



# Circular Maturity Model

## Usability Report

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## Summary

The principal findings of this testing determined that the Circuleire's Circular Maturity Model is a webtool with an intuitive user experience. In general, the user interface and content are easily understood. This report will focus on those areas which caused confusion, relating to language, navigation, user interface and content.

As the term 'Circularity' is relatively new, it does not appear within current business models, while the term 'Sustainability' is more often used both currently and with regard to targets. This fact caused all participants a level of uncertainty as to correct selection of current and target levels. All participants also have experience implementing practices for many years, but never referred to these practices as 'circular'.

The apparent interchangeability of the words, 'circularity', 'circular economy' and 'circular business models' and also 'company' and 'organisation' contributed the participants' hesitation or even confusion when selecting certain levels.

Considering the above, more information may be useful. This could take the form of pop-ups on various statements (present in AMM and APS) or a glossary of circular terminology before the questionnaire section.

For future iterations, two filter functions may be useful. Both the Job Title and Company dropdowns at Registration could be used to filter those statements or sections which are not applicable to the user. This would result in a smoother user journey throughout the webtool and more accurate assessment of the company's circular maturity.

# Participants

The testing was carried out from 1<sup>st</sup> December and 10<sup>th</sup> December 2020.

Circuleire partners were contacted by Dr Geraldine Brennan and asked to participate in a usability testing session of the Circuleire Maturity Model. 2 companies offered their time to participate in the session.

Below is a table summarising the 4 participants:

Name	Company	Sector
Stephen Callinan	Pfizer	Pharma
Thomas McCarthy	Pfizer	Pharma
Paul Brown	Pfizer	Pharma
Padraig O'Carroll	Kerry Group	Food

# Method

The participants had experience of the functionality and aesthetics of the Circuleire Maturity Model webtool, limited to a demonstration given by Dr Geraldine Brennan and the Circuleire team at IMR. In both interviews, the participants chose to use the session to complete the questionnaire, giving feedback at each stage of the webtool. A series of semi-structured interview questions were asked throughout the sessions. All comments were noted, providing further insight into the webtool's successes, failings, pain points and areas for future development.

## *Testing conditions*

- The testing session was conducted on a three-to-one (Pfizer) and one-to-one basis (Kerry Group). The interviewer for this testing was performed by IMR UX Researcher, Denise Thomas.
- The webtool was tested during interviews via Microsoft Teams. The interviewer tested on an IMR staff DELL laptop. The participants tested using their own work laptops, sharing their screen with the interviewer to demonstrate the webtool's format on varied partners' browsers.
- The webtool was tested on browsers Chrome, Firefox and Internet Explorer within the Windows operating system.
- The interviewer's wi-fi was supplied by VODAFONE, and the participants' connections were supplied by their personal or working internet providers.

## *CMM webtool testing itinerary*

- Each session began with an initial greeting and brief verbal introduction of the Circuleire Maturity Model.
- The participant was then asked to login to the webtool (using either participant's own login details or those of their company) and describe their first impressions of the Homepage.
- The participant was asked to navigate the webtool while 'thinking aloud', offering commentary on their understanding of each screen, what was required of them, the legibility of the text and the efficacy of navigation and interface. Comments on the webtool's functionality and concept were welcomed throughout the testing session.

# Findings and Recommendations

This section reports the results from the IMR semi structured interview and additional commentary from the participants, under several headings. The results are categorized as either High or Low Priority, with High or Low Difficulty. Difficulty in this case, refers to the level of time needed to implement the recommendation.

## Language

In general, the language and tone of voice was very well received. However, several minor instances and two major instances of language was noted.

### High Priority – Low Difficulty

#### Use of the phrase “circular business model”

All participants did not fully understand what precisely constitutes a “circular business model”. While the participants have extensive company experience relating to sustainability, recycling, waste management and energy efficiency (with cost drivers and regulatory targets at the core of such practices), they were hesitant, and in some cases unable, to select a current level for their company at several stages during the questionnaire. This was due to the language used in the questionnaire. As the word “circular” is relatively new, with regard to business models, the participants commented that although they were exercising practices for several years which would be termed circular or relevant to a circular business model today, selecting their current level pertaining to circularity specifically, led to confusion and the potential for inaccurate selection.

It should also be noted that this is the case for some target level statements – while company target level statements may refer to sustainability, the word “circularity” does not appear. This resulted in a certain amount of ‘guesswork’ on behalf of the participants.

#### *Specific examples:*

Strategy/Vision & Mission: “...with regard policy statements, the word ‘circularity’ does not appear... but [words relating to] emission, environmental impact... translatable into ISO”

Culture/Values & Leadership: One participant expressed a “quantum leap” between Levels 4 and 5, namely ‘...commitment to matching best practice’ (Level 4) and ‘...actively demonstrating sectoral leadership’ (Level 5).

Culture/Values & Leadership: "... the language needs to be changes...one of our by-products is sludge which goes to the fields... traditionally for years... we also ship by-products to Spain... we lead this way because it is a cost driver, it happens to be a circular action"

### Recommendation

Re-phrase instances of circularity and circular business models within the current level statements within the questionnaire, resulting in more relatable current level statements. This, in turn, will result in a more accurate assessment.

Figure 1 provides an example of the phrase "circular business model". One participant suggested alternative wording, "circular business thinking".

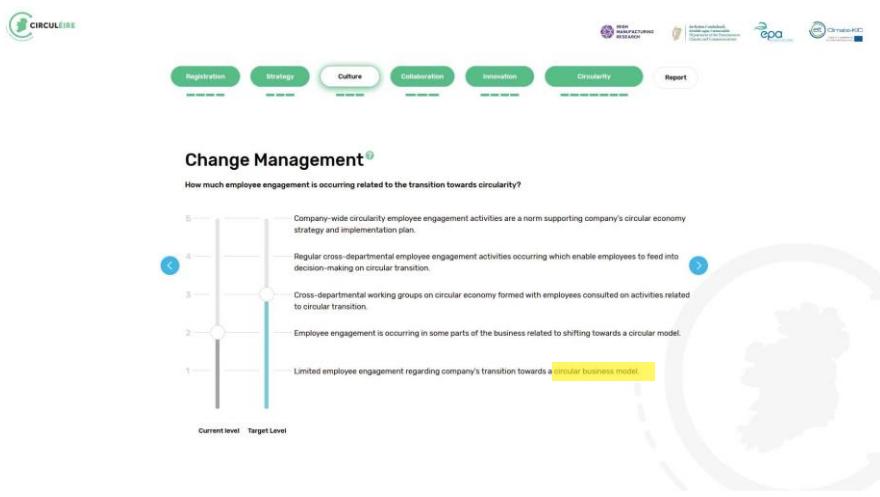


Figure 1.

### High Priority – Low Difficulty

#### Use of language pertaining to "company" and "organisation"

One participant expressed difficulty as to how and for whom, he should select current and target levels – should the participant complete the questionnaire on behalf of the company site or division, or on behalf of the group or multinational. This is particularly relevant to multinational companies.

#### *Specific examples:*

Strategy/Vision & Mission: "...Corporate level mission statements are produced...adopted into divisions... do people outside the division structure know what a mission statement,

objective or goal is" (Padraig O'Carroll, Engineering Manager, Primary Dairy Division, Kerry Group)

**Strategy/Governance & Reporting:** One participant expressed indecision on how to select levels, referred to Level 3 as business, Level 4 as organisational or Group level, interpreting the business model as financially orientated, not related or anchored in sustainability.

#### **Recommendation**

Include company hierarchy within the registration dropdowns. This will ensure user confidence as to their accuracy in answering the questionnaire, while providing better definition with regard to the reports generated and the benchmarking functionality.

[Note: Does one participant (Job title) hold the necessary experience or have access to the necessary information (eg; from Strategy (Corporate) to Circularity (Reuse)) to provide an accurate assessment of both current and target levels for all categories? For example, one participant did not feel equipped to answer Take-Back Scheme. For future iterations, the use of a filter function for questionnaire statements/categories relevant to the Job Title selected during Registration.]

#### **High Priority – Low Difficulty**

##### **Circularity/Reuse**

One participant expressed that this section's language is very mechanical.

#### **Recommendation**

Edit text to be more relatable to non-mechanical industry types. One participant suggested that the word 'repair' be replaced with "treated" or "re-processed".

#### **High Priority – Low Difficulty**

##### **Use of the word 'Burden'**

All participants did not find the Level 1 statement (Strategy/Goals & Objectives) to be fair or true as representative of their companies' current level. All participants agreed with the first sentence of this Level 1 statement, but not the second. The word 'burden' was not received well, see Figure 2.

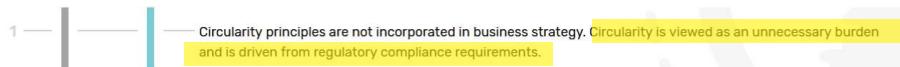


Figure 2.

### Recommendation

Remove second sentence. Consider if this sentence adds value to first sentence.

### Low priority – Low Difficulty

#### Use of the pronoun “I” within graphic on Homepage

One participant expressed that it may be better to use the pronoun “we” instead of “I”, see Figure 3.

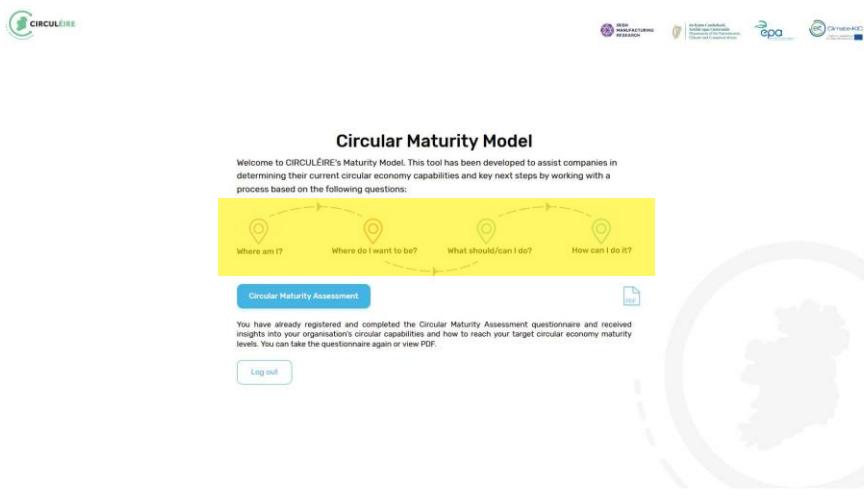


Figure 3.

### Recommendation

Edit the pronoun “I” within the graphic on the Homepage to reflect the company, rather than the individual answering the questionnaire.

### Low Priority – Low Difficulty

#### 5 Year Target

Although, the ‘5 Year Target’ is mentioned on the Welcome screen, one participant did not remember this time period when reviewing the target level statements throughout the questionnaire.

### Recommendation

Edit the title of the ‘Target level’ vertical slider to ‘5 Year Target Level’.

### **Low Priority – Low Difficulty**

#### **Use of the word ‘Limited’, ‘Recognised’ and ‘Wider Ecosystem’**

One participant expressed doubt at the use of the word ‘limited’ (Collaboration/Ecosystem Partnerships Level 1) and ‘recognised’ (Collaboration/Ecosystem Partnerships Level 5). Participant needed clarification on ‘Wider Ecosystem’ – does this refer to national or international?

#### **Recommendation**

Edit the words in question. [Note: Perhaps, ‘Limited’ sounds too negative – Language should not negatively affect the user]

‘Recognised’ – clarify what this means to the user? The participant was unsure regarding recognition, and asked if “acted on” or ‘put into practice’ could clarify this further.

Clarify statements using pop-ups (as per category headings with ‘Question mark’ hover pop-ups.

## **Navigation**

All participants navigated the webtool with ease; from Registration to Report. One participant intuitively understood the user may return to previous questionnaire sections. This was due to the pulsing effect when the user hovers over the section tab at the top of the screen.

## **High Priority – High Difficulty**

### **Save function**

One participant expressed concern as to the omission of a 'Save' function. [Note: This may be a bug experienced by such participant, as internal testing did not offer this result]

### **Recommendations**

If the user can only complete the questionnaire in one sitting (ie without saving for future completion), text informing the user of this fact must be included prior to the start of the questionnaire.

If it is possible for the user to save his/her progress, and return at a later stage, a 'Save' button must be included in every screen. This scenario was experienced during the testing session with Kerry Group. Due to the in-depth commentary offered by Padraig O'Carroll, testing extended to a second session. Unfortunately, the participant's registration and questionnaire responses were not recorded upon logging in to the second session.

## **High Priority – Low Difficulty**

### **Log out function**

One participant expressed satisfaction regarding the 'Log out' function which appears on the Homepage. This conveyed a sense of security with regard to recording the participant's professional details and responses. However, the user must navigate back to registration to access the 'Log out' button.

### **Recommendation**

Include the 'Log out' button in every screen.

## User Interface

The webtool's user interface was well received by all participants. This extends to layout, text legibility and readability, buttons, graphics and data visualisation (radial graphs). One minor instance regarding text size was expressed by one participant.

### High Priority – High (Pulsing effect) Low (Highlighted text) Difficulty

#### Radial graph clickable dots (Maturity Report)

All participants did not read the text below 'Maturity Report', see Figure 4.

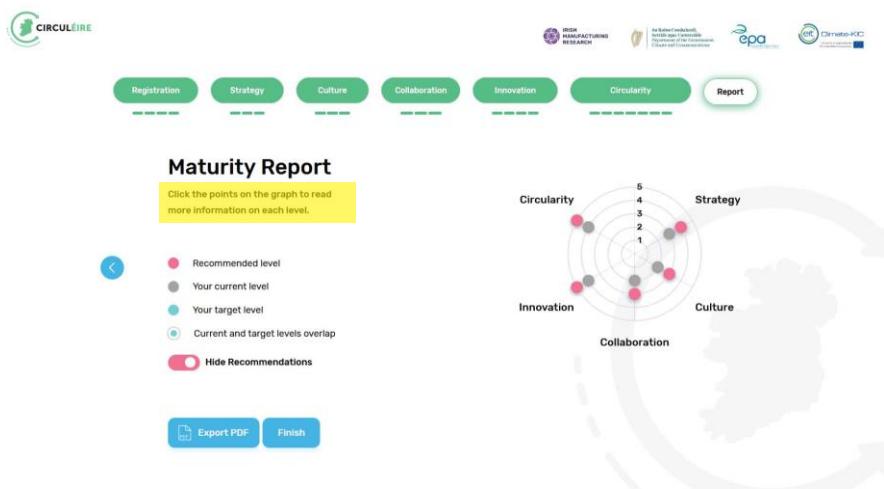


Figure 4.

## Recommendation

Highlight this text to inform the user that there is more information available.

If possible, have one dot on the radial graph with pulsing effect.

## Low Priority – Low Difficulty

#### Homepage text sizes

One participant expressed that the different sizes of text displayed on the Homepage (see Figure 3) did not convey their intended purpose. The participant considered the smaller text (description of the CMM) similar to a "small print". This could lead the user to overlook the text description of the CMM.

## Recommendation

Homepage text should be the same size. Either increase description text or reduce Introduction text. This will ensure equal importance to both paragraphs, see Figure 5.

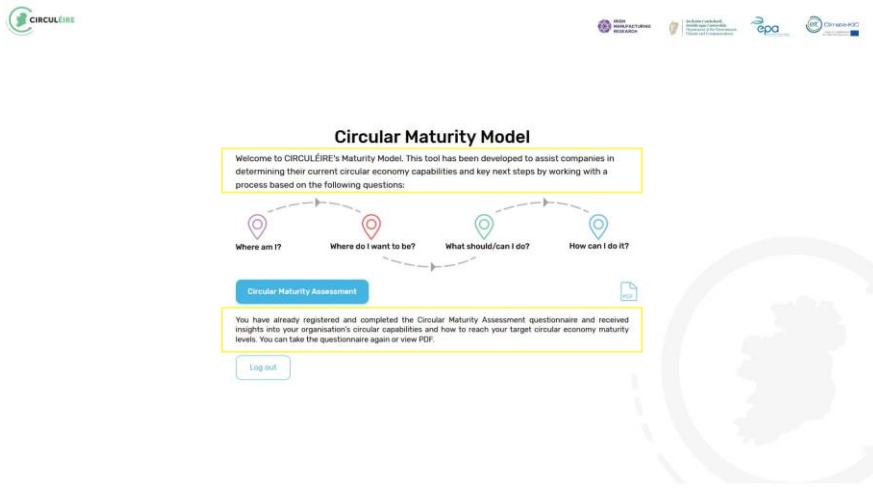


Figure 5.

## High Priority – High Difficulty

### Navigation tabs with misaligned text

One participant experienced the webtool with misaligned text in navigation tabs, see Figure 6. [Note: This was experienced by one participant only, other participants and internal testing did not offer this result]

### Recommendation

Re-visit responsiveness and formatting for Internet Explorer, especially resolution settings.

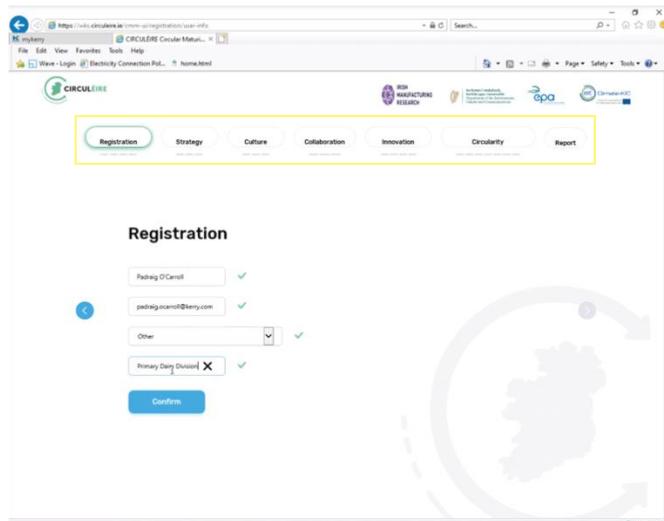


Figure 6.

## High Priority – High Difficulty

### Non-uniform scaling of IMR logo above navigation tabs

One participant experienced non-uniform scaling of the IMR logo throughout the webtool.

All other logos were scaled uniformly, see Figure 7.

## Recommendation

Re-visit responsiveness and formatting regarding IMR logo in Internet Explorer browsers.

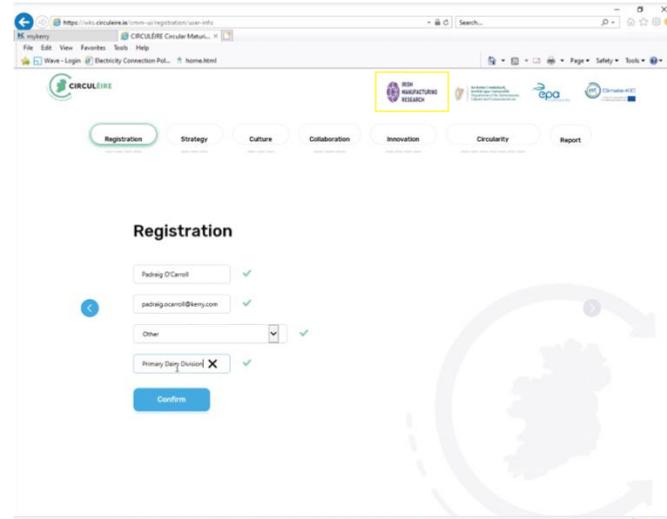


Figure 7.

## High Priority – High Difficulty

### Overlapping text on Industry page of Registration section

“Built Environment/Construction” and “Food and Drinks” text overlaps in the Internet Explorer browser, see Figure 8.

## Recommendation

Re-visit responsiveness and formatting with regard Internet Explorer browser and screen resolutions.

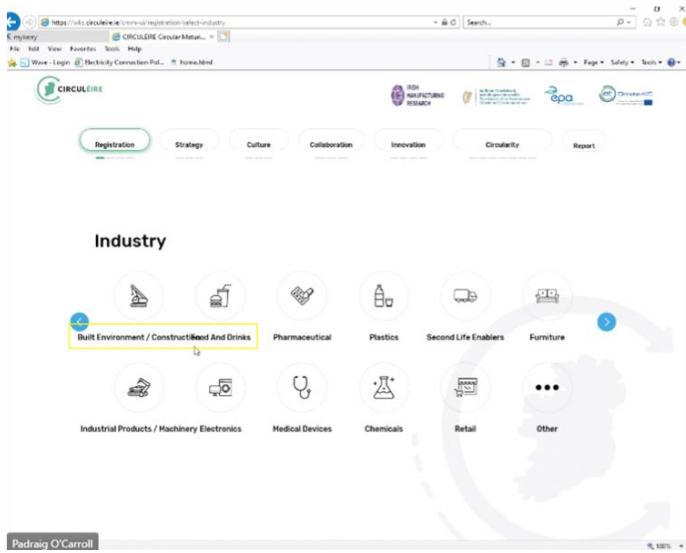


Figure 8.

## Low Priority – Low Priority Iconography backgrounds

Should icons have a white or transparent background? Icons appear clearer with white background (when viewed layered over Circuleire 'Ireland' graphic, bottom right, see Figure 9).

## Recommended

Edit icon backgrounds to feature white background on inactive and hover states.

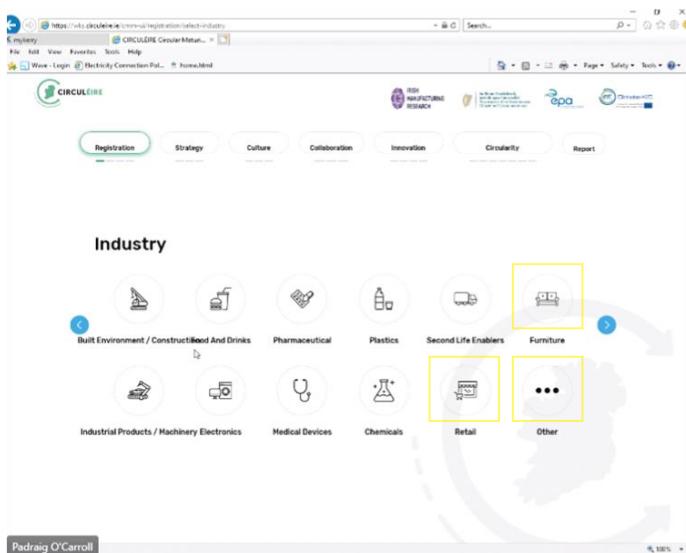


Figure 9.

### Low Priority – Low Difficulty

#### Vertical Slider (Current level)

One participant expressed difficulty when viewing the Current level slider (dark grey), see Figure 10.

#### Recommendations

Edit the Current level slider colour to a darker grey. Keep grey colour as both Current and Target levels are represented by the same colours within the radial graph in the report section.

Edit the colour of both vertical sliders (inactive or unselected state, at present light grey) to a lighter grey to establish greater contrast between Current level selected and unselected.

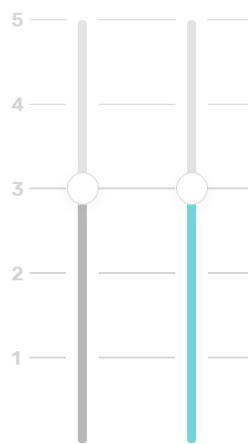


Figure 10.

### Low Priority – Low Difficulty

#### Vertical slider titles, inconsistency in capitalisation

First vertical slider title appears as 'Current level' (lower case 'l') while second vertical slider title appears as 'Target Level' (uppercase 'L'), see Figure 11.

#### Recommendation

Edit first vertical slider title to read, "Current Level" (uppercase 'L' to be consistent with heading capitalisation etc.

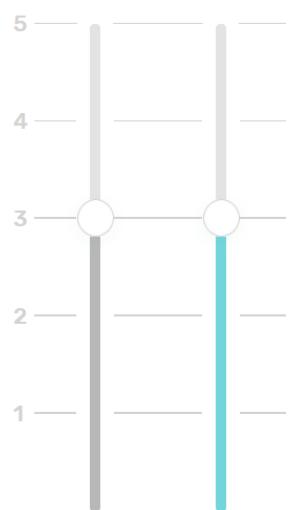


Figure 11.

## Content

### High Priority – Low Difficulty

#### Privacy

One participant expressed concern about the security of the webtool, ie dissemination of his professional details and responses.

#### Recommendation

Although a privacy policy is hyperlinked on the Login screen, this is often overlooked by users. Include text before the questionnaire section, informing the user that his/her details and responses will not be shared, other than as a resource for future benchmarking. As space is limited, a privacy policy icon, similar to the 'Question mark' icon, could be included before the questionnaire or throughout the questionnaire, with hover functionality, revealing GDPR details, reassuring the user that his/her details and responses will remain confidential.

### High Priority – Low Priority

#### Select Job Title

One participant could not select his job title. While there are several titles present pertaining to managerial and engineering roles, 'Engineer Manager' is not present. Although, EHS job titles are present (and very relevant), no specific 'Sustainability' job titles are present. [Note: As previously mentioned, there is no mention of company site or division]

#### Recommendation

Expand Job Title dropdown to include 'Engineer Manager' and those job titles relating to sustainability, in particular, those job titles referencing ISO regulations' areas of interest.

Also, hierarchy of company should be recorded, as it clarifies to the user on whose behalf he/she is responding to the questionnaire (ie international/group or division/ site).

### High Priority – Low Difficulty

#### Repetition

Innovation/Design: This section refers to product design, packaging design and process design. Packaging design, see Figure 12. One participant chose to concentrate his selection on packaging design, as the product and process design were non-applicable. Packaging, however, is repeated under Circularity/Packaging.

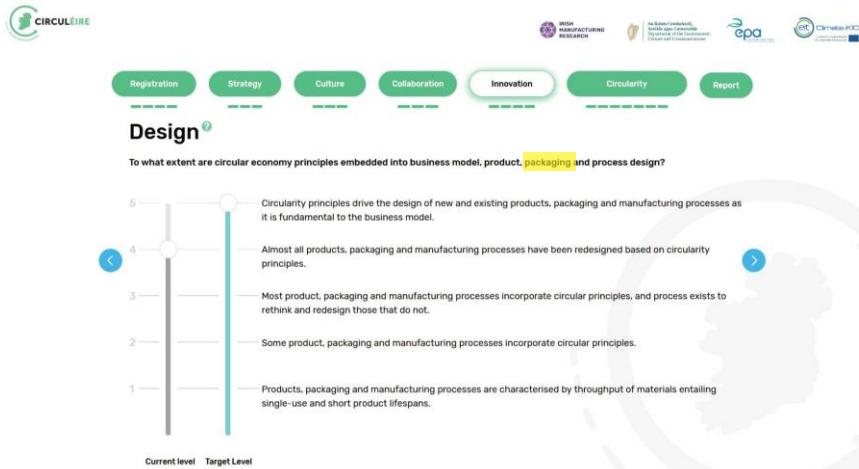


Figure 12.

Innovation/Procurement: Level 4 and 5 statements are the same, see Figure 13.

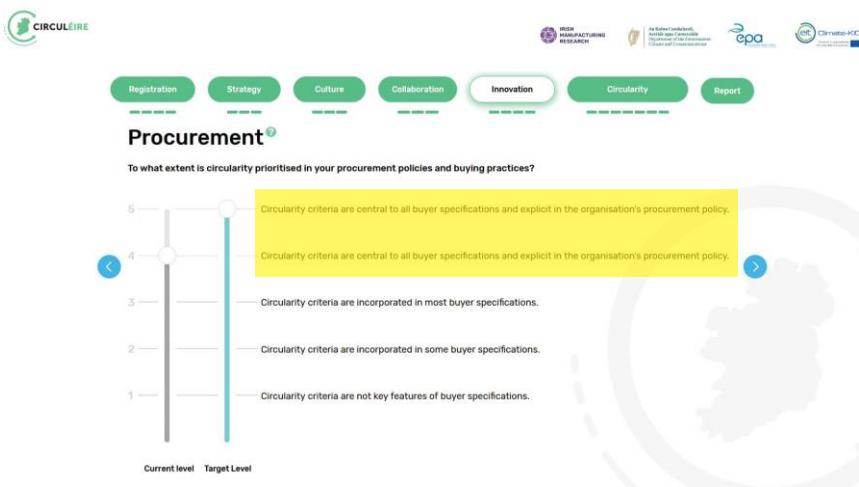


Figure 13.

## Recommendation

Remove or re-phrase those instances of repetition.

## High Priority – High Difficulty

### Non-applicable questions for specific industry types

All participants experienced current and target level statements which did not apply to their specific industry type, ie Pharma and Food. One participant, for example, expressed that PaaS does not apply to the food industry

### **Recommendation**

For future iterations, the use of a filter function of the questionnaire statements, to apply for industry types, entered at Registration. This would provide a better experience for the user and a more accurate assessment of the company's circular maturity.

### **High Priority – High Difficulty**

#### **Innovation/Procurement**

One participant was unsure “how procurements could stipulate circularity” and expressed that “a data piece is needed here”.

### **Recommendation**

Include a ‘Question mark’ icon with hover pop-up, giving more detail on those instances not fully understood.

### **High Priority – Low Difficulty**

#### **Outsourcing of circularity enablers**

One participant was unsure if the company itself needed to perform circularity enablers, for example, Data Analytics. If the company outsourced its Data Analytics, would this satisfy the selected statements.

### **Recommendation**

Edit statements to include outsourcing as satisfactory for statement selection.

### **High Priority – Low Difficulty**

#### **Circularity/Traceability & Transparency**

All participants selected either Level 4 or 5 for this section. For those participants who choose Level 5 for their Current Level. As a result, the participant did not have a target level statement to select.

### **Recommendation**

This section may benefit from a re-structure with a higher level statement to replace Level 5, as all participants tested scored highly in this section.