Module	A: Access and use of the internet		
1.1	Does your enterprise have internet?		
	Yes $\square$ 1 No $\square$ 2 $\longrightarrow$ Go to question 5.1.		
1.2	How many persons employed have access to the internet for business purposes?		
	Number		
Use of a	fixed line connection to the internet for business purposes		
1.3	Does your enterprise use any type of fixed line connection to the internet? (e.g. A technology (FTTP), cable technology, etc.)	DSL, SDSL, VDSL, fi	ber optics
	Yes $\square$ 1 No $\square$ 2 $\longrightarrow$ Go to question 1.6.		
1.4	What is the maximum contracted download speed of the fastest fixed line internot (Yalnızca bir seçenek işaretlenmelidir.)	et connection of yo	our enterprise?
	(Tick only one)		
	Less than 10 Mbit/	00-999 Mbit/s	□ 8
	10-29 Mbit/s 3 100-499 Mbit/s 7 1 0	Gbit/s and above	9
1.5	Is the speed of your fixed line connection(s) to the internet usually sufficient for tenterprise?	he actual needs of	the
	Yes		
Use of a	website		
1.6	Does your enterprise have a website?		
	Yes $\square$ 1 No $\square$ 2 $\longrightarrow$ Go to question 2.1.		
1.7	Does the website have any of the following?		
_		<u>Yes</u>	<u>No</u>
	Description of goods or services, price information	<u></u> 1	<u> </u>
	Online ordering or reservation or booking	1	2
	3. Possibility for visitors to customise or design online goods or services	1	2
	4. Tracking or status of orders placed	_ 1	2
	5. Personalised content on the website for regular/recurrent visitors	1	_ 2
	6. Links or references to the enterprise's social media profiles	<u> </u>	_ 2
1.8	Does your enterprise have the following chat service for customer contacts?		
		Yes	<u>No</u>
	A chart service where a person replies to customers	□ 1 □ 1	∐ 2 □ 3
	A chatbot or virtual agent replying to customers		<u> </u>
Module	B: E-commerce		
Web sal	es of goods or services		
2.1	During 2019, did your enterprise have web sales of goods or services via your ent	erprise's websites	or apps ?
	W		
	Yes $\square$ 1 No $\square$ 2 $\longrightarrow$ Go to question 2.7.		

1

What percentage of total turnover was generated by web sales of goods or services, i	n 2019?	
%		
.3 Which websites or apps did your enterprise have web sales of goods or services in 20:	19?	
	Yes	No
<ol> <li>your enterprise's websites or apps? (including extranets)</li> </ol>	1	2
<ol><li>e-commerce marketplace websites or apps used by several enterprises for trading good services? (e.g. Booking, hotels.com, eBay, Amazon, Amazon Business, Alibaba etc.)</li></ol>	ls or 1	2
What was the percentage breakdown of the value of web sales in 2019 for the following	ing:	
1. your enterprise's websites or apps? (including extranets)	%	
<ol> <li>e-commerce marketplace websites or apps used by several enterprises for trading good services? (e.g. Booking, hotels.com, eBay, Amazon, Amazon Business, Alibaba etc.)</li> <li>Total</li> </ol>	ls or %	1 0
What was the percentage breakdown of the value of web sales in 2019 by type of cus		1 0
Sales to private consumers (B2C)	%	
Sales to other enterprises (B2B) and Sales to public sector (B2G)	%	
Total	%	1 0
What is the percentage of sales of your enterprise have web sales of goods or services regions where the customers are located?	s in 2019 acco	rding to the
1. Turkey	%	
2. EU Member Countries	%	
3. Other Countries	%	
Total	%	1 0
ype sales		
During 2019, did your enterprise have EDI-type sales of goods or services?		
Yes $\Box$ 1 No $\Box$ 2 $\Longrightarrow$ Go to question 3.1.		
What percentage of total turnover was generated by EDI-type sales of goods or servi	ces, in 2019?	
%		
What is the percentage of sales of your enterprise haveEDI-type sales of goods or servegions where the customers are located?	vices in 2019 a	ccording to the
1. Turkey	%	
2. EU Member Countries	%	
3. Other Countries	%	
Total	%	1 0
ıle C: Use of cloud computing services		
Does your enterprise buy any cloud computing services used over the internet?		
Yes $\square$ 1 No $\square$ 2 $\longrightarrow$ Go to question 4.1.		
Does your enterprise buy any of the following cloud computing services used over the	e internet?	
E-mail (as a cloud computing service)	<u>Yes</u> ☐ 1	<u>No</u> □ 2
2. Office software (e.g. word processors, spreadsheets, etc.) (as a cloud	<u> </u>	2
Hosting the enterprise's database(s) (as a cloud computing service)	□ 1	2
Storage of files (as a cloud computing service)	<u> </u>	<u> </u>
Finance or accounting software applications (as a cloud computing service)	 □1	
Customer Relationship Management (CRM) software application for managing information about customers (as a cloud computing service)		2
· · · · · · · · · · · · · · · · · · ·		
7. Computing power to run software used by the enterprise (as a cloud computing service)	)1	2

During 2019, did your enterprise perform big data analysis on any of the following data sources?  1. Data from smart devices or sensors (e.g., Machine to Machine -M2AM-communications, digital sensors, Radio frequency identification tags RFID, etc.) (in the Geolocation data from the use of portable devices (e.g. portable devices using mobile 2. telephone networks, wireless connections or GPS) (in the context of big data)  3. Data generated from social media (e.g. social networks, biogs, multimedia content sharing websites, etc.) (in the context of big data)  4. Other big data sources not specified above, e.g. stock index data,	Dur	g data analysis		
1. Data from smart devices or sensors (e.g., Machine to Machine - M2M-	_ Dui	ing 2019, did your enterprise perform big data analysis on any of the following data sou	urces?	
Geolocation data from the use of portable devices (e.g. portable devices using mobile   2. telephone networks, wireless connections or GPS) (in the context of big data)  3. Data generated from social media (e.g. social networks, blogs, multimedia content sharing websites, etc.) (in the context of big data)  4. Other big data sources not specified above, e.g. stock index data, transaction data, other open web data.  If at least one "yes" in 4.1 then go to 4.2. If all is "no" in 4.1 then go to Module E.  During 2019 did your enterprise use any of the following methods to analyse big data?  1. Machine Learning (e.g. deep learning)		, <u> </u>		<b>No</b>
websites, etc.) (in the context of big data)  4. Other big data sources not specified above, e.g. stock index data, transaction data, other open web data.  If at least one "yes" in 4.1 then go to 4.2. If all is "no" in 4.1 then go to Module E.  During 2019 did your enterprise use any of the following methods to analyse big data?  1. Machine Learning (e.g. deep learning)			_ 1	2
If at least one "yes" in 4.1 then go to 4.2. If all is "no" in 4.1 then go to Module E.    During 2019 did your enterprise use any of the following methods to analyse big data?    L. Machine Learning (e.g. deep learning)			<u> </u>	2
During 2019 did your enterprise use any of the following methods to analyse big data?  1. Machine Learning (e.g. deep learning)		transaction data, other open web data.	_	2
During 2019 did your enterprise use any of the following methods to analyse big data?  1. Machine Learning (e.g. deep learning)		If at least one "yes" in 4.1 then go to 4.2. If all is "no" in 4.1 then go to Modu	ule E.	
1. Machine Learning (e.g. deep learning)	Dur	ing 2019 did your enterprise use any of the following methods to analyse big data?		
3. Other methods of big data analysis	1.	Machine Learning (e.g. deep learning)		<b>No</b>
During 2019, did your enterprise purchase any service of big data anaysis?  Yes	2.	Natural language processing, natural language generation or speech recognition	<u> </u>	2
Pouring 2019, did your enterprise sell (access to) any of its own big data?  Yes	3.	Other methods of big data analysis	<u> </u>	2
During 2019, did your enterprise sell (access to) any of its own big data?  Yes	Dur	ing 2019, did your enterprise purchase any service of big data anaysis?		
During 2019, did your enterprise sell (access to) any of its own big data?  Yes	_	res □1 No □2		
Pes				
During 2019, did your enterprise purchase (access to) any big data?  Yes	<b>J</b> ul			
Ves		/es		
Does your enterprise employ ICT specialists?  Yes	Dur	ing 2019, did your enterprise purchase (access to) any big data?		
Does your enterprise employ ICT specialists?  Yes		∕es ☐1 No ☐2		
Poid your enterprise provide any type of training to develop ICT related skills of the persons employed, during 20 of training for ICT specialists  1. Training for ICT specialists  2. Training for other persons employed  Did your enterprise recruit or try to recruit ICT specialists during 2019?  Yes □ 1 No □ 2 → Go to question 5.5.  During 2019, did your enterprise have vacancies for ICT specialists that were difficult to fill?  Yes □ 1 No □ 2  Who performed your enterprise's ICT functions in 2019?  1. own employees (incl. those employed in parent or affiliate enterprises) □ 1 □ 2	ule E: IC	specialists and skills		
Did your enterprise provide any type of training to develop ICT related skills of the persons employed, during 20  1. Training for ICT specialists	Doe	s your enterprise employ ICT specialists?		
1. Training for ICT specialists		∕es □1 No □2		
1. Training for ICT specialists	ריא	very enterprise provide any time of training to develop ICT related skills of the persons		during 2
1. Training for ICT specialists		your enterprise provide any type or training to develop ich related skills of the persons	employeu	, uuring zo
2. Training for other persons employed □ 1 □ 2  Did your enterprise recruit or try to recruit ICT specialists during 2019?  Yes □ 1 No □ 2 → Go to question 5.5.  During 2019, did your enterprise have vacancies for ICT specialists that were difficult to fill?  Yes □ 1 No □ 2  Who performed your enterprise's ICT functions in 2019?  1. own employees (incl. those employed in parent or affiliate enterprises) □ 1 □ 2	Dia			
Did your enterprise recruit or try to recruit ICT specialists during 2019?  Yes				
Yes ☐ 1 No ☐ 2 → Go to question 5.5.  During 2019, did your enterprise have vacancies for ICT specialists that were difficult to fill?  Yes ☐ 1 No ☐ 2  Who performed your enterprise's ICT functions in 2019?  1. own employees (incl. those employed in parent or affiliate enterprises) ☐ 1 ☐ 2		Γraining for ICT specialists	<u> </u>	· · · · · · · · · · · · · · · · · · ·
Yes ☐ 1 No ☐ 2 → Go to question 5.5.  During 2019, did your enterprise have vacancies for ICT specialists that were difficult to fill?  Yes ☐ 1 No ☐ 2  Who performed your enterprise's ICT functions in 2019?  1. own employees (incl. those employed in parent or affiliate enterprises) ☐ 1 ☐ 2	1.		<u> </u>	2
During 2019, did your enterprise have vacancies for ICT specialists that were difficult to fill?  Yes	1. 2.	Training for other persons employed	<u> </u>	2
Yes	1. 2. <b>Did</b>	your enterprise recruit or try to recruit ICT specialists during 2019?	<u> </u>	2
Who performed your enterprise's ICT functions in 2019?  1. own employees (incl. those employed in parent or affiliate enterprises)  Yes No  1 2	1. 2. <b>Did</b>	Training for other persons employed  your enterprise recruit or try to recruit ICT specialists during 2019?  Yes □ 1 No □ 2 → Go to question 5.5.	□1 □1	2
1. own employees (incl. those employed in parent or affiliate enterprises)  Yes  1. 0 Ves  1. 0	1. 2. <b>Did</b>	Training for other persons employed  your enterprise recruit or try to recruit ICT specialists during 2019?  Yes □ 1 No □ 2 → Go to question 5.5.	□1 □1	2
1. own employees (incl. those employed in parent or affiliate enterprises)	1. 2. Did	Training for other persons employed  your enterprise recruit or try to recruit ICT specialists during 2019?  Yes □ 1 No □ 2 → Go to question 5.5.  Ing 2019, did your enterprise have vacancies for ICT specialists that were difficult to fill	□1 □1	2
	1. 2. Did	Training for other persons employed  your enterprise recruit or try to recruit ICT specialists during 2019?  Yes □ 1 No □ 2 → Go to question 5.5.  Ing 2019, did your enterprise have vacancies for ICT specialists that were difficult to fill?  Yes □ 1 No □ 2	□1 □1	2
2. external suppliers	1. 2. Did Dur	Training for other persons employed  your enterprise recruit or try to recruit ICT specialists during 2019?  Yes □1 No □2 → Go to question 5.5.  Ing 2019, did your enterprise have vacancies for ICT specialists that were difficult to fill?  Yes □1 No □2  Deperformed your enterprise's ICT functions in 2019?	☐ 1 ☐ 1 ?	2 2
	1. 2. Did Dur Wh	Training for other persons employed  your enterprise recruit or try to recruit ICT specialists during 2019?  yes □ 1 No □ 2 → Go to question 5.5.  yes □ 1 No □ 2  your enterprise have vacancies for ICT specialists that were difficult to fill yes □ 1 No □ 2  your enterprise have vacancies for ICT specialists that were difficult to fill yes □ 1 No □ 2  your enterprise's ICT functions in 2019?  your employees (incl. those employed in parent or affiliate enterprises)	1 1 1 1 7 7 7 9 1 1 1 1 1 1 1 1 1 1 1 1	□ 2 □ 2 □ 2
	1. 2. Did Dur Wh	Training for other persons employed  your enterprise recruit or try to recruit ICT specialists during 2019?  yes □ 1 No □ 2 → Go to question 5.5.  yes □ 1 No □ 2  your enterprise have vacancies for ICT specialists that were difficult to fill yes □ 1 No □ 2  your enterprise have vacancies for ICT specialists that were difficult to fill yes □ 1 No □ 2  your enterprise's ICT functions in 2019?  your employees (incl. those employed in parent or affiliate enterprises)	1 1 1 1 7 7 7 9 1 1 1 1 1 1 1 1 1 1 1 1	□ 2 □ 2 □ 2
	1. 2. Did Dur Wh	Training for other persons employed  your enterprise recruit or try to recruit ICT specialists during 2019?  yes □ 1 No □ 2 → Go to question 5.5.  yes □ 1 No □ 2  your enterprise have vacancies for ICT specialists that were difficult to fill yes □ 1 No □ 2  your enterprise have vacancies for ICT specialists that were difficult to fill yes □ 1 No □ 2  your enterprise's ICT functions in 2019?  your employees (incl. those employed in parent or affiliate enterprises)	1 1 1 1 7 7 7 9 1 1 1 1 1 1 1 1 1 1 1 1	□ 2 □ 2 □ 2

Module	F: Use of 3D printing		
6.1	During 2019, did your enterprise use 3D printing:		
	<ol> <li>using your enterprise's 3D printers? Include use of rented or leased 3D printers</li> <li>using printing services provided by other enterprises?</li> </ol>	<u>Yes</u> ☐ 1 ☐ 1	<u>No</u> ☐ 2 ☐ 2
<u> </u>	If all is "no" in 6.1 then go to Module E.		
6.2	During 2019, did your enterprise use 3D printing for any of the following:	Van	Al-
	Prototypes or models for sale	Yes 1	<u>No</u>
	Prototypes or models for internal use	_ □1	 □ 2
	<ol> <li>Goods for sale excluding prototypes or models (e.g. moulds, tools, parts of goods, semi-finished goods, etc.)</li> <li>Goods to be used in your enterprise's production process excluding prototypes or models (e.g. moulds, tools, parts of goods, semi-finished goods, etc.)</li> </ol>	□ 1 □ 1	2 2
Module	G: Use of robotics		
7.1	Does your enterprise use any of the following types of robots?		
	<ol> <li>industrial robots (e.g. robotic welding, laser cutting, spray painting, etc.)</li> </ol>	<u>Yes</u> ☐ 1	<u>No</u> □ 2
	2. Service robots (e.g. used for surveillance, cleaning, transportation, etc.)	□ 1	2
	If the question 7.1.2 "no" the questionnaire is end.		
7.2	Does your enterprise use service robots for any of the following?		
	, ,	V	No
		Yes	
	1. Surveillance, security or inspection tasks (e.g. use of autonomous airborne drones, etc.)	<u>Yes</u> 1	2
	<ol> <li>Surveillance, security or inspection tasks (e.g. use of autonomous airborne drones, etc.)</li> <li>Transportation of people or goods (e.g. use of automated guided vehicle, etc.)</li> </ol>		2 2
		<u>1</u>	_
	2. Transportation of people or goods (e.g. use of automated guided vehicle, etc.)	□ 1 □ 1 □ 1 □ 1	2
	<ol> <li>Transportation of people or goods (e.g. use of automated guided vehicle, etc.)</li> <li>Cleaning or waste disposal tasks</li> </ol>	1   1   1	2 2
	<ol> <li>Transportation of people or goods (e.g. use of automated guided vehicle, etc.)</li> <li>Cleaning or waste disposal tasks</li> <li>Warehouse management systems (e.g. palletising, handling goods, etc.)</li> </ol>	□ 1 □ 1 □ 1 □ 1	2 2 2
	<ol> <li>Transportation of people or goods (e.g. use of automated guided vehicle, etc.)</li> <li>Cleaning or waste disposal tasks</li> <li>Warehouse management systems (e.g. palletising, handling goods, etc.)</li> <li>Assembly works performed by service robots</li> </ol>	1   1   1   1   1	2 2 2 2
	<ol> <li>Transportation of people or goods (e.g. use of automated guided vehicle, etc.)</li> <li>Cleaning or waste disposal tasks</li> <li>Warehouse management systems (e.g. palletising, handling goods, etc.)</li> <li>Assembly works performed by service robots</li> <li>Robotic store clerk tasks</li> </ol>		2   2   2   2   2   2
	<ol> <li>Transportation of people or goods (e.g. use of automated guided vehicle, etc.)</li> <li>Cleaning or waste disposal tasks</li> <li>Warehouse management systems (e.g. palletising, handling goods, etc.)</li> <li>Assembly works performed by service robots</li> <li>Robotic store clerk tasks</li> </ol>		2   2   2   2   2   2
	<ol> <li>Transportation of people or goods (e.g. use of automated guided vehicle, etc.)</li> <li>Cleaning or waste disposal tasks</li> <li>Warehouse management systems (e.g. palletising, handling goods, etc.)</li> <li>Assembly works performed by service robots</li> <li>Robotic store clerk tasks</li> </ol>		2   2   2   2   2   2
	<ol> <li>Transportation of people or goods (e.g. use of automated guided vehicle, etc.)</li> <li>Cleaning or waste disposal tasks</li> <li>Warehouse management systems (e.g. palletising, handling goods, etc.)</li> <li>Assembly works performed by service robots</li> <li>Robotic store clerk tasks</li> </ol>		2   2   2   2   2   2
	<ol> <li>Transportation of people or goods (e.g. use of automated guided vehicle, etc.)</li> <li>Cleaning or waste disposal tasks</li> <li>Warehouse management systems (e.g. palletising, handling goods, etc.)</li> <li>Assembly works performed by service robots</li> <li>Robotic store clerk tasks</li> </ol>		2   2   2   2   2   2
	<ol> <li>Transportation of people or goods (e.g. use of automated guided vehicle, etc.)</li> <li>Cleaning or waste disposal tasks</li> <li>Warehouse management systems (e.g. palletising, handling goods, etc.)</li> <li>Assembly works performed by service robots</li> <li>Robotic store clerk tasks</li> </ol>		2   2   2   2   2   2
	<ol> <li>Transportation of people or goods (e.g. use of automated guided vehicle, etc.)</li> <li>Cleaning or waste disposal tasks</li> <li>Warehouse management systems (e.g. palletising, handling goods, etc.)</li> <li>Assembly works performed by service robots</li> <li>Robotic store clerk tasks</li> </ol>		2   2   2   2   2   2