Employer questionnaire

B001 - INTRO: SCREENING AND INTRODUCTION	Begin block

Q001 - country: Country (sample source)	Single coded

Not back | Dummy

Normal

1	Austria
2	Canada
3	Germany
4	Ireland
5	the United Kingdom
6	the United States
7	France

Q002 - industry1: Industry type (sample source)	Single coded

Not back | Dummy

Normal

1	Finance and insurance activities
2	Manufacturing

Q003 - size1: Size of company (sample source)	Single coded

Not back | Dummy

Normal

1	< 20 workers
2	20 to 49 workers
3	50 to 249 workers
3	250 to 499 workers
4	500 or more workers

Q004 - languagecanada: Language choice within Canada `Single coded`

Not back

In which language do you want to continue?
Dans quelle langue voulez-vous continuer?

Normal

1	English
2	Francais

Q005 - intro1: Introduction to survey `Single coded`

Not back

Good morning/afternoon. My name is ... from [PROG: institute] in [PROG: location of the institute].

On behalf of the OECD, we are conducting a survey about advanced technologies and their impact on workplaces.
To this end, I would like to talk to the person who has the best overview of the advanced technologies applied in this company.
[PROG if size1 < 250:] Usually, this is the owner or manager of the company, but it can also be a specific manager for technology.
[PROG if size1 = 250 or more AND industry1, code 1:] Usually, this is either the managing director of the company or the head of technology.
[PROG if size1 = 250 or more AND industry1, code 2:] Usually, this is either the managing director of the company or the head of technology or the head of production.

Explain if needed:
The OECD (or Organisation for Economic Co-operation and Development) is an international research and policy organisation that works to shape policies that foster prosperity, opportunity and well-being for all.
The aim of the study is to find out how the adoption of advanced technologies impacts workplaces in companies within two sectors: manufacturing as well as finance and insurance.
The results of the survey will be used to better understand the opportunities and risks associated with these new developments and to shape policies in this area. The OECD will publish a report based on this survey, which you will be able to access on their website next year.
If more topic details required:
The aim is to explore whether advanced technologies are used in your company and if so, how they impact workplaces. If you and your company do not work with advanced technologies, we also would like to get to know your view on these new developments in your sector.
I can send you a cover letter by email. This explains the objectives of this study and the data protection measures.

Normal

1	Respondent is this person and OK to continue
2	Appointment for a later call
3	Respondent puts through to another person
4	Respondent names another person to call
5	Refused
6	Motivation letter and data privacy information

Q006 - participate: Data privacy and agreement to participate `Single coded`

Not back

The survey is conducted on behalf of the OECD by the research institute Kantar.
Your participation is of course voluntary and you have the right to revoke your consent at any time.
Your workplace has been selected at random to represent its sector and size. To obtain representative results, however, it is important that as many of the selected companies as possible take part.
All data will be treated with absolute confidentiality and all analyses of results will be totally anonymous, not revealing your name or the name of your company at any time.
Do you have any questions about data privacy at this stage or do you want to get any written information about the survey and the data protection rules by email beforehand?
Would you be so kind as to participate in this interview?

Explain if needed:
The OECD (or Organisation for Economic Co-operation and Development) is an international research and policy organisation that works to shape policies that foster prosperity, opportunity and well-being for all.
The aim of the study is to find out how the adoption of advanced technologies impacts workplaces in companies within two sectors: manufacturing as well as finance and insurance.
The results of the survey will be used to better understand the opportunities and risks associated with these new developments and to shape policies in this area. The OECD will publish a report based on this survey, which you will be able to access on their website towards the end of this year.
If more topic details required:
The aim is to explore whether advanced technologies are used in your company and if so, how they impact workplaces. If you and your company do not work with advanced technologies, we also would like to get to know your view on these new developments in your sector.
I can send you a cover letter by email. This explains the objectives of this study and the data protection measures.

Normal

1	OK to conduct interview right now
2	Appointment for a later call
3	Refused because there is no target person for this topic in this company
4	Does generally not participate in telephone interviews
5	Refusal for other reasons
6	Motivation letter and data privacy information

Q007 - industry2: Industry confirmation by respondent `Single coded`

Not back

According to the information we have available, the sector your company is in is [PROG: insert industry1].
Is this correct?

Normal

1	Yes	
2	No	➔ GO TO SCREEN OUT
8	DO NOT READ OUT: I don't know	➔ GO TO SCREEN OUT

[IF code 2 or 8 THEN show screen out text: Unfortunately we are only looking for respondents in this specific sector. Thank you very much for your time. This is the end of the survey.]

Q008 - industry3: Industry according to respondent　　　`Single coded`

Not back | Dummy

Normal

1	Finance and insurance
2	Manufacturing

[Pipe in answers as follows:
IF in industry1 code 1 and in industry2 code 1 (yes) => THEN in this question code 1 (finance and insurance).
IF in industry1 code 2 and in industry2 code 1 (yes) => THEN in this question code 2 (manufacturing).]

Q009 - size2: Size by respondent - numeric　　　`Numeric`

Not back | Min = 1 | Max = 99000

Including yourself, approximately how many workers work for your company in [PROG: insert country]?
Please include both full-time and part-time staff on your payroll, as well as any directors or owners.

Probe for the best estimate before selecting 'don't know'.

999	Don't know *Fixed *Exclusive

Q010 - size3: Size by respondent - categories　　　`Single coded`

Not back | Dummy

Normal

1	< 20 workers	➔ GO TO SCREEN OUT
2	20 to 49 workers	
3	50 to 249 workers	
4	250 to 499 workers	
5	500 or more workers	

[Assign answers from size2 (numeric), but IF DK in size2 => THEN use the same category as in size1.
IF code 1 in size3, THEN show screen out text: Unfortunately we are only looking for respondents in larger companies. Thank you very much for your time. This is the end of the survey.]

B001 - INTRO: SCREENING AND INTRODUCTION　　　`End block`

B002 - ADOPT: ADOPTION OF AI　　　`Begin block`

Q012 - aidefinition: AI definition   **Text**

Not back

In the questions that follow, the term 'artificial intelligence' is used. No matter how familiar you are with the term, please have the following definition in mind when answering the subsequent questions:

Artificial intelligence - or 'AI' in short - is, what enables smart computer programs and machines to carry out tasks that would typically require human intelligence.
Some examples where AI can be found in your everyday life include:
- Siri, Alexa and other smart assistants,
- Netflix or YouTube recommendations, and
- Self-driving cars

Some examples where AI can be found in your sector include:
[IF industry1 = code 1 (finance) THEN:] Robo-advisors, chatbots used for customer service, and fraud detection software
[IF industry1 = code 2 (manufacturing) THEN:] Robots that use cameras to check items for flaws, software used to predict prices and demand and technology that predicts when machines should be serviced

Q013 - adoption: Adoption of AI in company - in general   `Single coded`

Not back

To the best of your knowledge, does your company use artificial intelligence?
Please think of all areas within your company in [PROG: insert country], not just the area you work in.

> Interviewer hints:
> Respondents reporting that they use artificial intelligence but have outsourced the development or maintenance of the technology to another company should be encouraged to report "yes" here.
> Respondents reporting that they don't use artificial intelligence themselves, but that some of their suppliers use it, should be encouraged to report "no" here.
> The key point of this question is whether artificial intelligence is used within the respondent's company.

Normal

1	Yes
2	No
8	Don't know

Q014 - adopter: Adopters vs Non-Adopters of AI   `Single coded`

Not back | Dummy

Normal

1	Adopters
2	Non-adopters

[Pipe in answers from previous question adoption:
IF adoption code 1 (yes) => THEN in this question code 1 (adopters);
IF adoption code 2 (no) OR code 8 (DK) => THEN in this question code 2 (non-adopters).]

Ask only if **Q014 - adopter**,1

B003 - ADOPTDETAIL: DETAILED INFORMATION FROM ADOPTERS   **Begin block**

Q016 - lengthai: Length of AI experience in company `Numeric`

Not back | Min = 0 | Max = 40

Approximately how many years ago did your company first start using artificial intelligence?

999   Don't know *Fixed *Exclusive

Q017 - aiusesfinance: AI usage in finance sector `Matrix`

Not back | Number of rows: 9 | Number of columns: 3

I am going to list some possible uses of artificial intelligence in the finance and insurance sector. Please tell me whether or not your company uses AI for each of the following purposes:

Please read out.

Rows: Rotated | Columns: Normal

		Yes	No	DO NOT READ OUT: Don't know
		1	2	8
Data analytics?	1	○	○	○
Risk management?	2	○	○	○
Fraud detection?	3	○	○	○
Trading and investment?	4	○	○	○
Administration?	5	○	○	○
Customer service and advice?	6	○	○	○
Reporting?	7	○	○	○
Human resources?	8	○	○	○
Other areas? *Fixed	9	○	○	○

Q018 - aiusesmanufacturing: AI usage in manufacturing sector — Matrix

Not back | Number of rows: 6 | Number of columns: 3

I am going to list some possible uses of artificial intelligence in the manufacturing sector. Please tell me whether or not your company uses AI for each of the following purposes:

Please read out.

Rows: Rotated | Columns: Normal

		Yes	No	DO NOT READ OUT: Don't know
		1	2	8
Product design?	1	○	○	○
Planning and scheduling?	2	○	○	○
Production processes?	3	○	○	○
Maintenance tasks?	4	○	○	○
Human Resources?	5	○	○	○
Other areas? *Fixed*	6	○	○	○

Q019 - aiappsmanufacturing: AI usage in manufacturing sector in production — Matrix

Not back | Number of rows: 6 | Number of columns: 3

You reported that your company uses artificial intelligence for production processes. Is it used for any of the following applications?

Please read out.

Rows: Random | Columns: Normal

		Yes	No	DO NOT READ OUT: Don't know
		1	2	8
Quality control?	1	○	○	○
Digital twins and simulation?	2	○	○	○
Robotics?	3	○	○	○
Worker assistance?	4	○	○	○
Autonomous vehicles?	5	○	○	○
Other areas? *Fixed*	6	○	○	○

Q020 - frame1: Framing for adopters — Text

Not back

I'm going to ask a few questions about how you think artificial intelligence impacts workers. To answer these questions, please think of the technologies that you've mentioned that your company uses here in [PROG: insert country].

Q021 - motivation: Motivations for adopting AI | **Matrix**

Not back | Number of rows: 4 | Number of columns: 3

There are many reasons why companies choose to adopt artificial intelligence. To the best of your knowledge, were any of the following motivations for your company adopting artificial intelligence?

Please read out.

Rows: Random | Columns: Normal

		Yes	No	DO NOT READ OUT: Don't know
		1	2	8
To improve worker performance?	1	○	○	○
To reduce staff costs?	2	○	○	○
To improve workers' health and safety?	3	○	○	○
To address skill shortages?	4	○	○	○

B003 - ADOPTDETAIL: DETAILED INFORMATION FROM ADOPTERS | **End block**

B002 - ADOPT: ADOPTION OF AI | **End block**

Ask only if **Q014 - adopter**,1

B005 - IMPACTCOMPANY: IMPACT IN COMPANY BY ADOPTERS | **Begin block**

Q026 - impacttasks: Changing tasks by AI | **Matrix**

Not back | Number of rows: 2 | Number of columns: 3

Thinking about your company, has artificial intelligence …

Please read out.

Rows: Random | Columns: Normal

		Yes	No	DO NOT READ: Don't know
		1	2	8
Automated tasks that workers used to do?	1	○	○	○
Created new tasks that workers did not do previously?	2	○	○	○

Q027 - replacetasks: Attributes for tasks replaced by AI `Matrix`

Not back | Number of rows: 3 | Number of columns: 3

You said that artificial intelligence automated tasks that workers used to do before. Were most of these tasks …

Please read out.

Rows: Random | Columns: Normal

		Yes	No	DO NOT READ: Don't know
		1	2	8
Repetitive?	1	○	○	○
Complex?	2	○	○	○
Dangerous?	3	○	○	○

Q028 - createtasks: Attributes for new tasks created by AI `Matrix`

Not back | Number of rows: 3 | Number of columns: 3

You said that artificial intelligence created tasks that workers didn't do previously. Are most of these new tasks …

Please read out.

Rows: Random | Columns: Normal

		Yes	No	DO NOT READ: Don't know
		1	2	8
Repetitive?	1	○	○	○
Complex?	2	○	○	○
Dangerous?	3	○	○	○

Q030 - emp: AI impact on overall employment in company `Single coded`

Not back

Has artificial intelligence increased, decreased or had no effect on <u>overall employment</u> in your company?

Normal

1	Increased
2	Decreased
3	No effect
8	DO NOT READ OUT: Don't know

Q034 - productivity: AI impact on worker productivity in company   Single coded

Not back

Has artificial intelligence increased, decreased or had no effect on <u>worker productivity</u> in your company?

Normal

1	Increased
2	Decreased
3	No effect
8	DO NOT READ OUT: Don't know

Q035 - satisfaction: AI impact on worker satisfaction in company   Single coded

Not back

Has artificial intelligence increased, decreased or had no effect on <u>worker satisfaction</u> in your company?

Normal

1	Increased
2	Decreased
3	No effect
8	DO NOT READ OUT: Don't know

Q036 - oshrisk: AI impact on health and safety in company   Single coded

Not back

Has artificial intelligence had a positive, negative or no effect on the <u>health and safety</u> of workers in your company?

Normal

1	Positive effect
2	Negative effect
3	No effect
8	DO NOT READ OUT: Don't know

Q038 - management: AI impact on measuring worker performance in company   Single coded

Not back

Has artificial intelligence increased, decreased or had no effect on <u>managers' ability to measure worker performance</u> in your company?

Normal

1	Increased
2	Decreased
3	No effect
8	DO NOT READ OUT: Don't know

B005 - IMPACTCOMPANY: IMPACT IN COMPANY BY ADOPTERS	End block

B006 - IMPACTSECTOR: IMPACT IN SECTOR BY NON-ADOPTERS	Begin block

Q043 - frame2: Framing for non-adopters	Text

Not back

I'm going to ask a few questions about how you think artificial intelligence will impact workers. Your company does not need to have adopted artificial intelligence in order for you to be able to answer the questions. Please think of what you have heard of artificial intelligence, particularly how it is used in your sector here in [PROG: insert country].

Q044 - empsector: AI impact on overall employment in sector	Single coded

Not back

Do you think that artificial intelligence will increase, decrease or have no effect on overall employment in your sector in the next 10 years?

Normal

1	Increase
2	Decrease
3	No effect
8	DO NOT READ OUT: Don't know

Q048 - productivitysector: AI impact on worker productivity in sector	Single coded

Not back

Do you think that artificial intelligence will increase, decrease or have no effect on worker productivity?

Repeat if needed: Please think about your sector as a whole and how it will develop in the next 10 years.

Normal

1	Increase
2	Decrease
3	No effect
8	DO NOT READ OUT: Don't know

Q050 - oshrisksector: AI impact on health and safety in sector Single coded

Not back

Do you think that artificial intelligence will have a positive, negative or no effect on the <u>health and safety</u> of workers?

Repeat if needed: Please think about your sector as a whole and how it will develop in the next 10 years.

Normal

1	Positive effect
2	Negative effect
3	No effect
8	DO NOT READ OUT: Don't know

B006 - IMPACTSECTOR: IMPACT IN SECTOR BY NON-ADOPTERS End block

Ask only if **Q014 - adopter**,1

B007 - DATA: DATA Begin block

Q053 - frame3: Framing on big data Text

Not back

Artificial intelligence often requires large amounts of data.

Q054 - workerdata: AI collecting worker data Single coded

Not back

Does your company's use of artificial intelligence involve collecting data on workers or their work?

Normal

1	Yes
2	No
8	Don't know

B007 - DATA: DATA End block

B009 - SOCIAL: SOCIAL DIALOGUE - EMPLOYEE RELATIONS Begin block

Q060 - workerrep: Worker representation in company `Single coded`

Not back

Is there trade union representation, a works council or any other form of worker representation in your company?

Normal

1	Yes
2	No
8	Don't know

Q063 - consultrep: Consultation of workers when introducing new technologies `Single coded`

Not back

Does your company consult workers or worker representatives regarding the use of new technologies in the workplace?

Normal

1	Yes
2	No
8	Don't know

Q064 - techconsult: Topics discussed with workers `Matrix`

Not back | Number of rows: 6 | Number of columns: 3

I'm going to list a few topics that might have been discussed in consultations regarding the use of new technologies in the workplace. For each of these topics, please tell me whether or not they were discussed.

Please read out.

Rows: Random | Columns: Normal

		Yes	No	DO NOT READ OUT: Don't know
		1	2	8
Potential job loss	1	○	○	○
Impact on wages	2	○	○	○
Impact on working conditions	3	○	○	○
Skills and training needs	4	○	○	○
Use of data	5	○	○	○
Impact on specific groups of workers	6	○	○	○

Q065 - agreement: Agreements achieved at worker consultations	Matrix

Not back | Number of rows: 3 | Number of columns: 3

Have these consultations led to …

Please read out.

Rows: Random | Columns: Normal

		Yes	No	Don't know
		1	2	8
A collective agreement which addresses the use of artificial intelligence?	1	○	○	○
Changes to or the adoption of an artificial intelligence strategy?	2	○	○	○
Changes to or the adoption of guidelines for the use of artificial intelligence?	3	○	○	○

B009 - SOCIAL: SOCIAL DIALOGUE - EMPLOYEE RELATIONS	End block

B010 - SKILLSADOPT: SKILLS AND TRAINING NEEDS BY ADOPTERS	Begin block

Q066 - skillchange: Change in skill needs by AI in company	Single coded

Not back

Do you think that artificial intelligence has changed skill needs in your company?

Normal

1	Yes
2	No
8	Don't know

Q069 - sourceskills: Sources for meeting skill needs | Matrix

Not back | Number of rows: 4 | Number of columns: 3

Has your company addressed these changing skill needs in any of the following ways?

Please read out.

Rows: Random | Columns: Normal

		Yes	No	DO NOT READ OUT: Don't know
		1	2	8
By retraining or upskilling internal workers?	1	○	○	○
By hiring new workers?	2	○	○	○
By buying services from external companies?	3	○	○	○
By attrition or redundancies *Fixed*	4	○	○	○

Q067 - skillneeded1: Higher relevance of AI skills in company | Single coded

Not back

In your company, has artificial intelligence made it more important to have specialised artificial intelligence skills, such as those needed to maintain or develop artificial intelligence?

Normal

1	Yes
2	No
8	Don't know

Q068 - skillneeded2: Higher relevance of human skills in company | Single coded

Not back

In your company, has artificial intelligence made it more important to have human skills, such as creativity and communication?

Normal

1	Yes
2	No
8	Don't know

Q070 - skillneeded3: Higher relevance of university education in company | Single coded

Not back

In your company, has artificial intelligence made it more important to have highly educated workers?

Normal

1	Yes
2	No
8	Don't know

B010 - SKILLSADOPT: SKILLS AND TRAINING NEEDS BY ADOPTERS	End block

B012 - POLICY: GOVERNMENT POLICY AND REGULATION	Begin block

Q076 - barriers: Barriers of adopting AI	Matrix

Not back | Number of rows: 5 | Number of columns: 3

I'm going to list a few potential barriers to the adoption of artificial intelligence. In each case, please tell me whether it has ever been a barrier to adopting artificial intelligence in your company.

Please read out.

Rows: Random | Columns: Normal

		Yes	No	DO NOT READ OUT: Don't know
		1	2	8
High costs?	1	⭘	⭘	⭘
Lack of skills to adopt artificial intelligence?	2	⭘	⭘	⭘
Government regulation?	3	⭘	⭘	⭘
Not convinced by the technology?	4	⭘	⭘	⭘
Any other barriers not previously mentioned? *Fixed*	5	⭘	⭘	⭘

Ask only if **Q014 - adopter**,1

Q078 - covidinvestment: Impact of covid on investment in AI	Single coded

Not back

Would you say that the COVID-19 has increased, decreased or had no effect on your company's investment in artificial intelligence?

Normal

1	Increased
2	Decreased
3	No effect
8	DO NOT READ OUT: Don't know

Q080 - subgroupdisadvantaged: AI impact on subgroups of workers | Matrix

Not back | Number of rows: 6 | Number of columns: 4

I'm going to name a few different groups of workers.
For each of them, please tell me whether you think artificial intelligence is more likely to <u>help them or harm them or neither help nor harm them in their work.</u>

Please read out.

Rows: Random | Columns: Normal

		Help them	Harm them	Neither help nor harm them	DO NOT READ OUT: Don't know
		1	2	3	8
Older workers	1	❍	❍	❍	❍
Low-skilled workers	2	❍	❍	❍	❍
Female workers	3	❍	❍	❍	❍
Migrant workers	4	❍	❍	❍	❍
Workers from an ethnic minority	5	❍	❍	❍	❍
Workers with disabilities	6	❍	❍	❍	❍

B012 - POLICY: GOVERNMENT POLICY AND REGULATION | **End block**

Q091 - out1: End of survey | Text

Not back

We have reached the end of the interview. We thank you for your time and we wish you a lovely day.