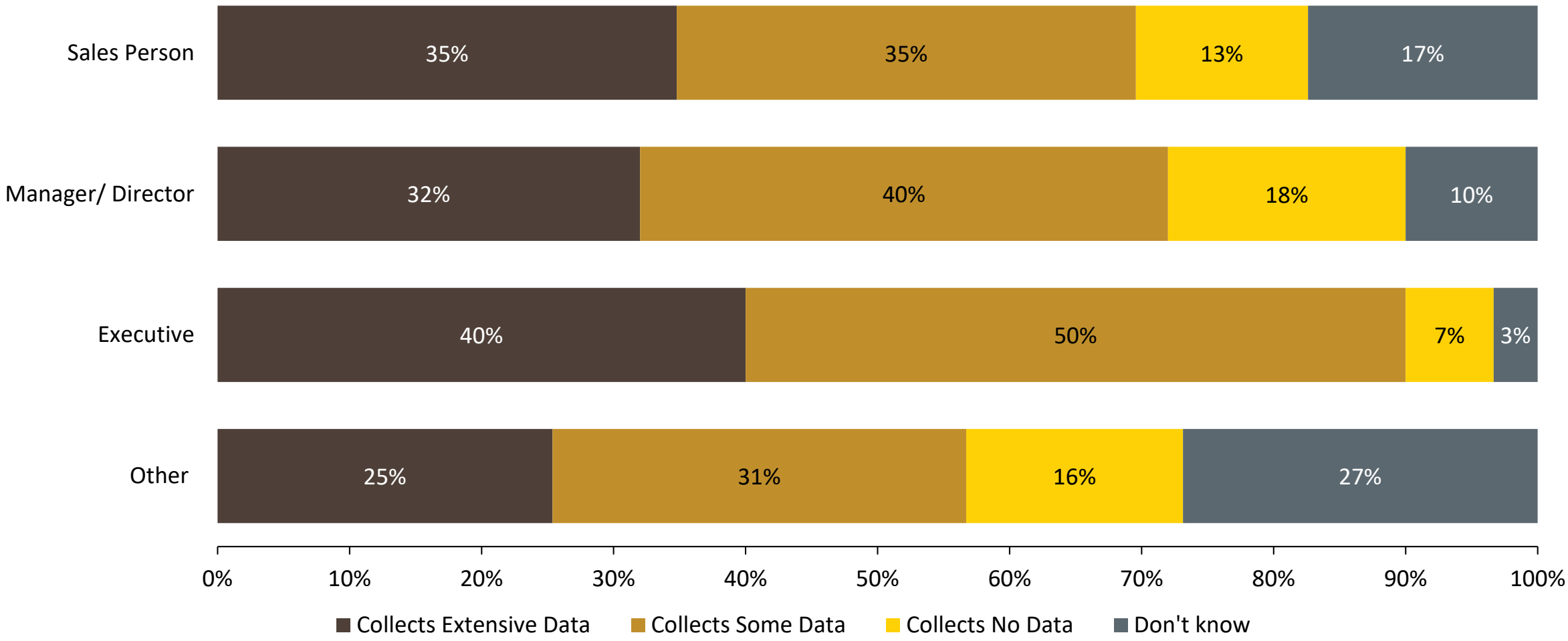
The Extent Data is Collected by Role – Marketing



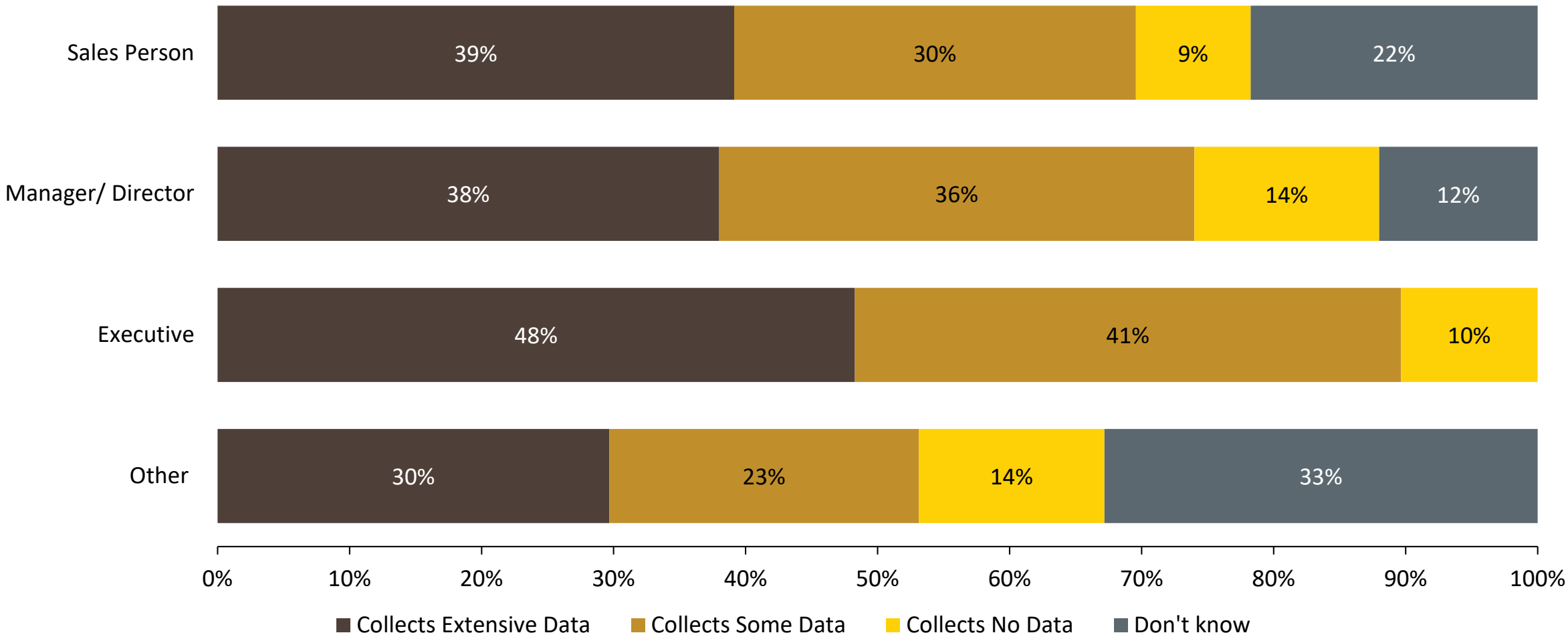
The Extent Data is Collected by Role – Sales



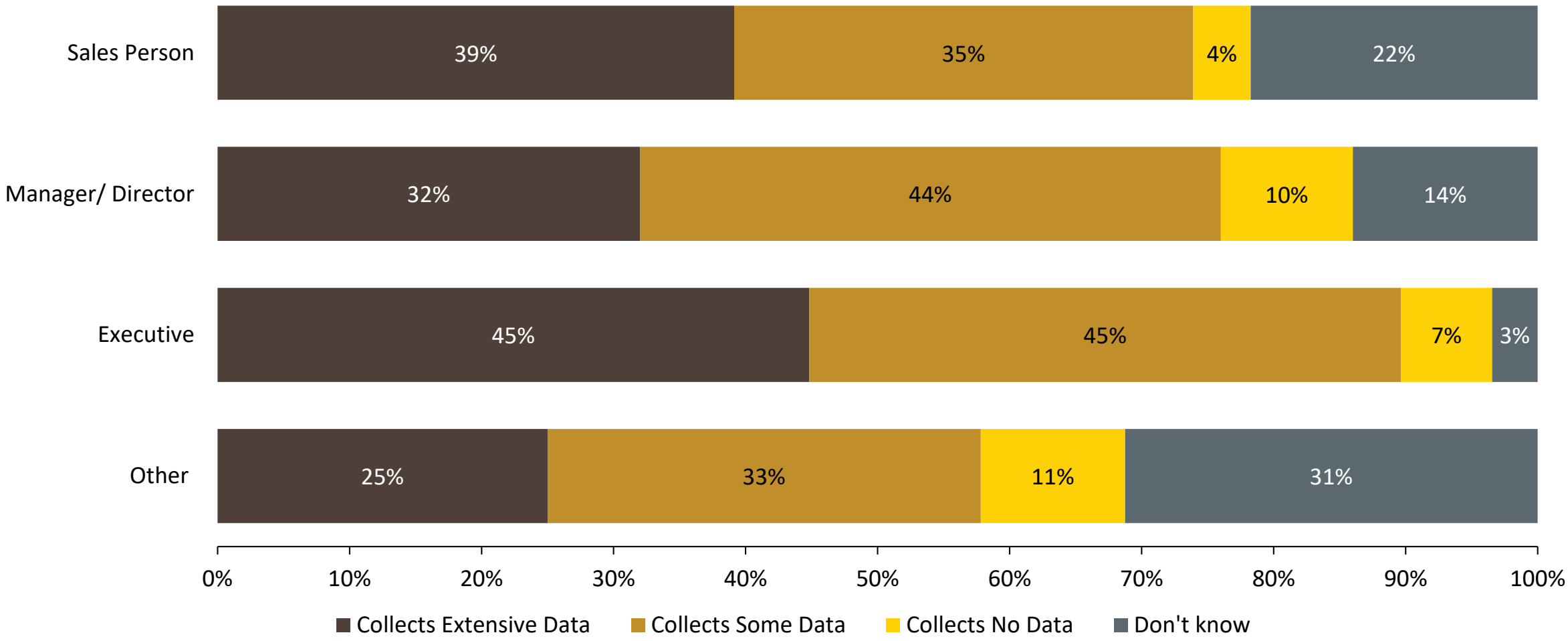
The Extent Data is Collected by Role – Services



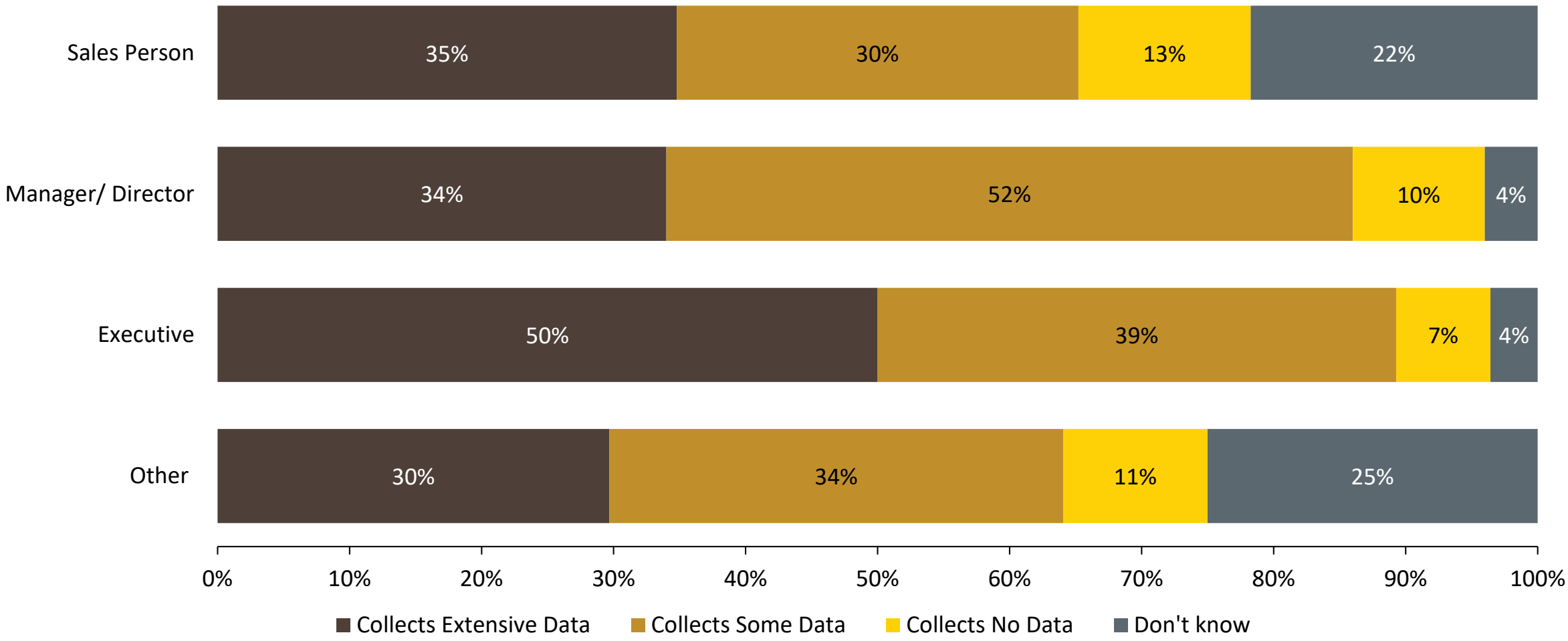
The Extent Data is Collected by Role – HR Management



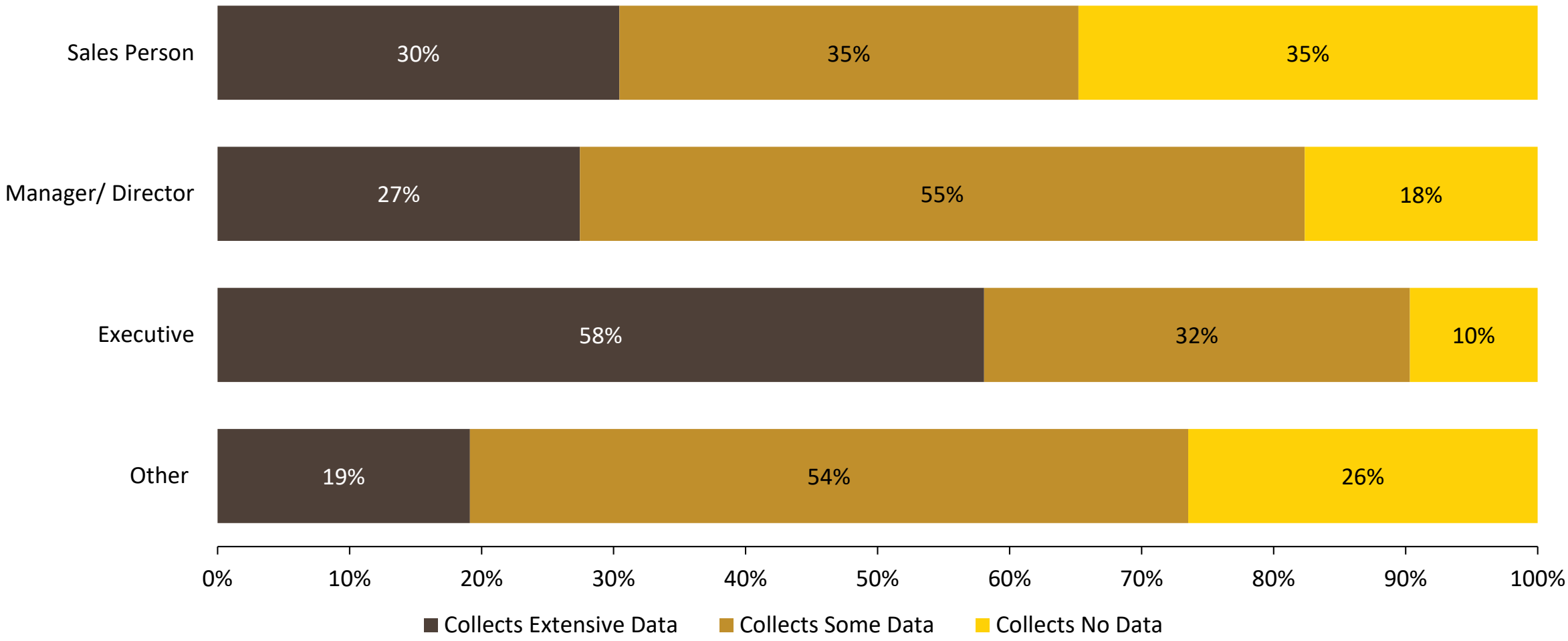
The Extent Data is Collected by Role – Procurement



The Extent Data is Collected by Role – Regulatory Compliance



The Extent Data is Collected by Role – Overall

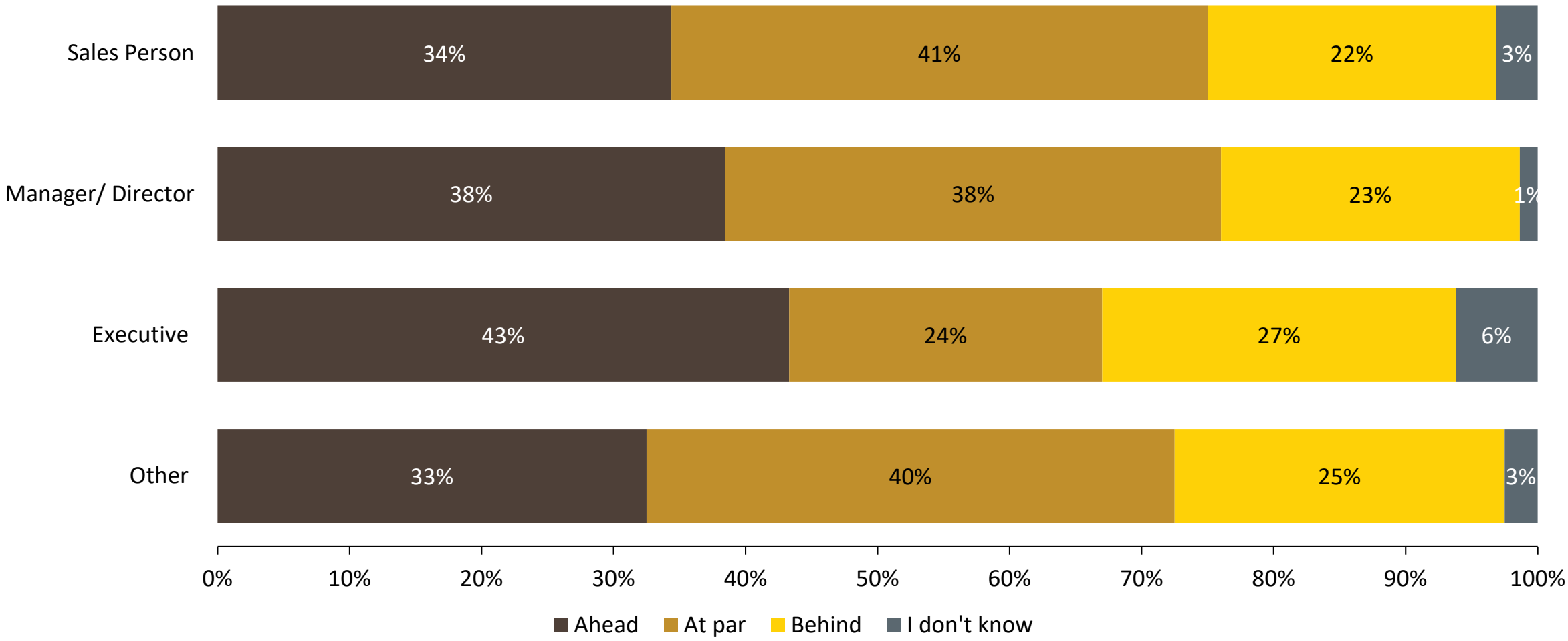


Data Collection and Analytics Compared to Competitors – by Role

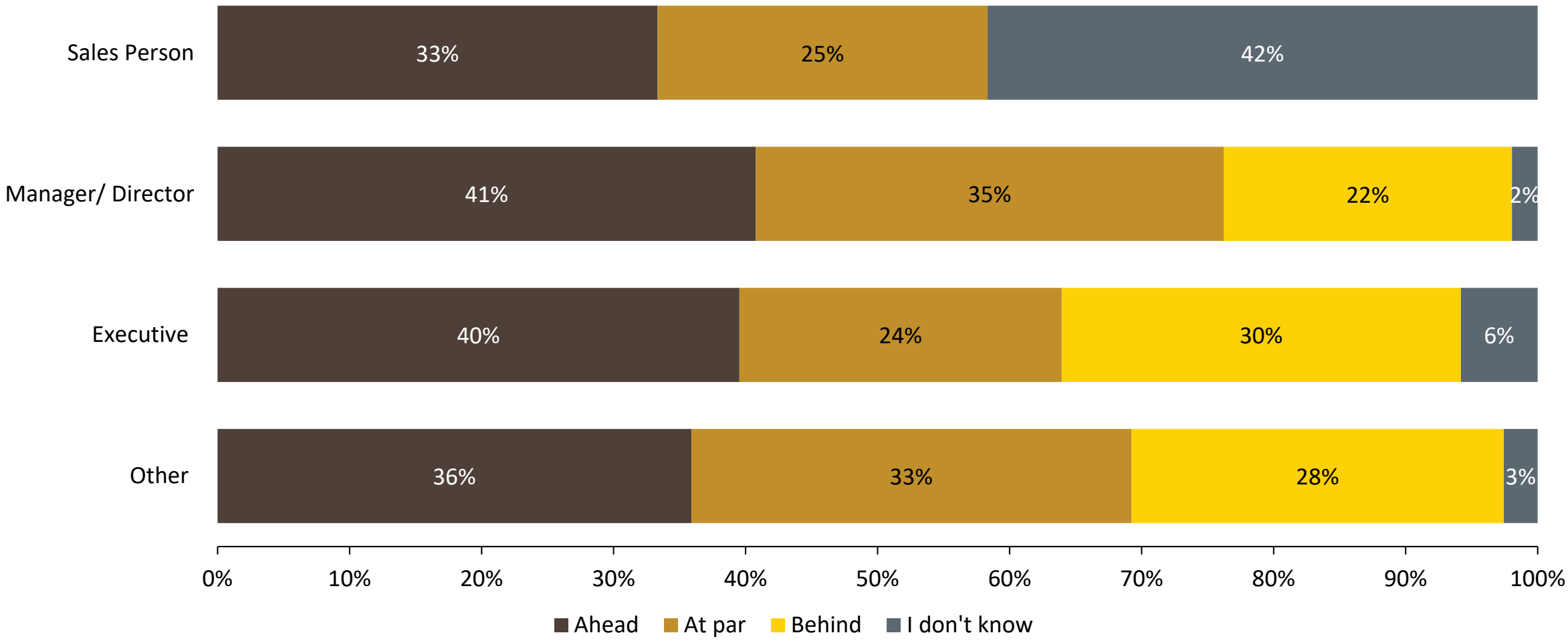
Compared to your competitors, how do you feel about **data collection** in your organization?

- ○ Far ahead
- ○ Somewhat ahead
- ○ At par
- ○ Somewhat behind
- ○ Far behind
- ○ I don't know

Data Collection Compared to Competitors by Role



Data Analytics Compared to Competitors by Role

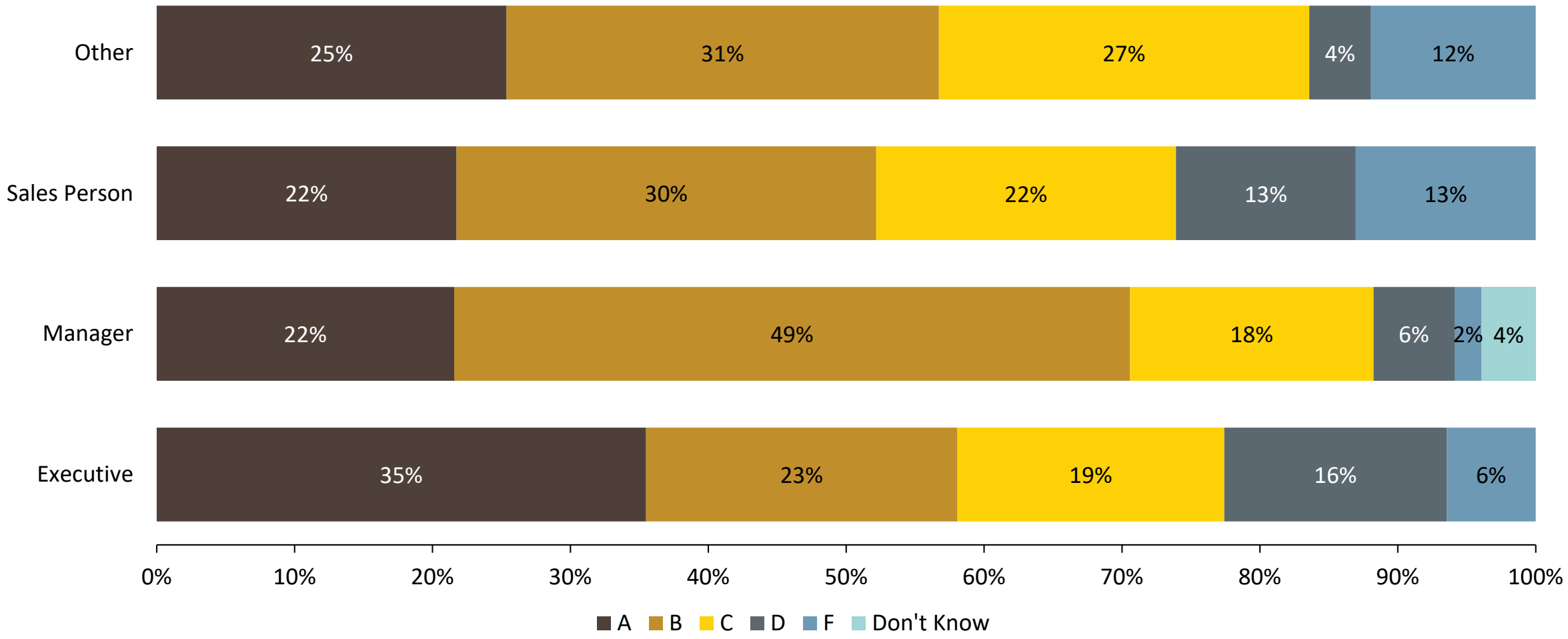


Organization Grade on Data Analytics

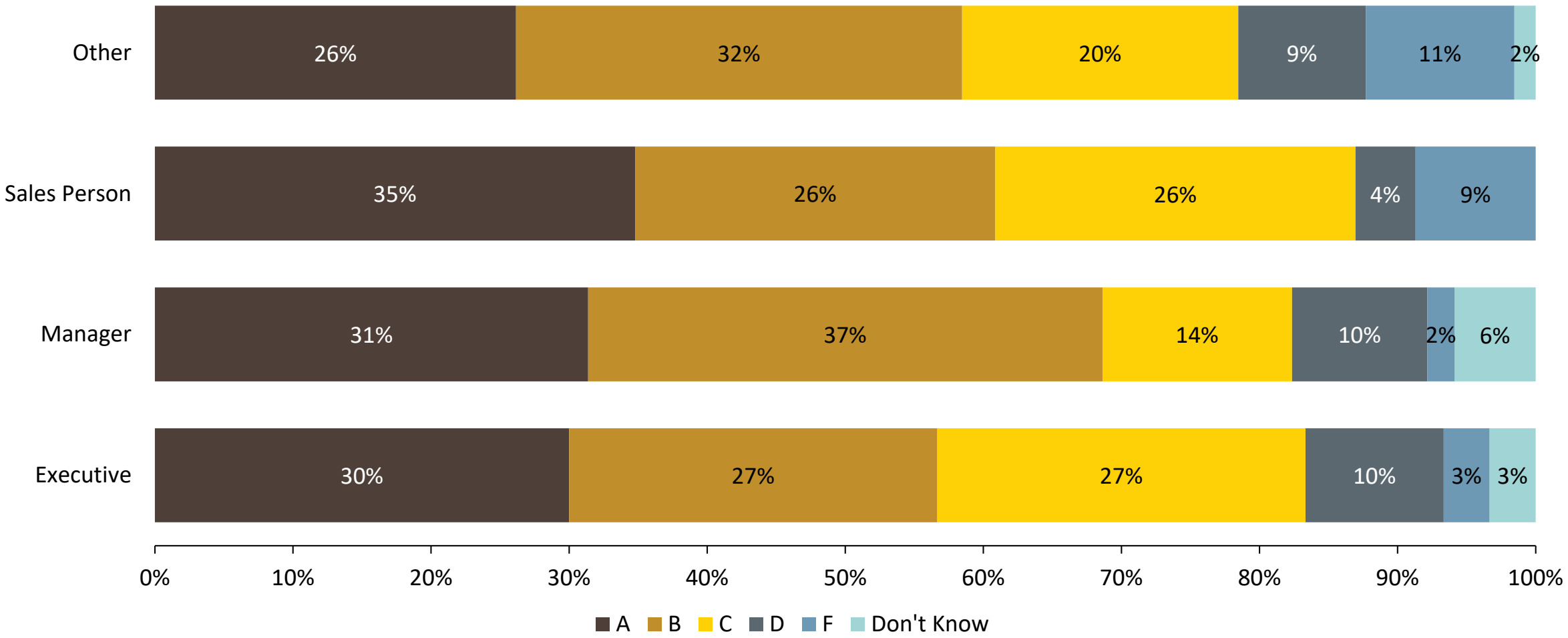
If you were to give your organization a "grade" based on using **data analytics** on decision making, what grade would you give for the following business functions?

	A	B	C	D	F	Don't Know
Inbound Logistics (*e.g. ordering/receiving, inventory replenishment*)	○	○	○	○	○	○
Operations (*e.g. production volumes, process details, quality control, efficiency measure*)	○	○	○	○	○	○
Outbound Logistics (*e.g. ordering/delivery*)	○	○	○	○	○	○
Marketing (*e.g. customer data/CRM, product development, product life-cycle, segmentation*)	○	○	○	○	○	○
Sales (*e.g. customer orders, referrals, transactional data*)	○	○	○	○	○	○
Service (*e.g. application, repair, tech support*)	○	○	○	○	○	○
HR Management (*e.g. goal setting and monitoring, compensation, payroll, benefits*)	○	○	○	○	○	○
Procurement (*e.g. input costs, SRM*)	○	○	○	○	○	○
Regulatory Compliance (*e.g. labor, environmental standard*)	○	○	○	○	○	○
Overall	○	○	○	○	○	○

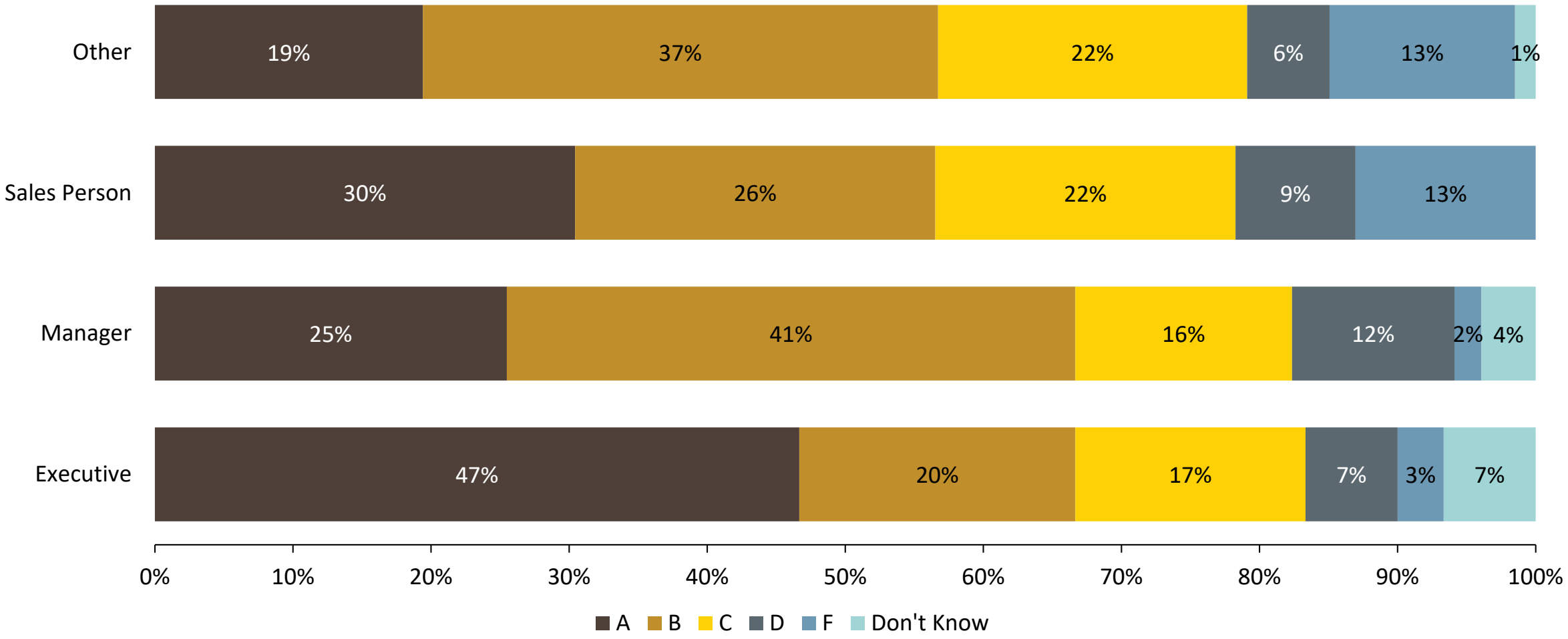
Organization Grade on Data Analytics by Role – Inbound Logistics



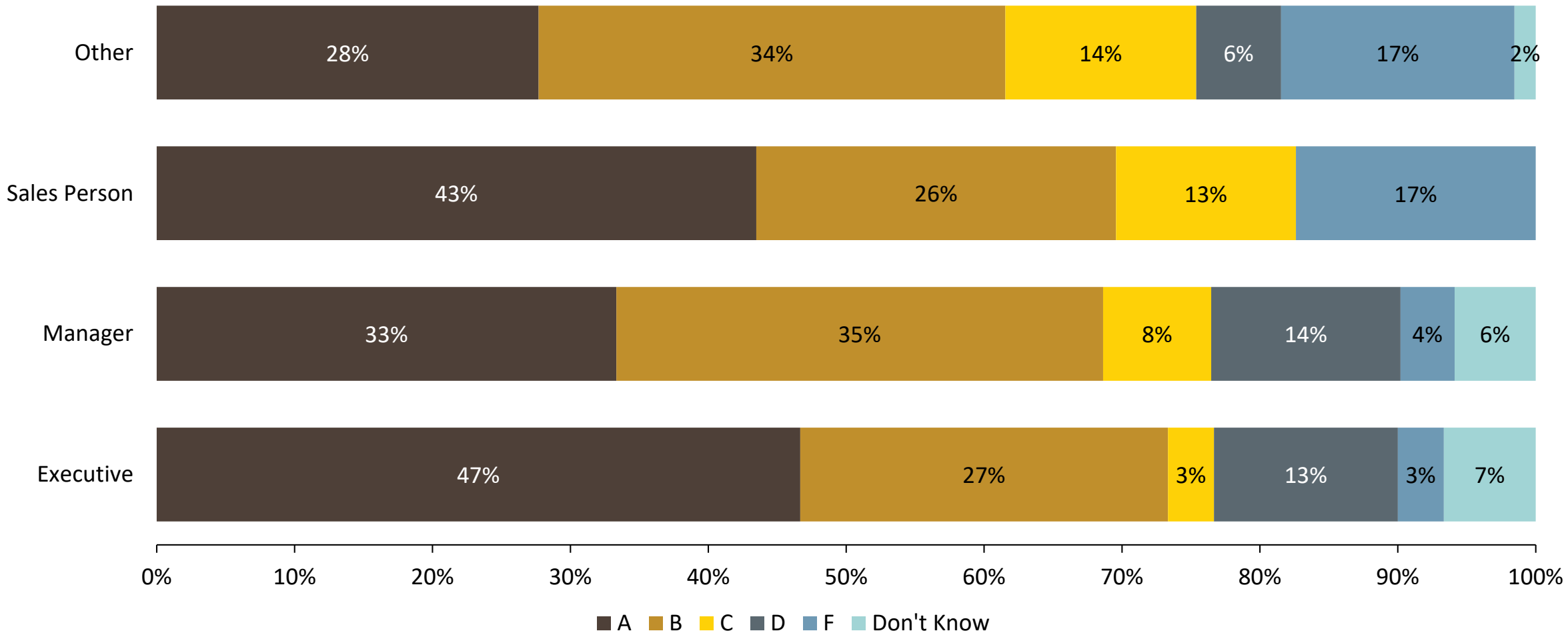
Organization Grade on Data Analytics by Role – Operations



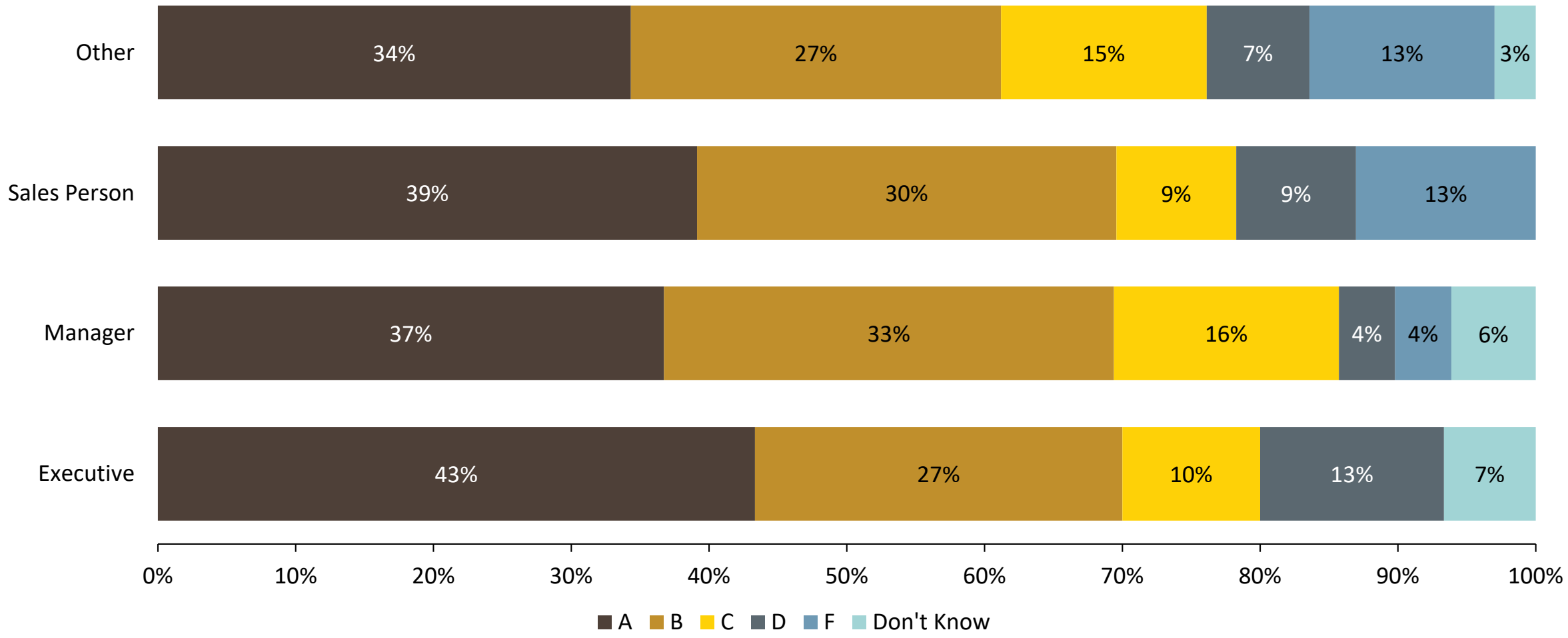
Organization Grade on Data Analytics by Role – Outbound Logistics



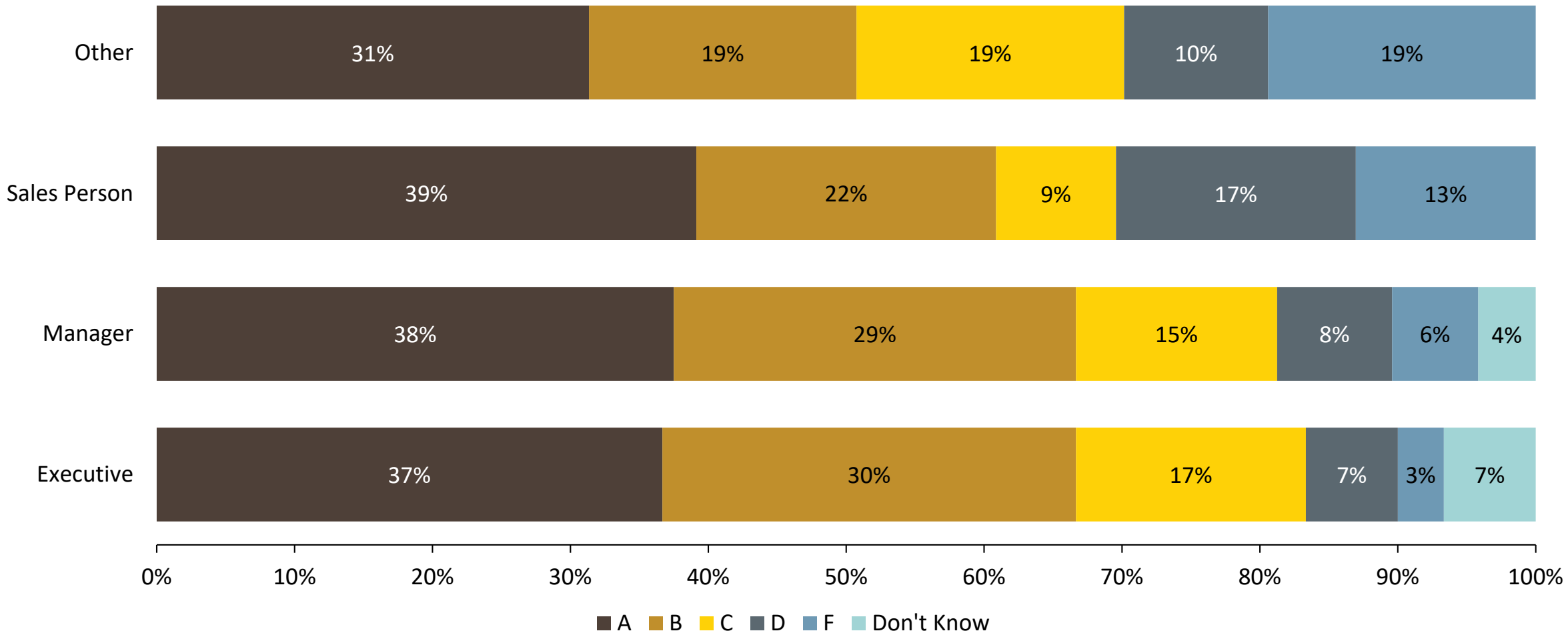
Organization Grade on Data Analytics by Role – Marketing



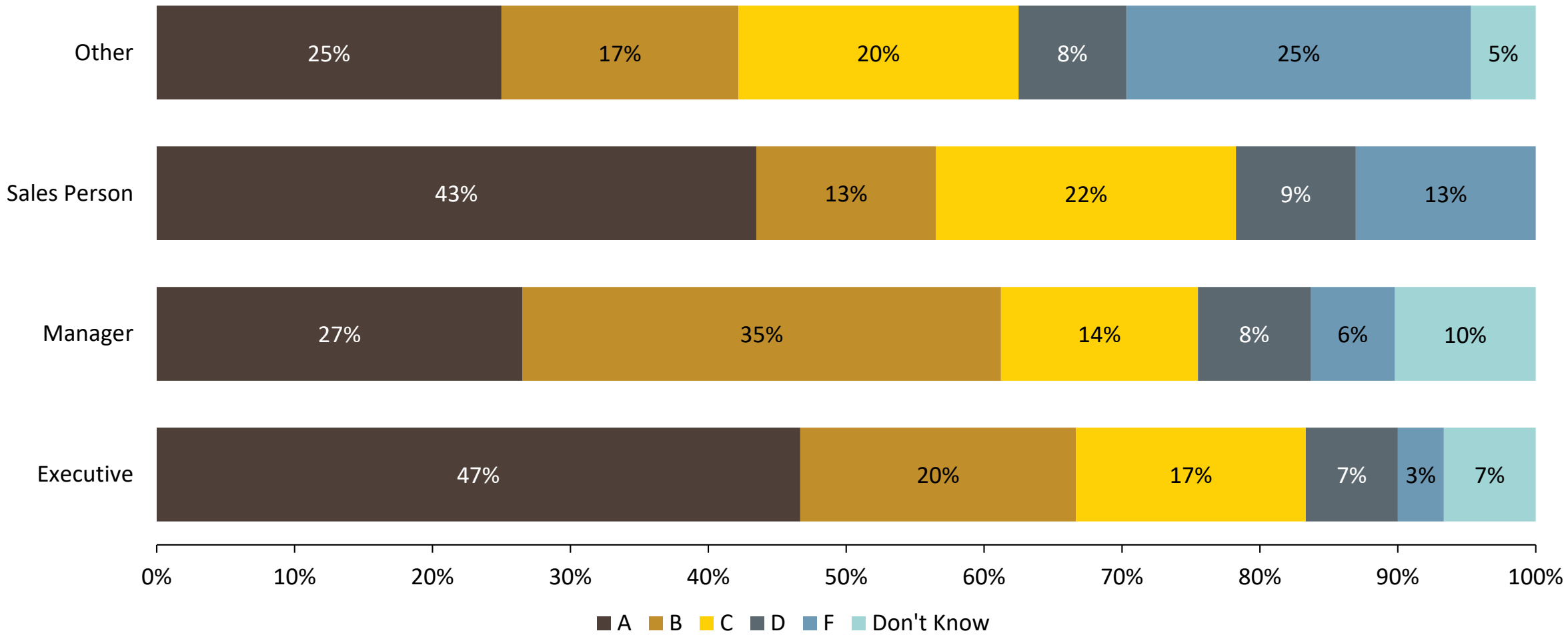
Organization Grade on Data Analytics by Role – Sales



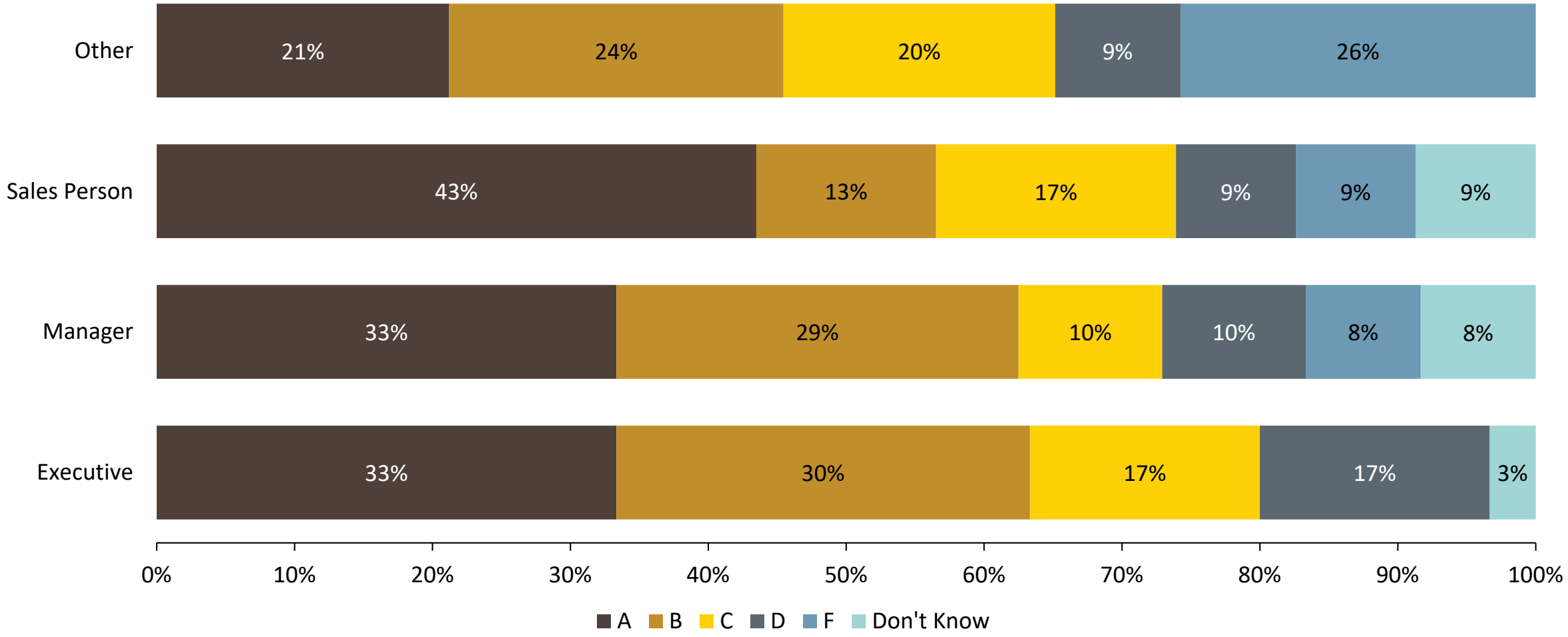
Organization Grade on Data Analytics by Role – Service



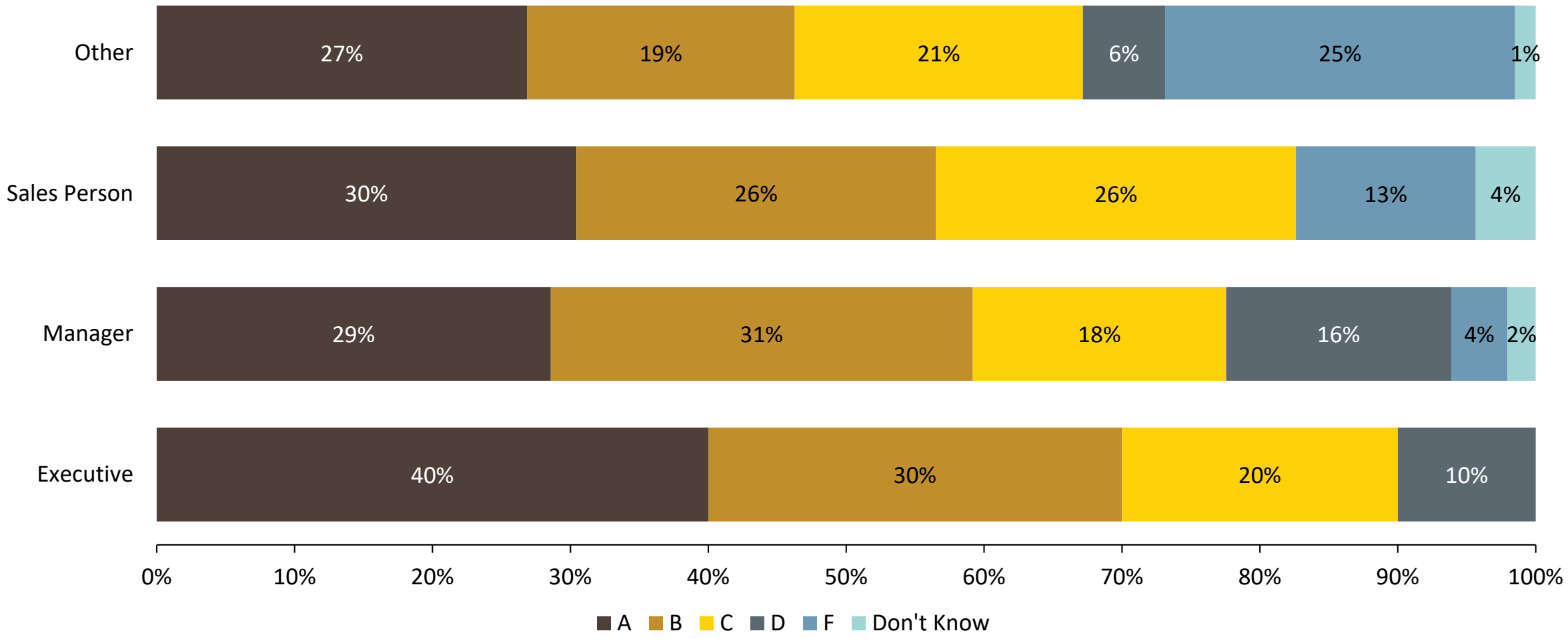
Organization Grade on Data Analytics by Role – HR Management



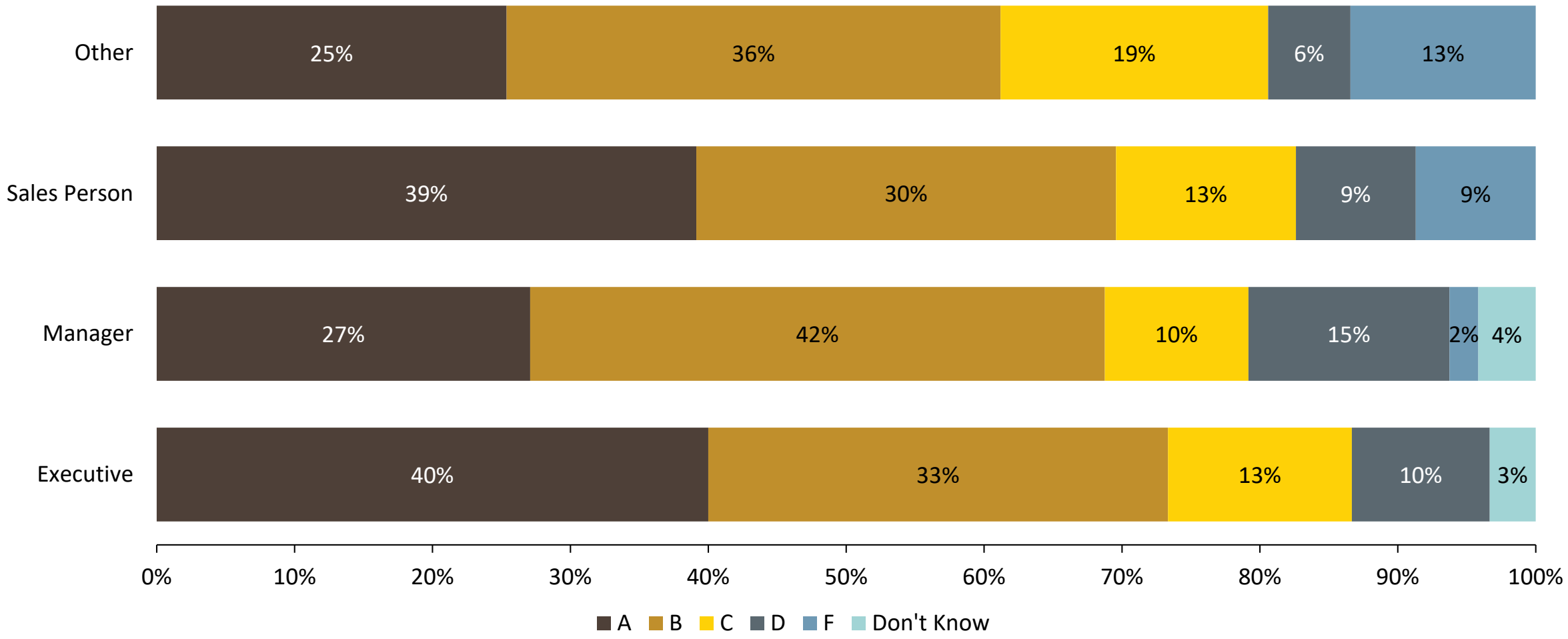
Organization Grade on Data Analytics by Role – Procurement



Organization Grade on Data Analytics by Role – Regulatory Compliance



Organization Grade on Data Analytics by Role – Overall



Most Important Benefits of Data Analytics by Role

What do you see as the most important benefit of data analytics? Please rank the following statements from 1 to 6, where 1 is ***"the most important benefit"*** and 6 is ***"the least important benefit"***. *(Drag each term and drop it to desired rank)*

Improved decision-making

Improved customer satisfaction

Improved compliance with data protection and privacy regulations

Improved operational efficiency

Driving company profitability

Improved market awareness

Most Important Benefits of Data Analytics by Role

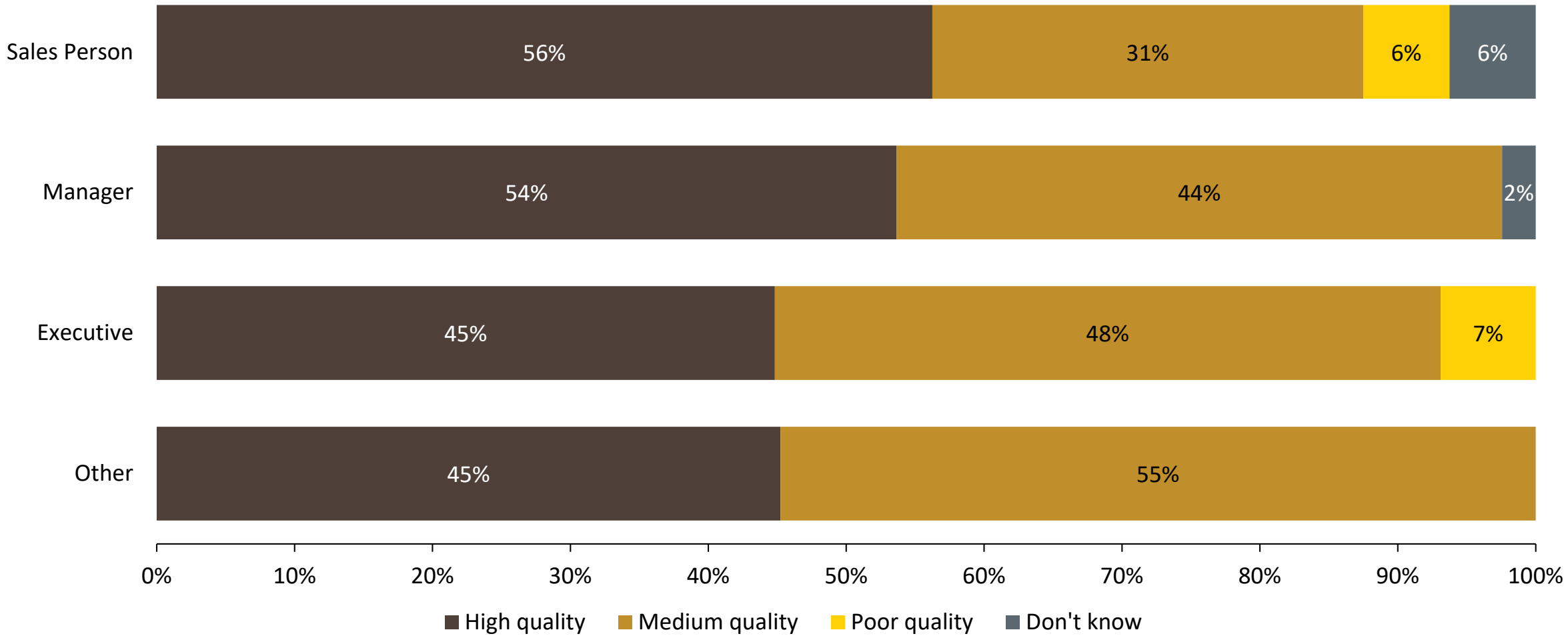
Data Quality by Role

How would you rate your organization on the **quality** of collected data in the following business functions?

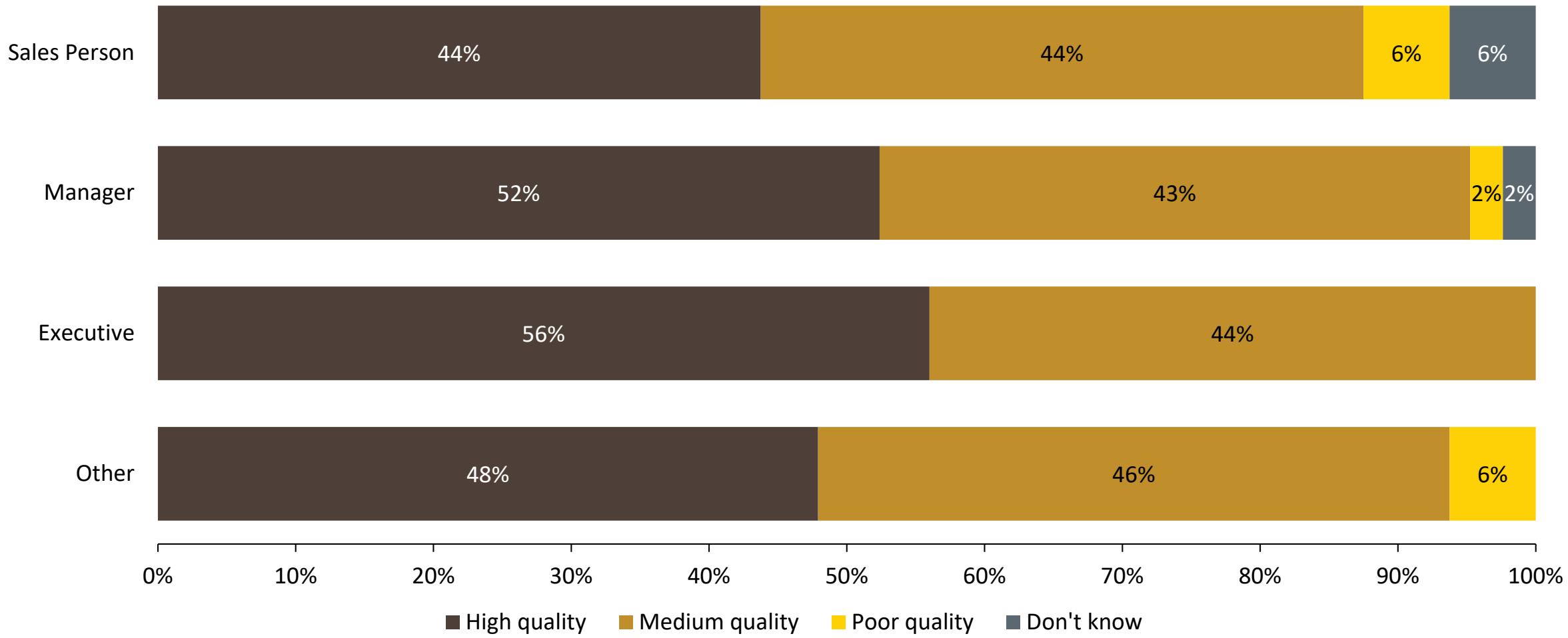
*(**Quality** refers to completeness, validity, consistency, timeliness and accuracy that makes data appropriate for a specific use.)*

	Poor quality	Medium quality	High quality	Don't know
Inbound Logistics (*e.g. ordering/receiving, inventory replenishment*)	○	○	○	○
Operations (*e.g. production volumes, process details, quality control, efficiency measure*)	○	○	○	○
Outbound Logistics (*e.g. ordering/delivery*)	○	○	○	○
Marketing (*e.g. customer data/CRM, product development, product life-cycle, segmentation*)	○	○	○	○
Sales (*e.g. customer orders, referrals, transactional data*)	○	○	○	○
Service (*e.g. application, repair, tech support*)	○	○	○	○
HR Management (*e.g. goal setting and monitoring, compensation, payroll, benefits*)	○	○	○	○
Procurement (*e.g. input costs, SRM*)	○	○	○	○
Regulatory Compliance (*e.g. labor, environmental standard*)	○	○	○	○

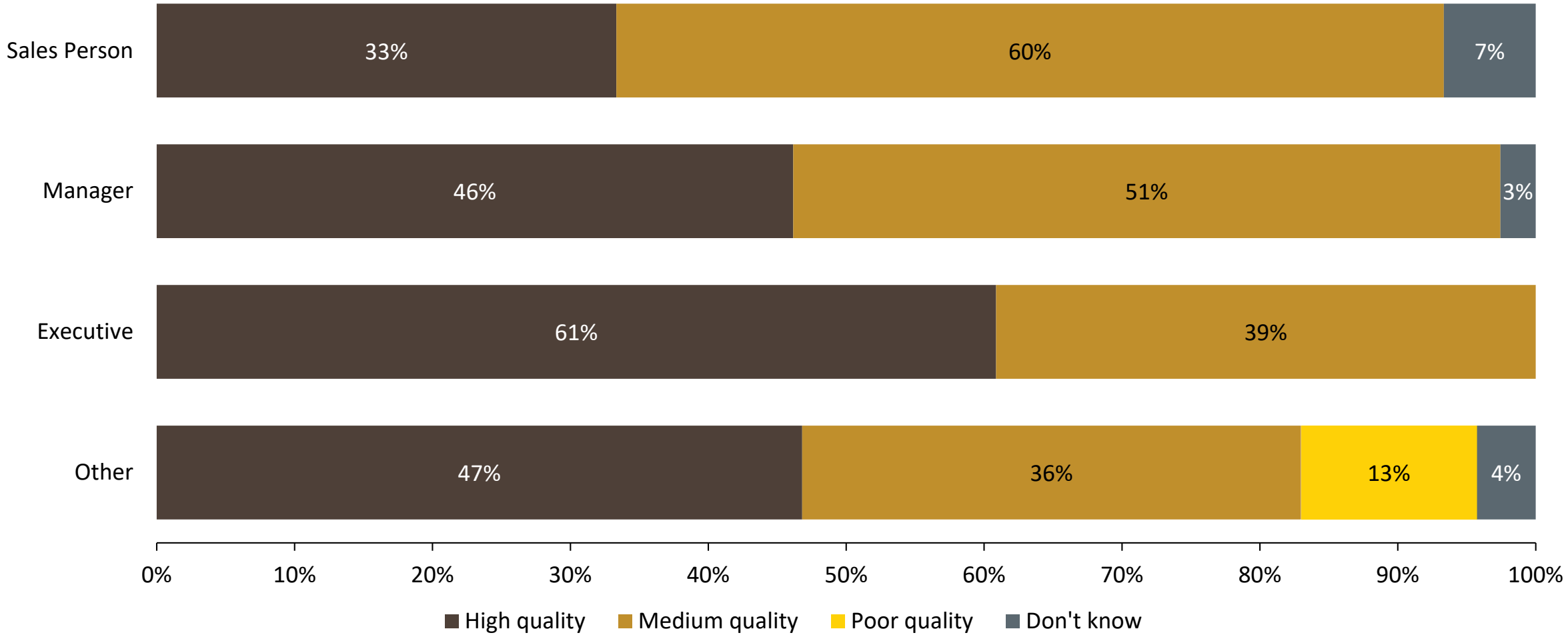
Data Quality by Role – Inbound Logistics



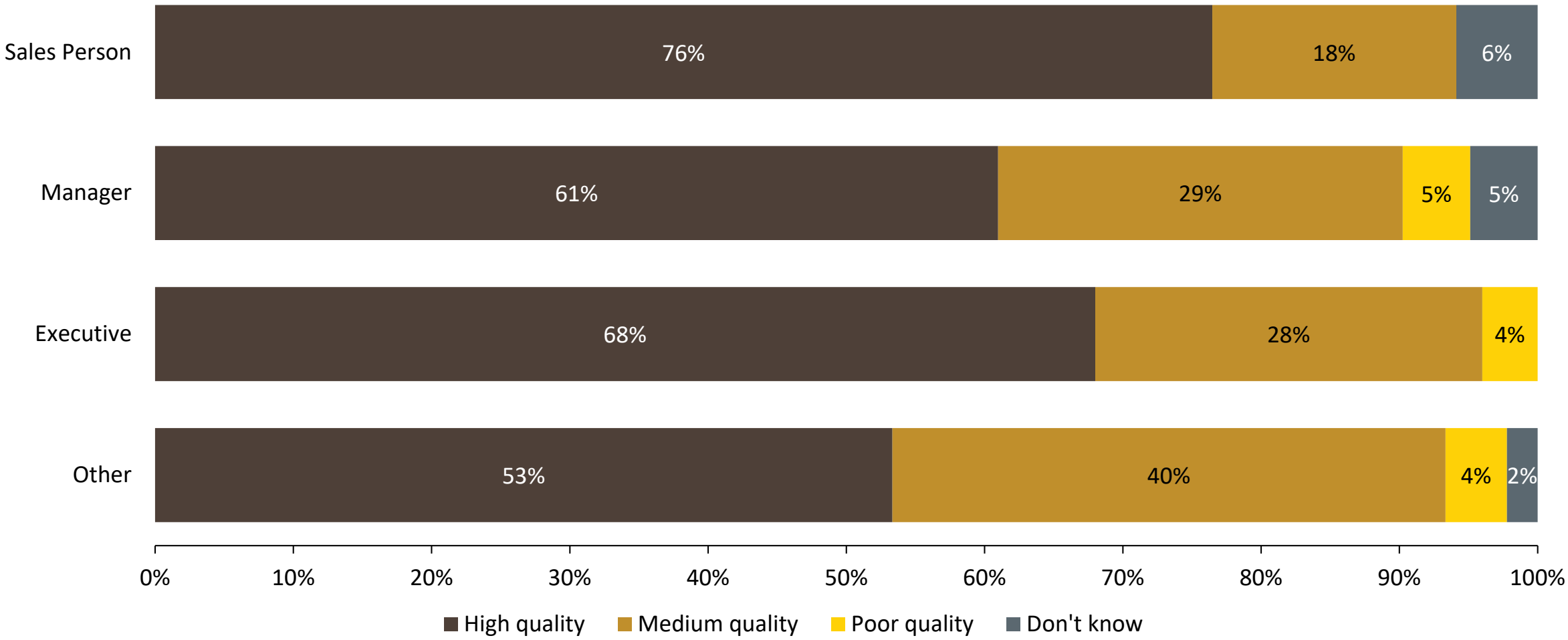
Data Quality by Role – Operations



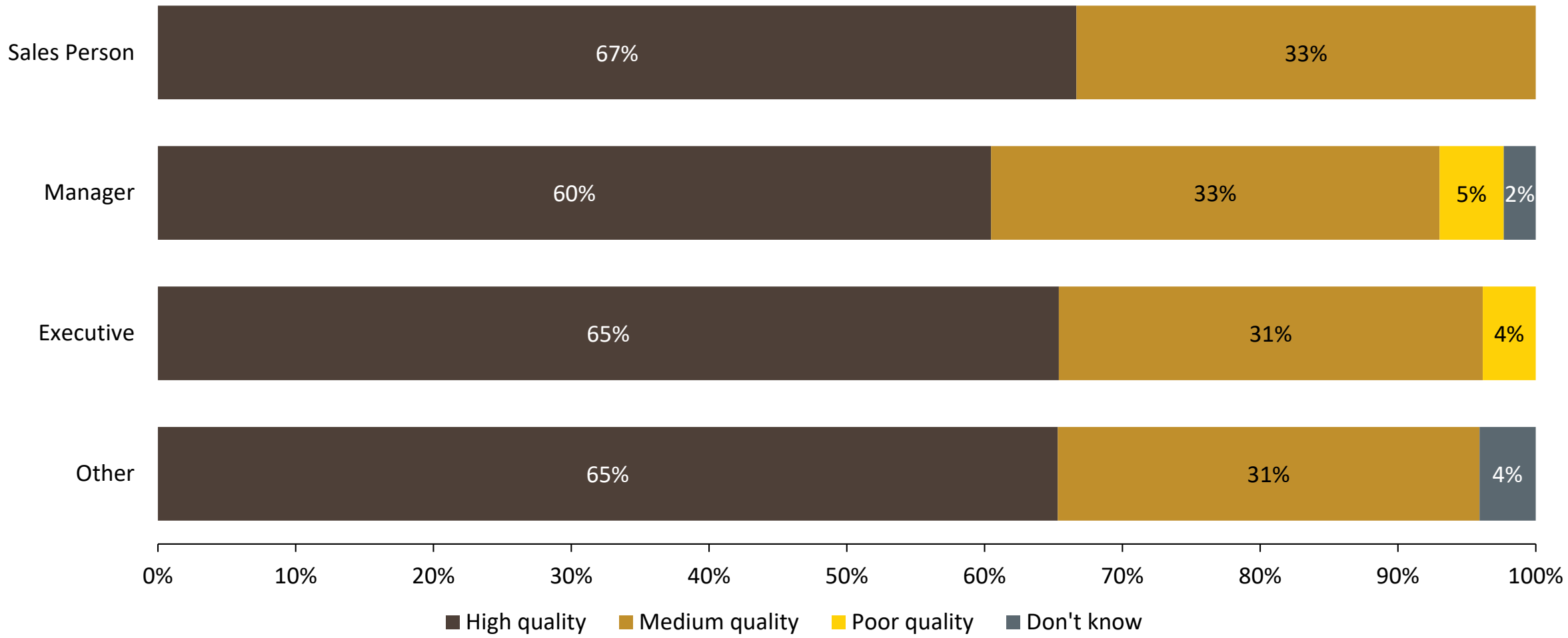
Data Quality by Role – Outbound Logistics



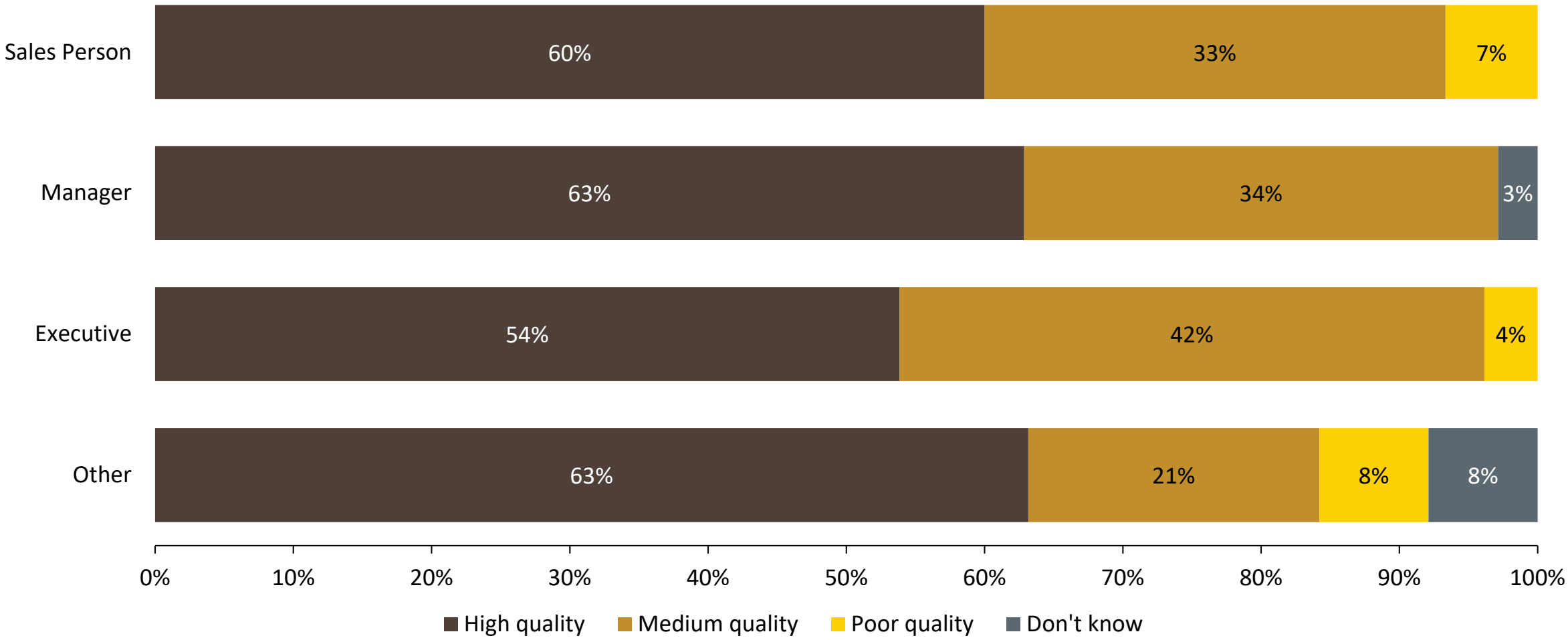
Data Quality by Role – Marketing



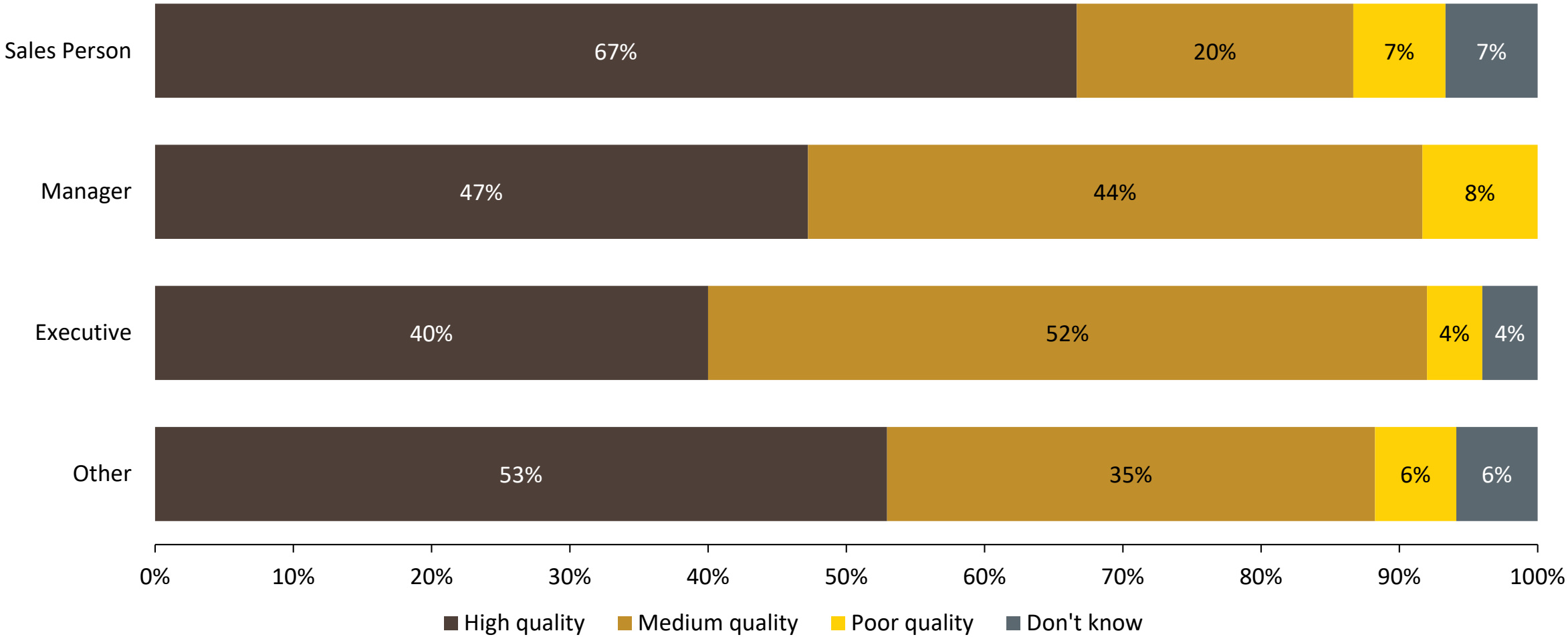
Data Quality by Role – Sales



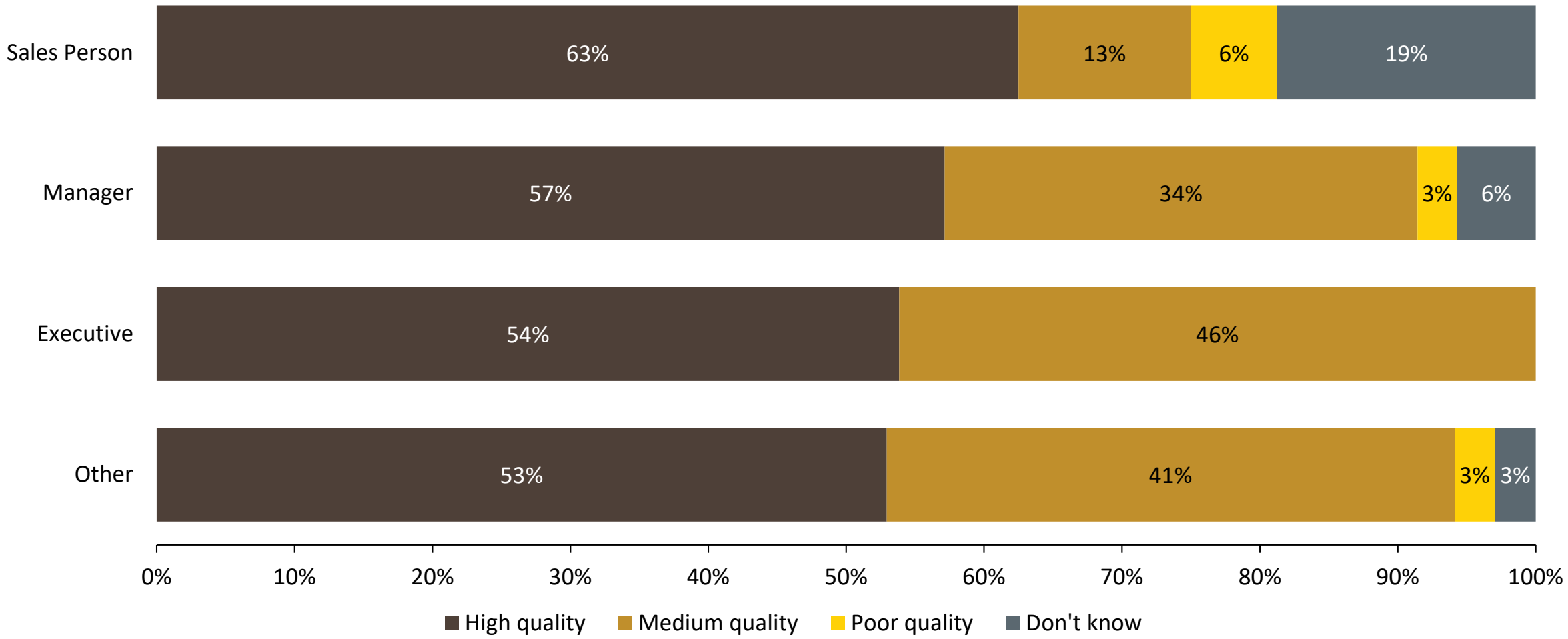
Data Quality by Role – Services



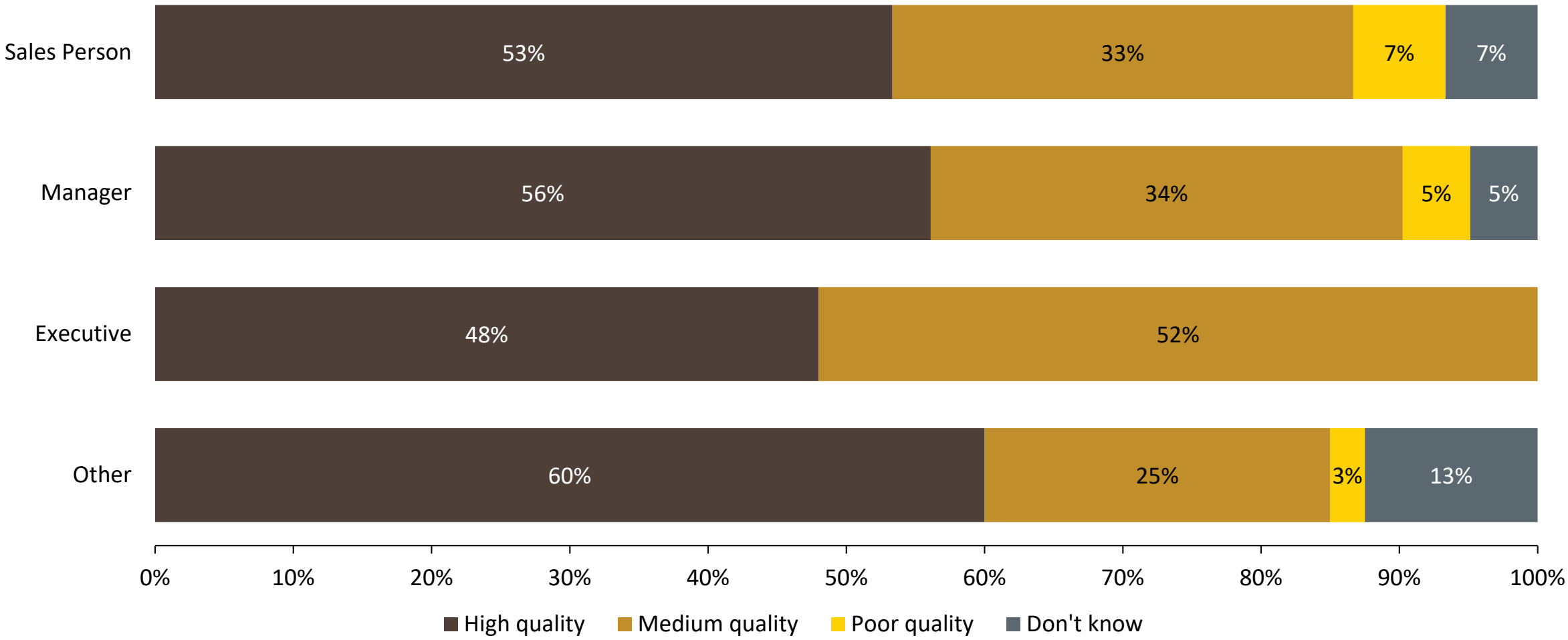
Data Quality by Role – HR Management



Data Quality by Role – Procurement



Data Quality by Role – Regulatory Compliance

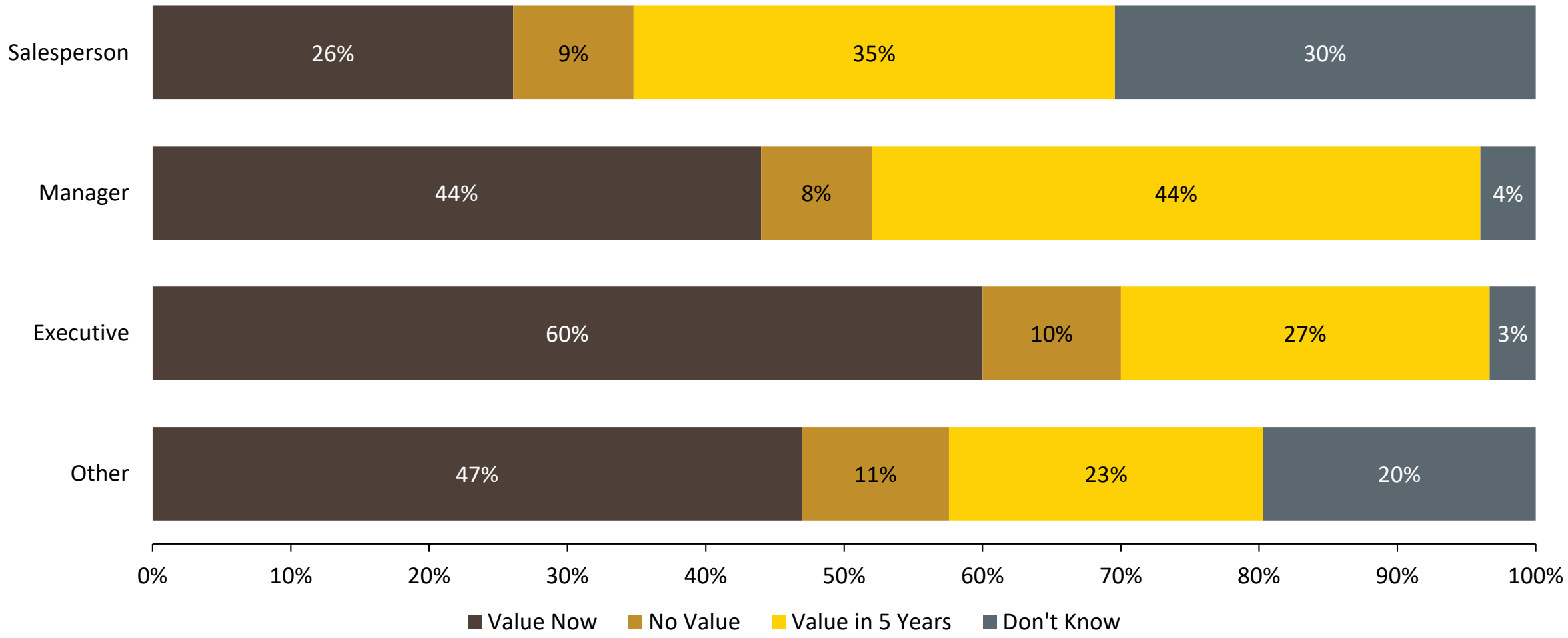


Value Creation by Role

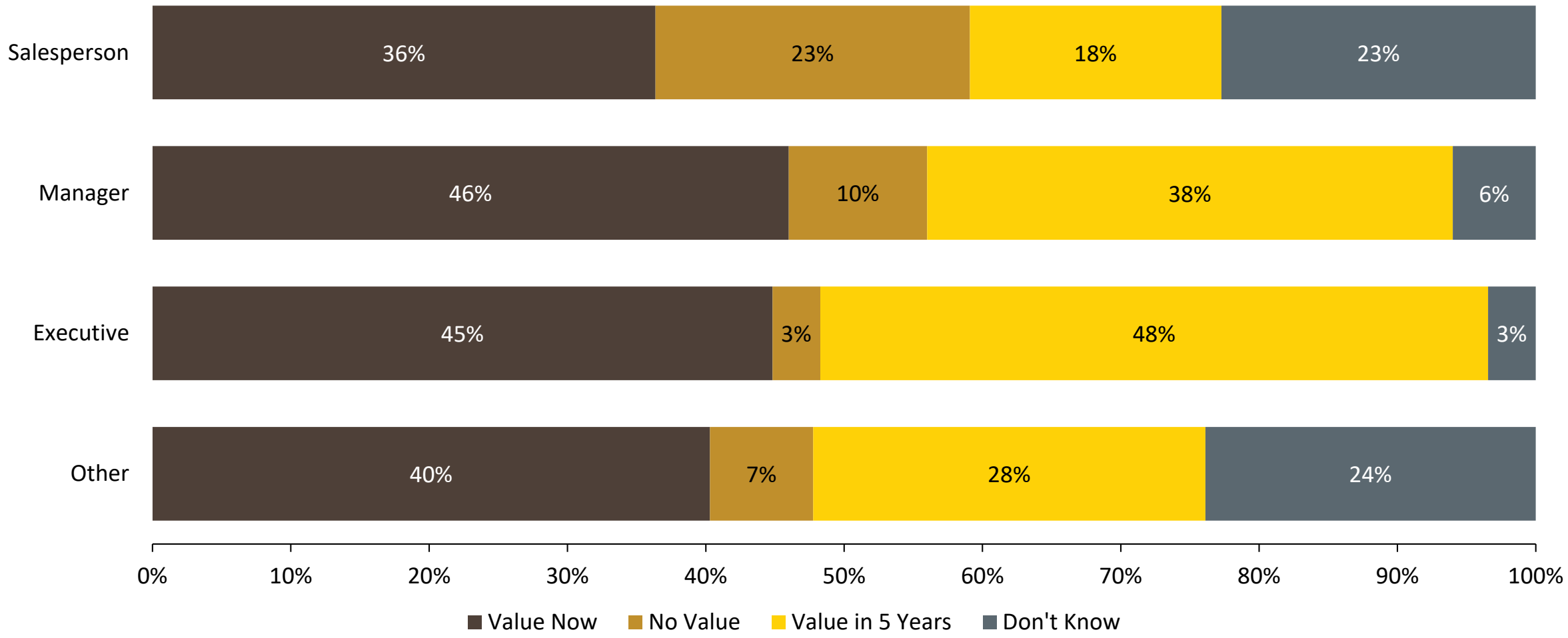
Does **data analytics** create, or is it expected to create, **value** in the following business functions of your organization?

	Creates Value **Now**	Expected to Create Value **in 5 Years**	**Does Not** Create Value in This Way	Don't Know
Inbound Logistics (*e.g. ordering/receiving, inventory replenishment*)	○	○	○	○
Operations (*e.g. production volumes, process details, quality control, efficiency measure*)	○	○	○	○
Outbound Logistics (*e.g. ordering/delivery*)	○	○	○	○
Marketing (*e.g. customer data/CRM, product development, product life-cycle, segmentation*)	○	○	○	○
Sales (*e.g. customer orders, referrals, transactional data*)	○	○	○	○
Service (*e.g. application, repair, tech support*)	○	○	○	○
HR Management (*e.g. goal setting and monitoring, compensation, payroll, benefits*)	○	○	○	○
Procurement (*e.g. input costs, SRM*)	○	○	○	○
Regulatory Compliance (*e.g. labor, environmental standard*)	○	○	○	○

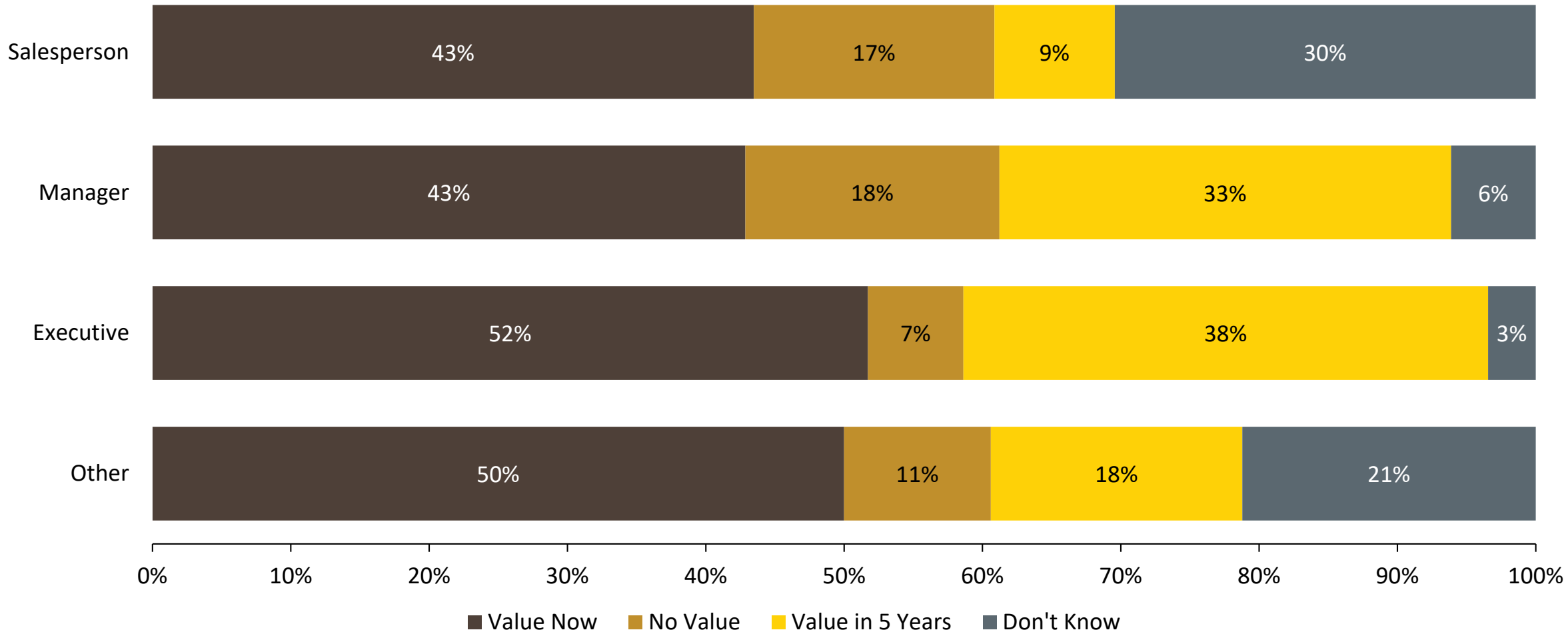
Value Creation by Role – Inbound Logistics



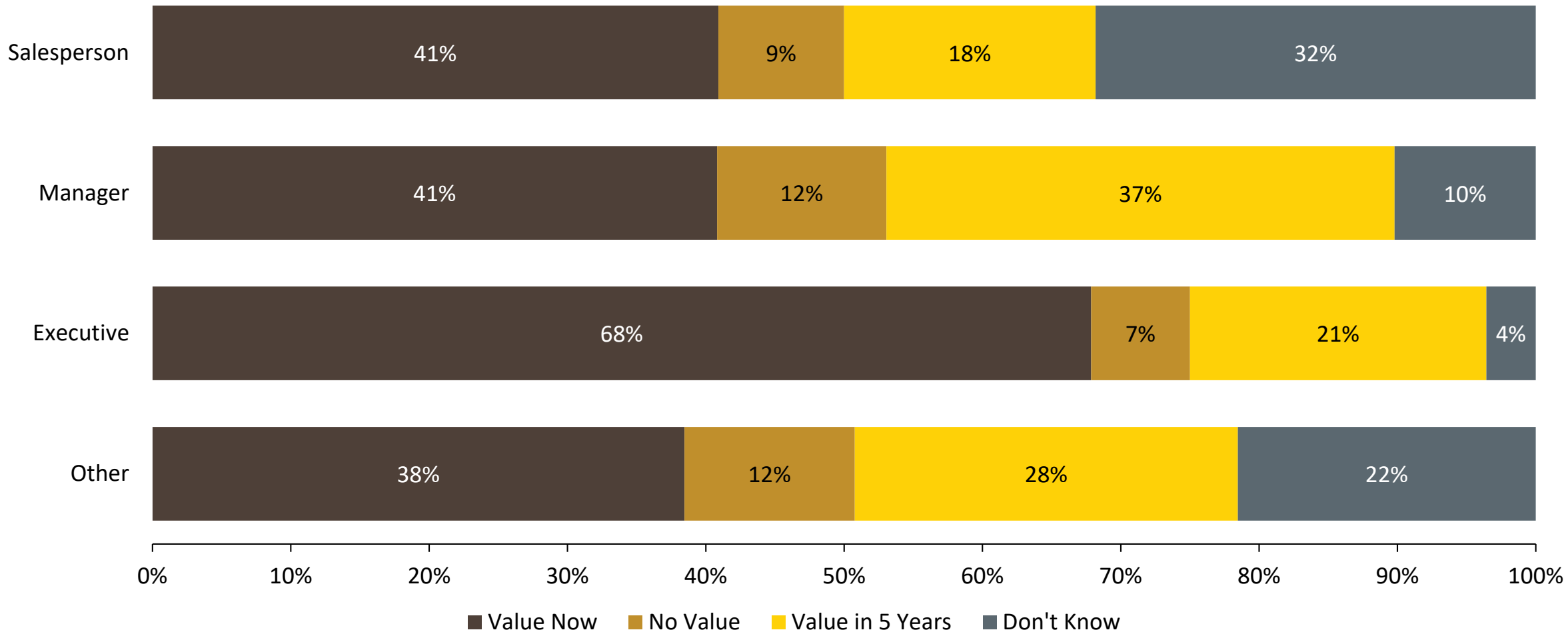
Value Creation by Role – Operations



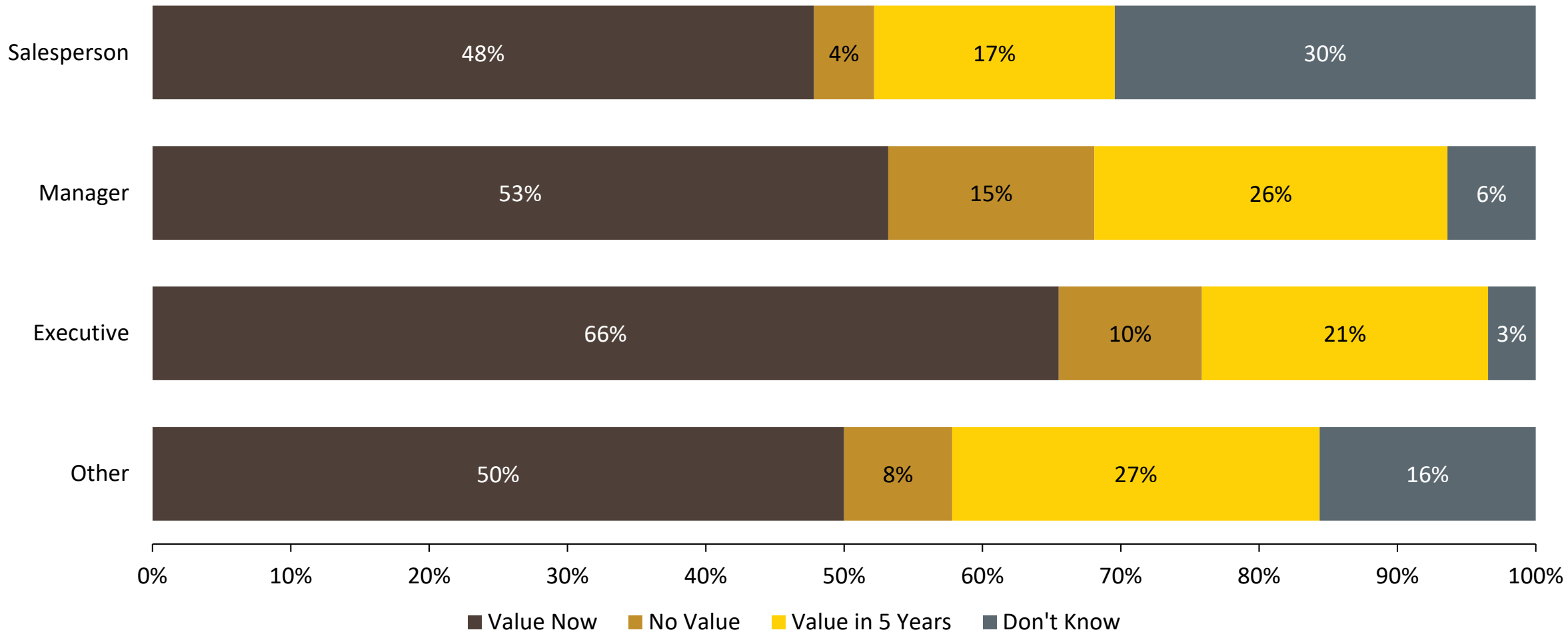
Value Creation by Role – Outbound Logistics



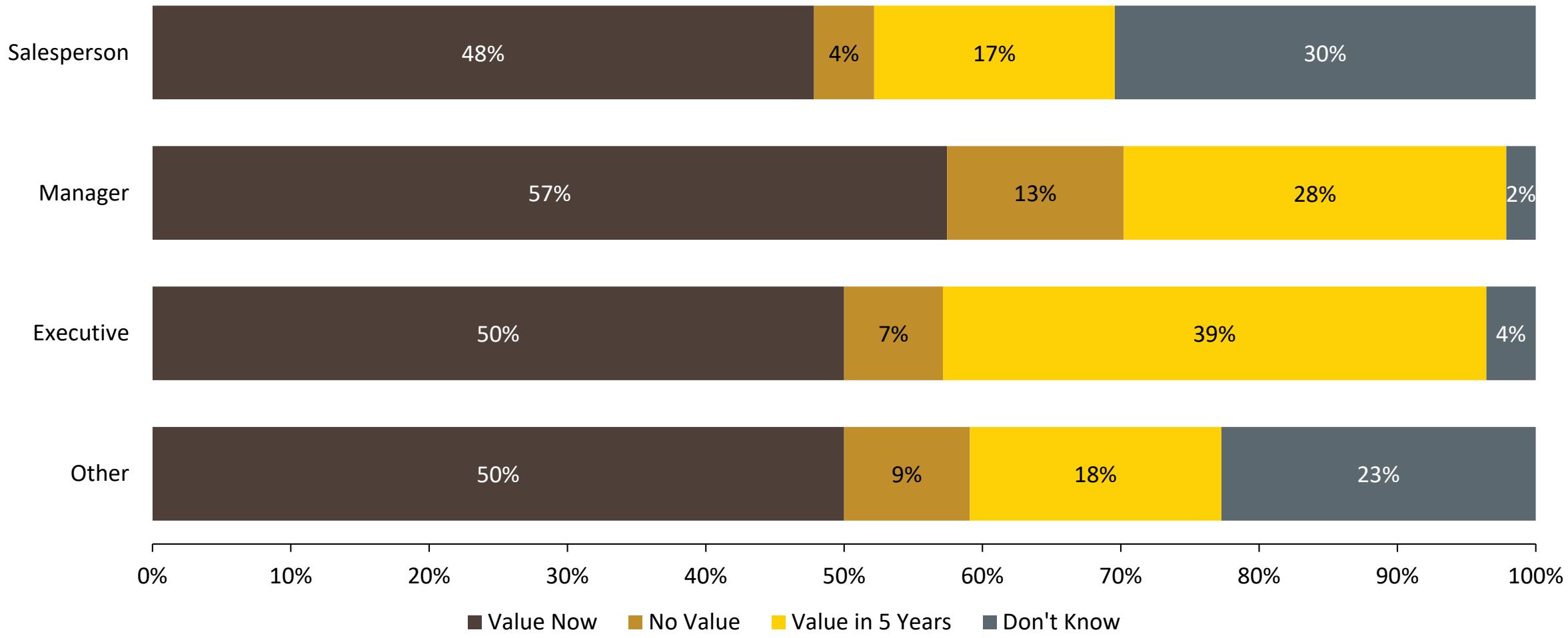
Value Creation by Role – Marketing



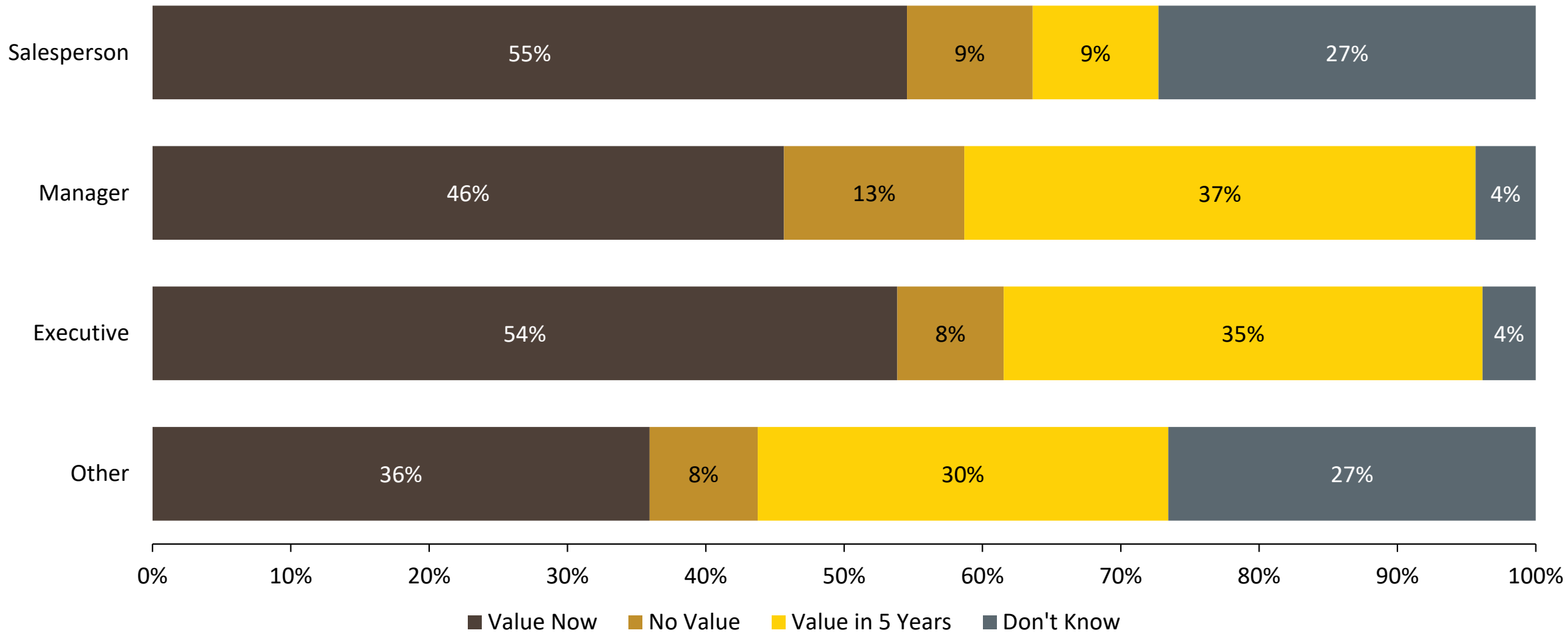
Value Creation by Role – Sales



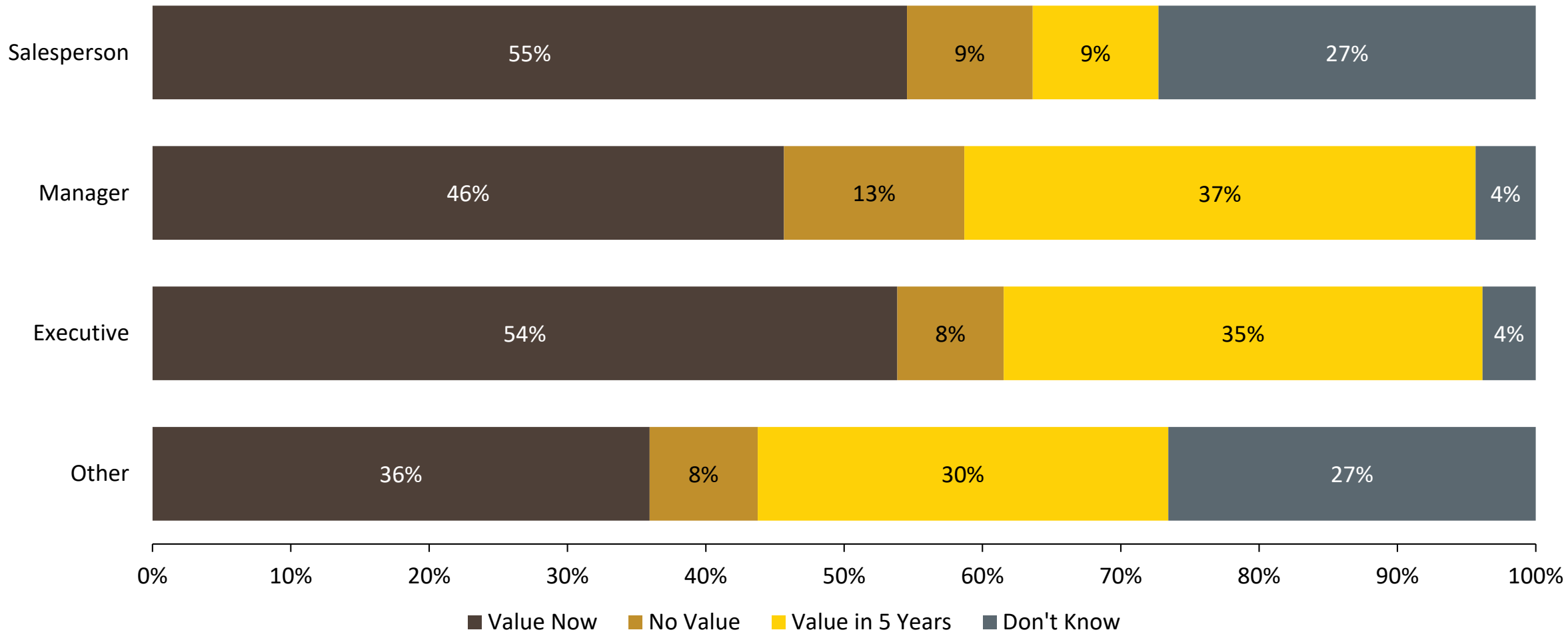
Value Creation by Role – Service



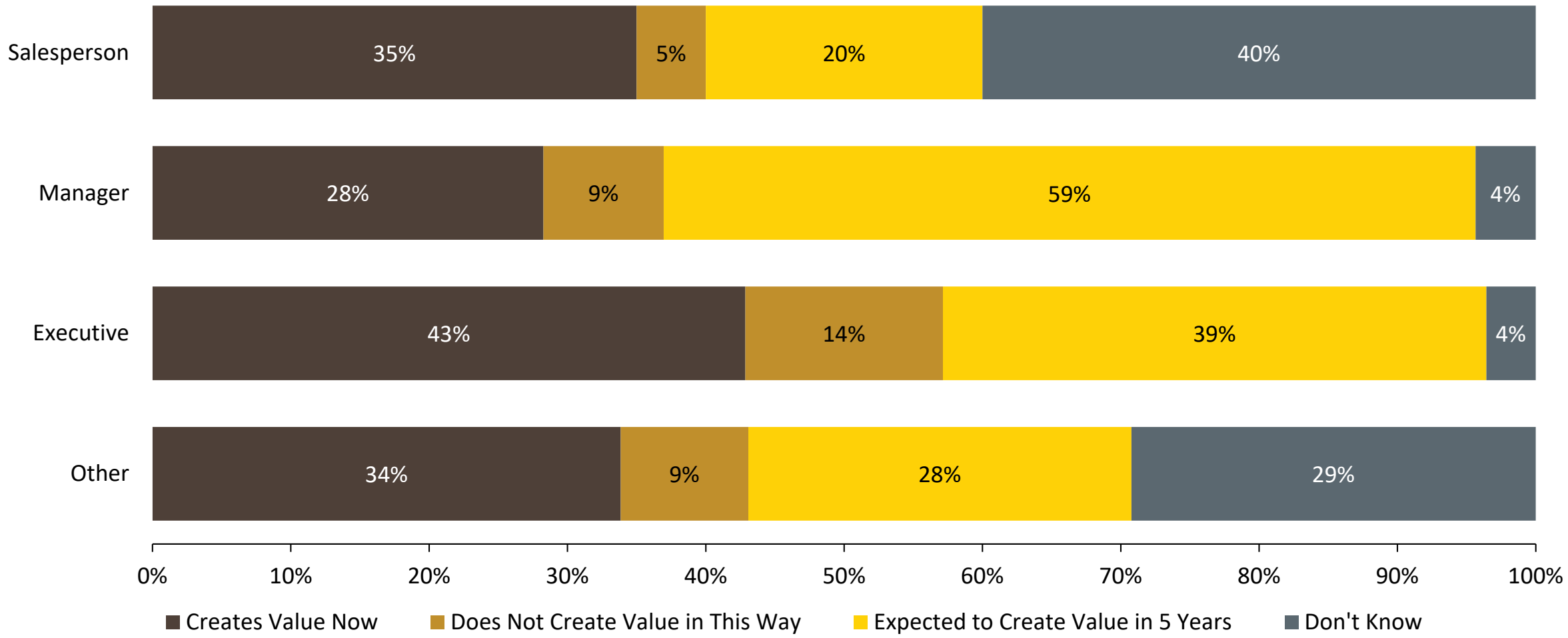
Value Creation by Role – HR Management



Value Creation by Role – Procurement

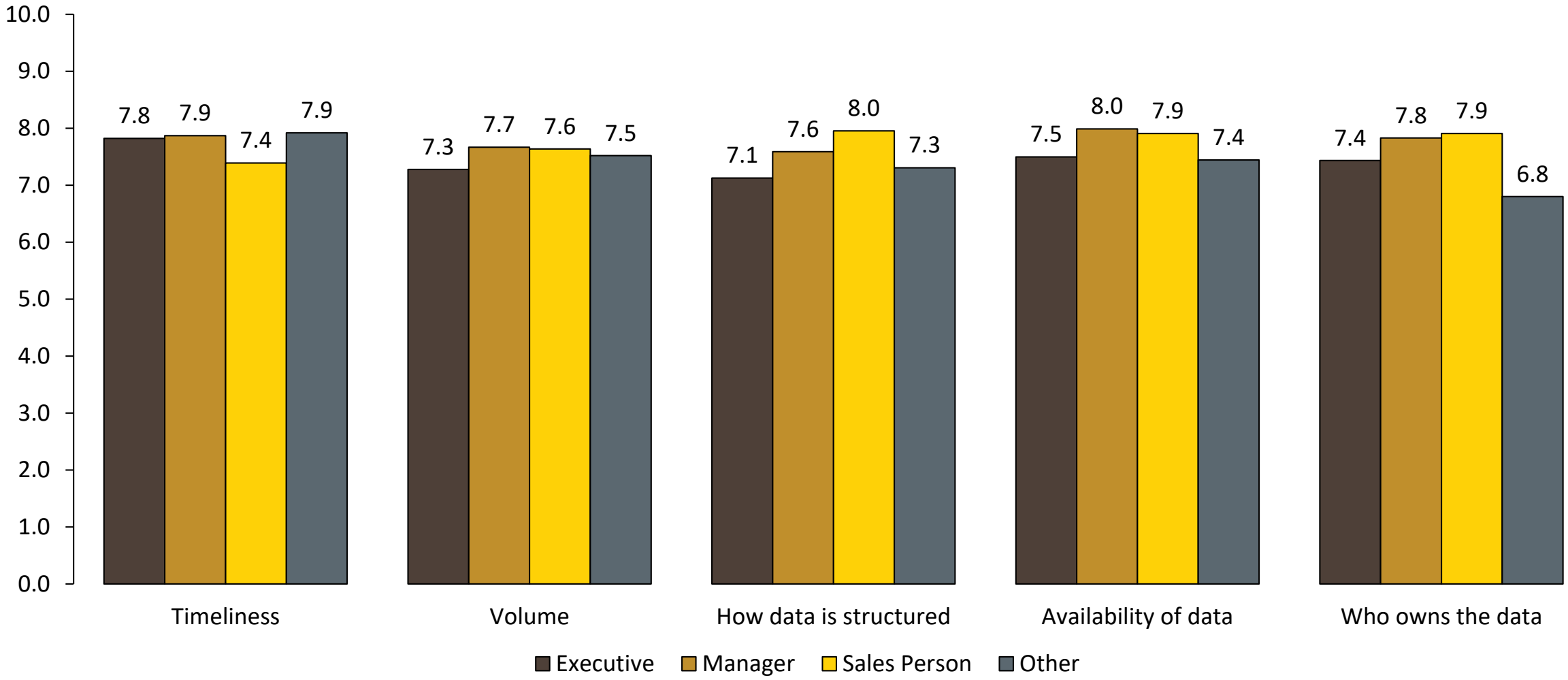


Value Creation by Role – Regulatory Compliance

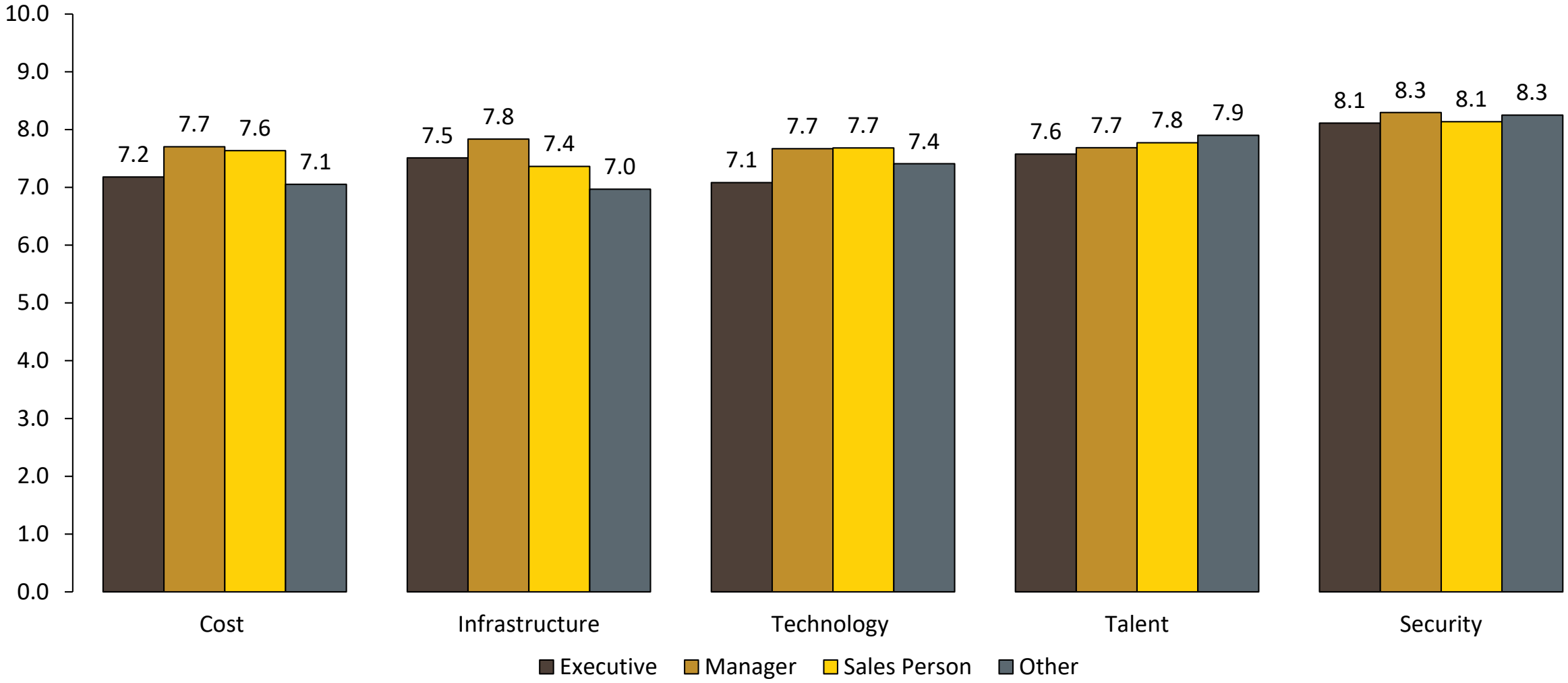


Data Collection Challenges

Data Collection Challenges by Role



Data Collection Challenges by Role



Decision Made on Data Analytics by The Extent Data is Collected

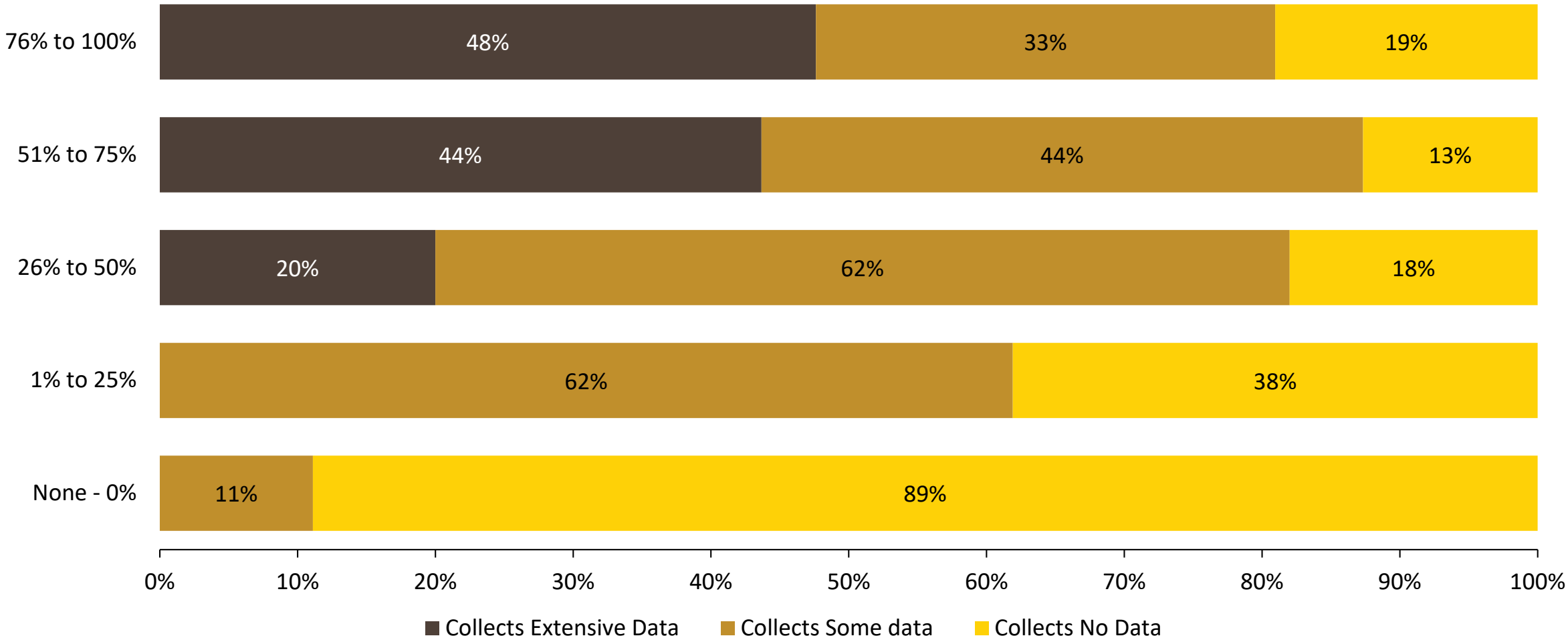
To what extent does your organization **collect data** that is useful?

- ○ Collects No Data
- ○ Collects Some data
- ○ Collects Extensive Data

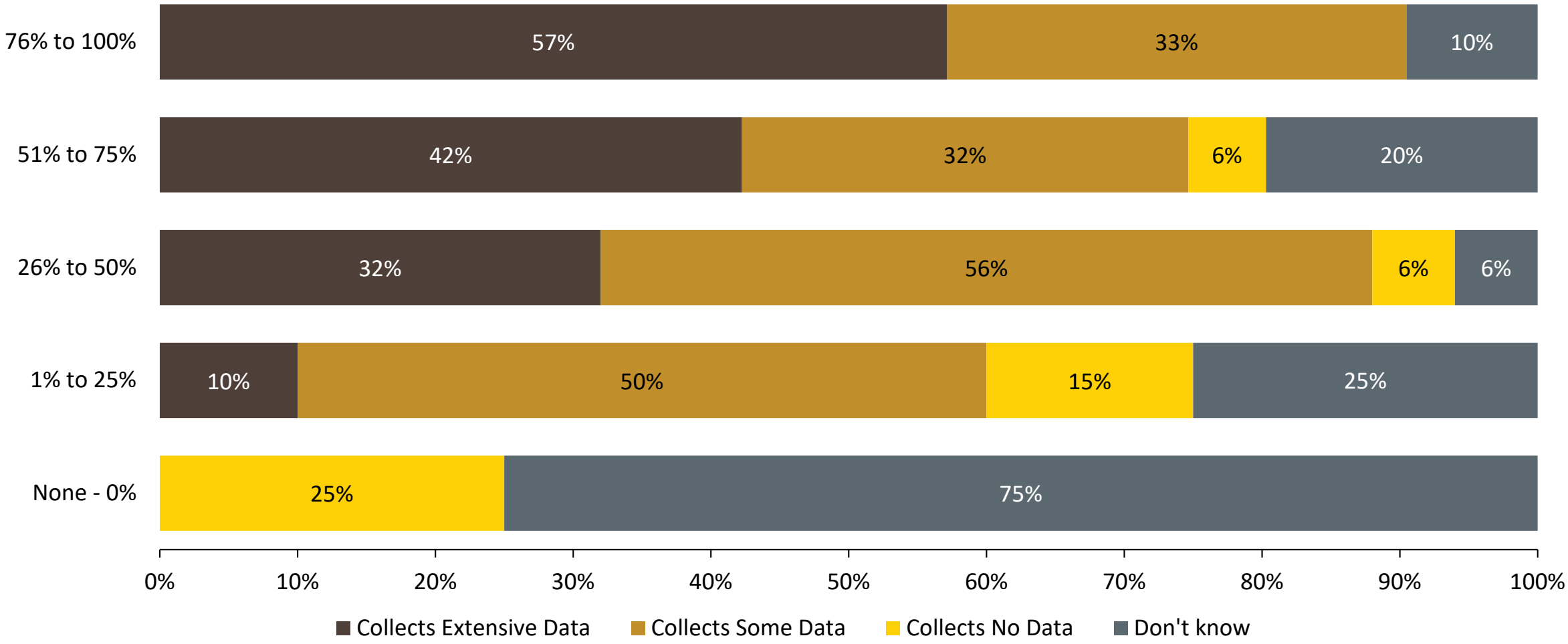
Approximately what percentage of overall decisions are made based on **data analytics** in your organization?

- ○ None - 0%
- ○ 1% to 25%
- ○ 26% to 50%
- ○ 51% to 75%
- ○ 76% to 100%

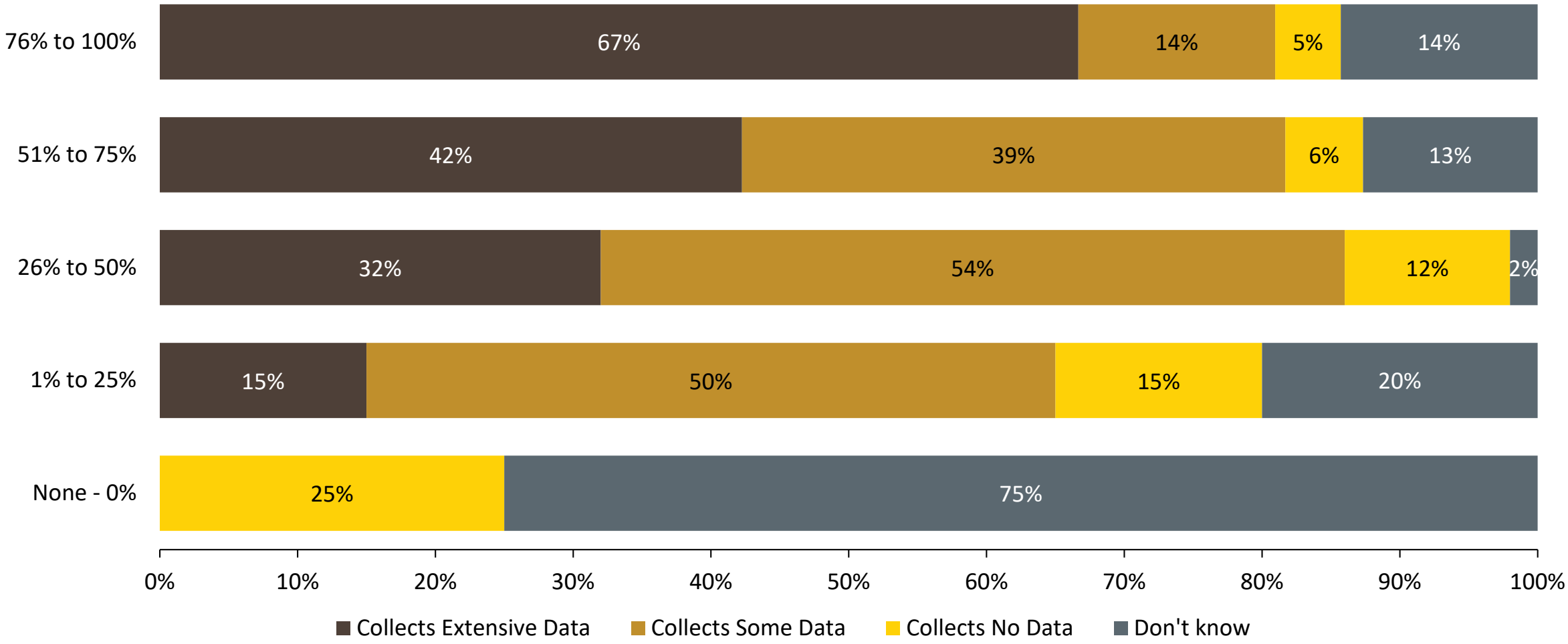
% of Decision Made on Data Analytics by The Extent Data is Collected - Overall



% of Decision Made on Data Analytics by The Extent Data is Collected – Inbound Logistics



% of Decision Made on Data Analytics by The Extent Data is Collected - Operations



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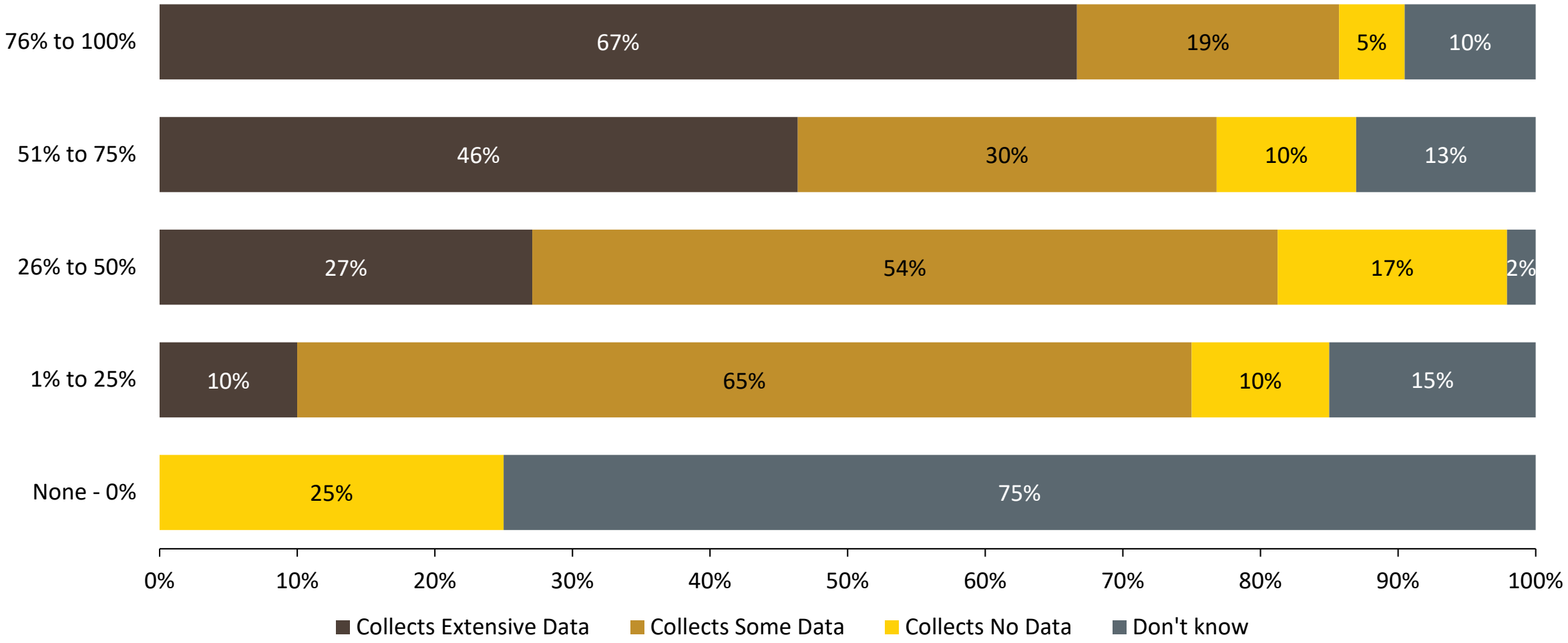
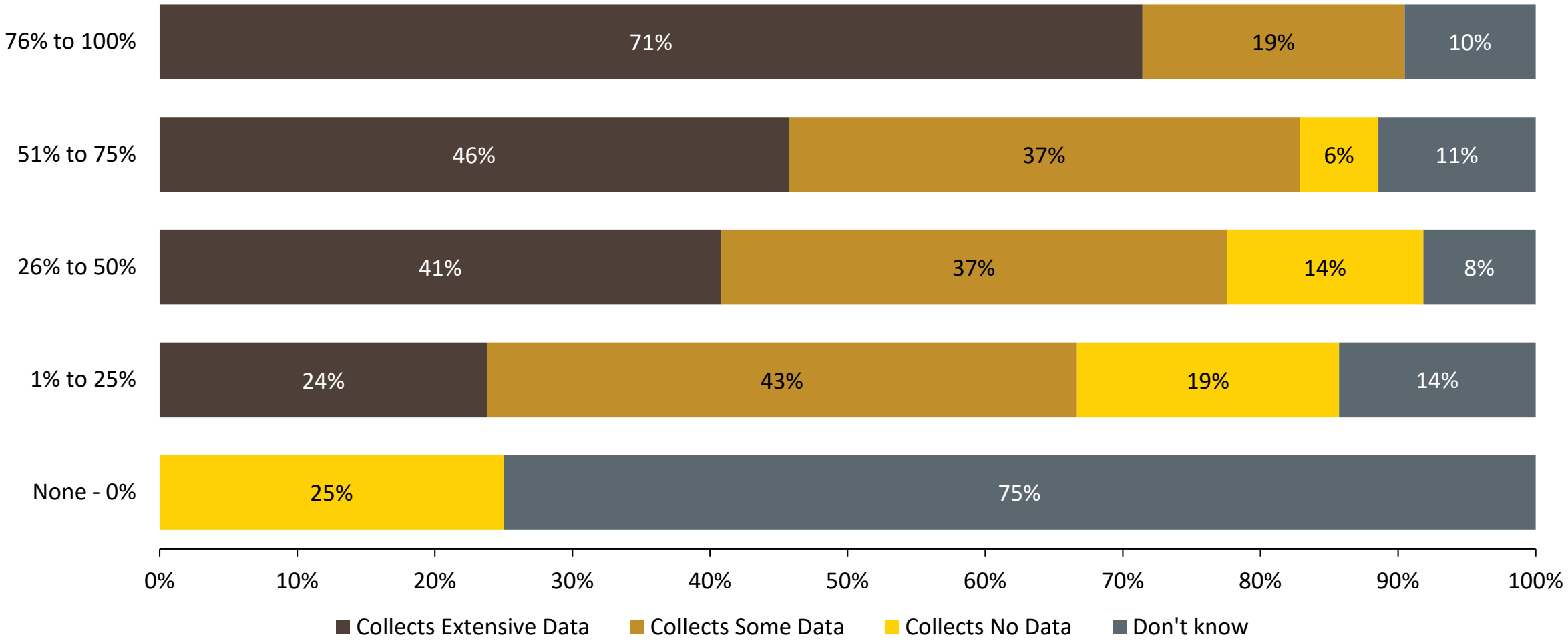
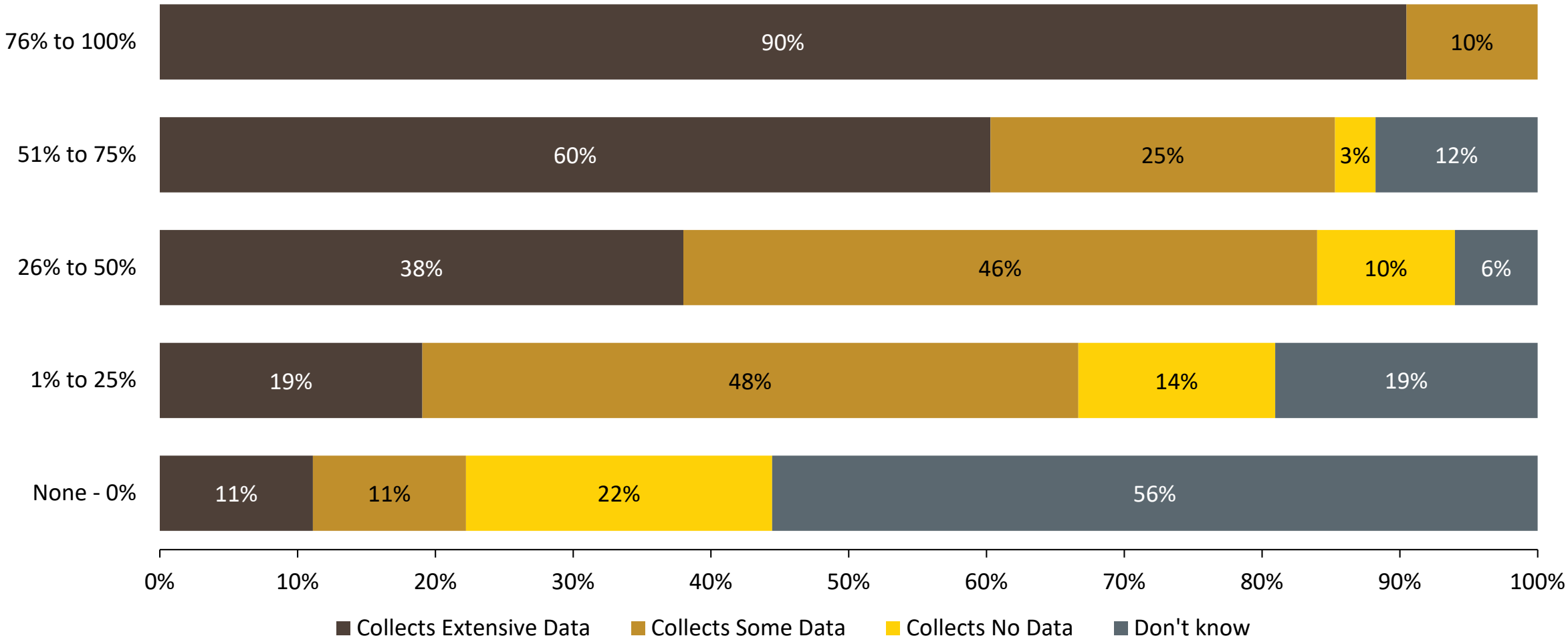


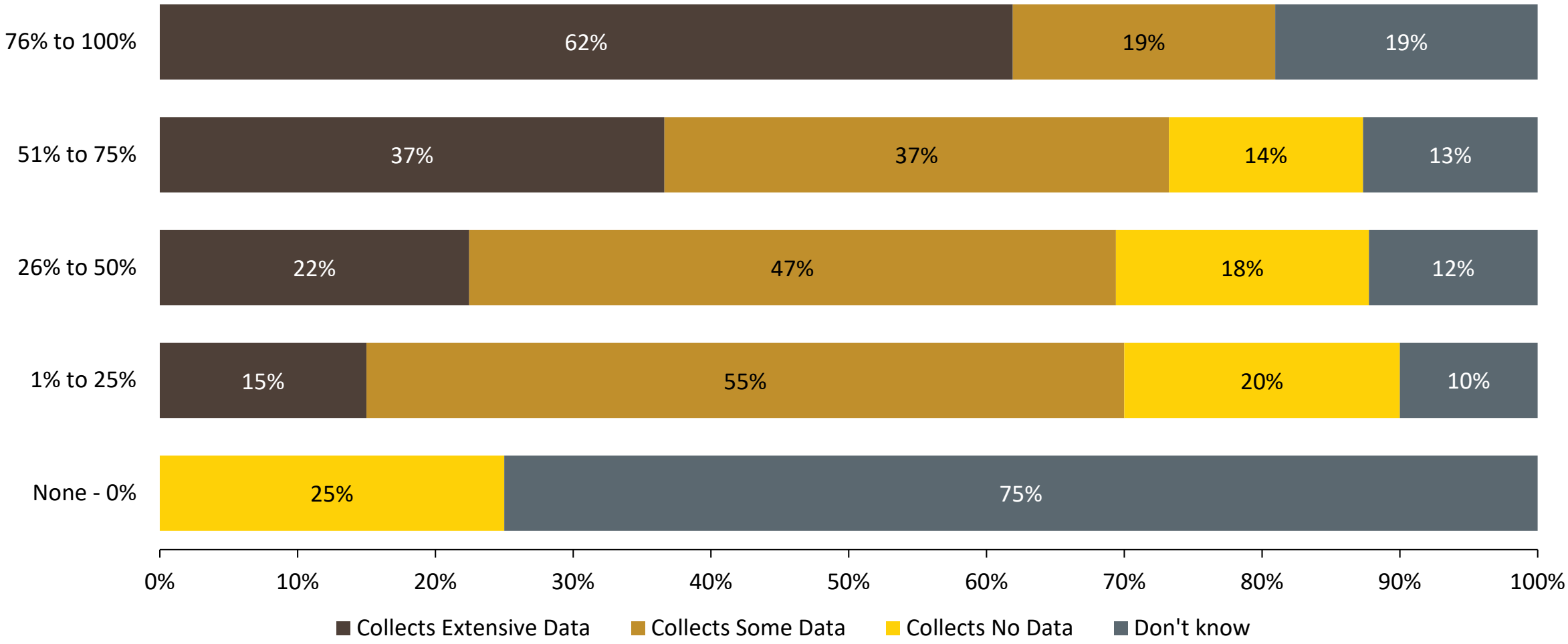
% of Decision Made on Data Analytics by The Extent Data is Collected - Marketing



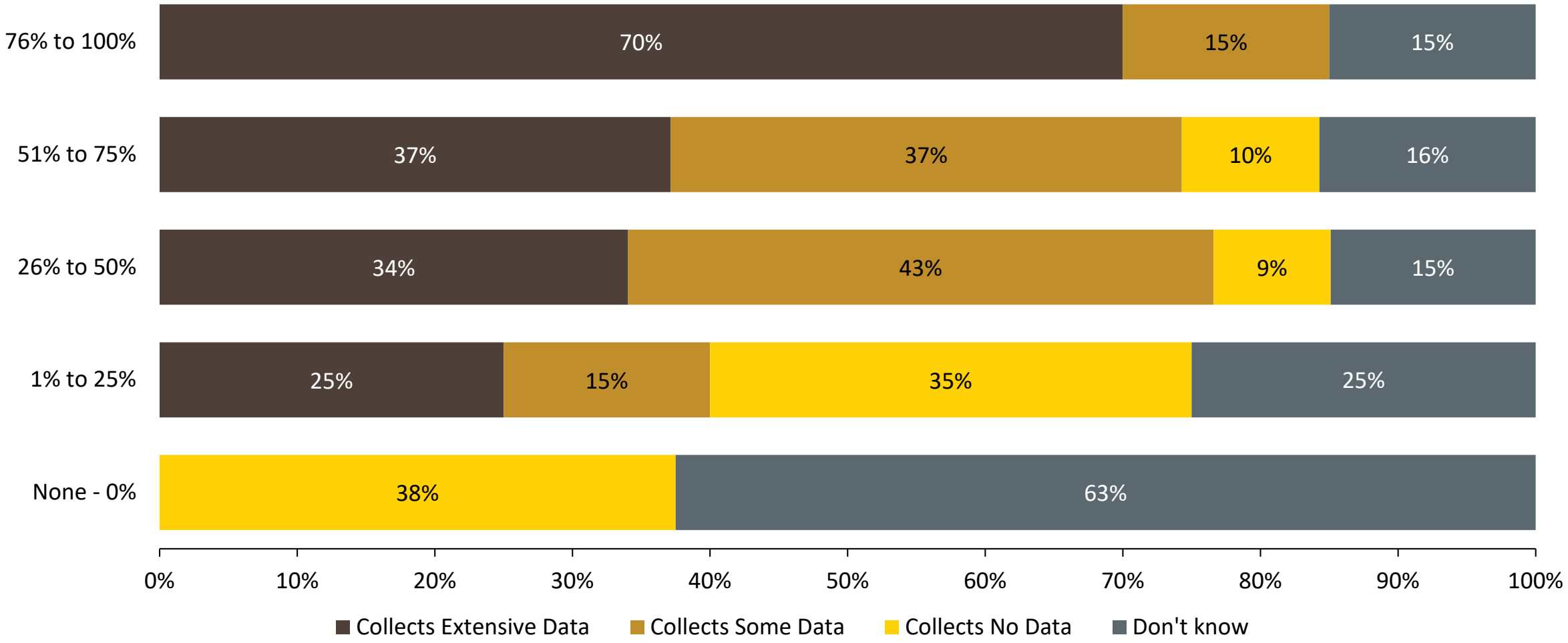
% of Decision Made on Data Analytics by The Extent Data is Collected - Sales



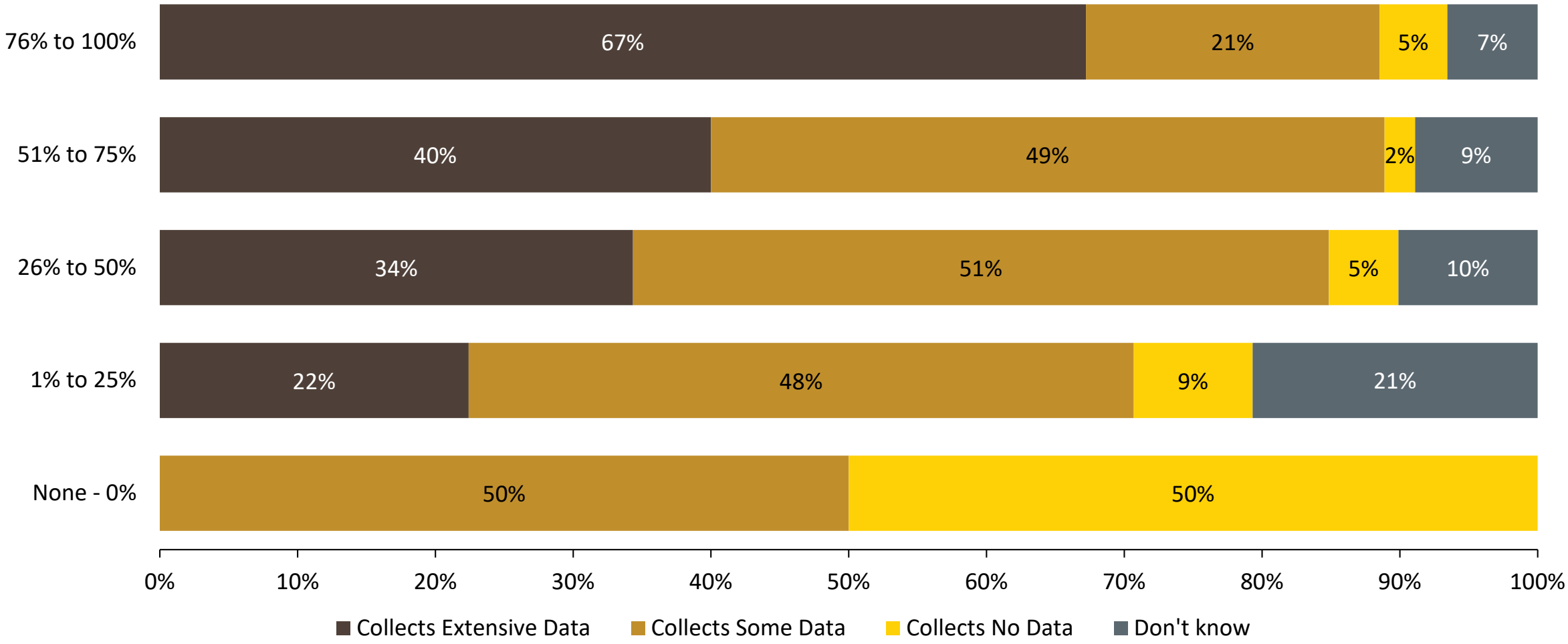
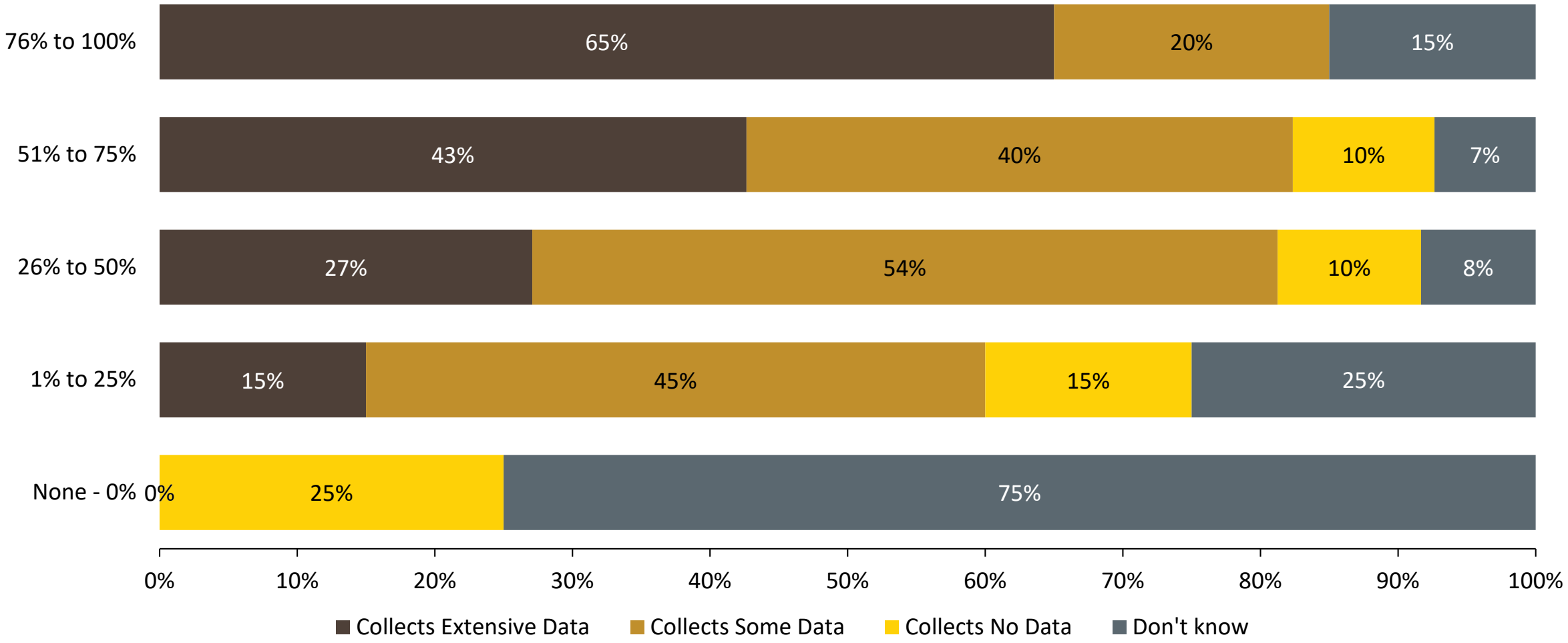
% of Decision Made on Data Analytics by The Extent Data is Collected - Service



% of Decision Made on Data Analytics by The Extent Data is Collected – HR Management



% of Decision Made on Data Analytics by The Extent Data is Collected - Procurement



% of Decision Made on Data Analytics by The Extent Data is Collected – Regulatory Compliance