Design 2019 v1.1
IA3 mid-level annotated sample response
June 2018

Project (25%)
This sample has been compiled by the QCAA to assist and support teachers to match evidence in student responses to the characteristics described in the instrument-specific marking guide (ISMG).

Assessment objectives
This assessment instrument is used to determine student achievement in the following objectives:

1. describe the features and sustainable requirements that define a redesign problem and design criteria based on the requirements of the opportunity and the principles of good design
2. represent ideas, a sustainable design concept and sustainability information using schematic sketching and ideation sketching and/or low-fidelity prototyping in the explore and develop phases
3. analyse redesign opportunities using data about existing designed solutions and sustainability information
4. devise ideas using divergent thinking strategies and circular design methods in response to a redesign problem in the develop phase
5. synthesise ideas and sustainability information to propose a sustainable design concept in the develop phase
6. evaluate the strengths, limitations and implications of ideas and a sustainable design concept against design criteria to make refinements
7. make decisions about and use visual, written and/or spoken communication to present a design brief and visual display of a design proposal for stakeholders.
Instrument-specific marking guide (ISMG)

Criterion: Exploring

Assessment objectives

1. describe the features and sustainable requirements that define a redesign problem and design criteria based on the requirements of the opportunity and the principles of good design

2. analyse redesign opportunities using data about existing designed solutions and sustainability information

The student work has the following characteristics:

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>• discerning description of features and sustainable requirements that define a redesign problem and essential design criteria based on the requirements of the opportunity and the principles of good design</td>
<td>6–7</td>
</tr>
<tr>
<td>• insightful analysis of redesign opportunities using relevant data about existing designed solutions and sustainability to identify the significant features, constraints and the relationships between them.</td>
<td></td>
</tr>
<tr>
<td>• adequate description of features and sustainable requirements that define a redesign problem and some design criteria based on the requirements of the opportunity and the principles of good design</td>
<td>4–5</td>
</tr>
<tr>
<td>• appropriate analysis of redesign opportunities using data about existing designed solutions and sustainability to identify features and constraints.</td>
<td></td>
</tr>
<tr>
<td>• superficial description of a redesign problem with sustainable requirements and some design criteria</td>
<td>2–3</td>
</tr>
<tr>
<td>• superficial analysis of redesign opportunities to identify some partial features.</td>
<td></td>
</tr>
<tr>
<td>• description of aspects of a redesign problem</td>
<td>1</td>
</tr>
<tr>
<td>• statements about opportunities.</td>
<td></td>
</tr>
<tr>
<td>• does not satisfy any of the descriptors above.</td>
<td>0</td>
</tr>
</tbody>
</table>
Criterion: Devising

Assessment objectives

4. devise ideas using divergent thinking strategies and circular design methods in response to a redesign problem in the develop phase

<table>
<thead>
<tr>
<th>The student work has the following characteristics:</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>• multiple ideas perpectively devised from different points of view — with each idea incorporating unique, credible and detailed attributes — using divergent thinking strategies and circular design methods in response to a redesign problem in the develop phase.</td>
<td>4–5</td>
</tr>
<tr>
<td>• ideas appropriately devised — with each idea incorporating credible and detailed attributes — using a divergent thinking strategy and aspects of circular design methods in response to a redesign problem in the develop phase.</td>
<td>2–3</td>
</tr>
<tr>
<td>• ideas disjointedly devised in response to aspects of a redesign problem.</td>
<td>1</td>
</tr>
<tr>
<td>• does not satisfy any of the descriptors above.</td>
<td>0</td>
</tr>
</tbody>
</table>
Criterion: Synthesising and evaluating

Assessment objectives

5. synthesise ideas and sustainability information to propose a sustainable design concept in the develop phase

6. evaluate the strengths, limitations and implications of ideas and a sustainable design concept against design criteria to make refinements

<table>
<thead>
<tr>
<th>The student work has the following characteristics:</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>• coherent and logical synthesis by combining attributes of multiple ideas and sustainability information to propose an innovative sustainable design concept in the develop phase</td>
<td>4–5</td>
</tr>
<tr>
<td>• critical evaluation of the strengths, limitations and implications of ideas and a sustainable design concept against design criteria to make discerning refinements that improve ideas and the sustainable design concept.</td>
<td></td>
</tr>
<tr>
<td>• simple synthesis by combining ideas and sustainability information to propose a sustainable design concept</td>
<td>2–3</td>
</tr>
<tr>
<td>• feasible evaluation of the strengths and limitations of ideas and sustainable design concept against some design criteria to make adequate refinements.</td>
<td></td>
</tr>
<tr>
<td>• unclear combination of ideas</td>
<td>1</td>
</tr>
<tr>
<td>• make statements about ideas or the sustainable concept.</td>
<td></td>
</tr>
<tr>
<td>• does not satisfy any of the descriptors above.</td>
<td>0</td>
</tr>
</tbody>
</table>
Criterion: Representing and communicating

Assessment objectives

2. represent ideas, a sustainable design concept and sustainability information using schematic sketching and ideation sketching and low-fidelity prototyping in the explore and develop phases

7. make decisions about and use visual, written and/or spoken communication to present a design brief and visual display of a design proposal for stakeholders.

<table>
<thead>
<tr>
<th>The student work has the following characteristics:</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>sophisticated representation of ideas, a design concept and sustainability information using fluent sequences of schematic sketching and ideation sketching and/or low-fidelity prototyping to progress understanding in the explore and develop phases</td>
<td>7–8</td>
</tr>
</tbody>
</table>
| discerning decision-making about, and fluent use of,  
  - illustrations and/or low-fidelity prototypes to promote a design opportunity with sustainable attributes for relevant stakeholders  
  - written and/or spoken conventions, features and design-specific language to present a design brief for a specified audience | |
| considered representation of ideas, a design concept and sustainability information using proficient schematic sketching and ideation sketching and/or low-fidelity prototyping to progress understanding in the explore and develop phases  
 effective decision-making about, and proficient use of,  
  - illustrations and/or low-fidelity prototypes to promote a design opportunity with sustainable attributes for relevant stakeholders  
  - written and/or spoken conventions, features and design-specific language to present a design brief for a specified audience | 5–6 |
| appropriate representation of ideas, a design concept and sustainability information using schematic sketching and ideation sketching and/or low-fidelity prototyping in the explore and develop phases  
 appropriate decision-making about and use of  
  - illustrations and/or low-fidelity prototypes to promote a design opportunity  
  - written and/or spoken conventions and features to present a design brief | 3–4 |
| cursory representation of ideas and information using unclear sketching or low-fidelity prototyping in the design process  
 variable decision-making about, and inconsistent use of,  
  - illustrations and/or low-fidelity prototypes  
  - written and/or spoken conventions. | 1–2 |
| does not satisfy any of the descriptors above. | 0 |
Task

Context

The context of this project is sustainable design. Fundamental to sustainable design is the principle that designers should create new designs that can be supported indefinitely in terms of their economic, social and ecological impact on human wellbeing.

Products, services and environments are often designed for specific cultural celebrations and events. Unfortunately, their use is often limited to the duration of the event. Examples include a mobile phone app for spectators navigating events at a music festival or a Christmas-themed carry bag.

Task

Respond to the following question: How can products, services and environments be redesigned to extend their useful life beyond their original intended purpose?

You are required to:

- identify a design opportunity based on the redesign of a product, service or environment that was originally designed for a specific cultural celebration or event
- apply the design process to explore and develop the opportunity
- use circular design methods to improve the economic, social or ecological sustainability of your design concept.

Sample response

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Marks allocated</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exploring Assessment objective/s 1, 3</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Devising Assessment objective 4</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Synthesising and evaluating Assessment objective/s 5, 6</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Representing and communicating Assessment objective/s 2, 7</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>18</td>
</tr>
</tbody>
</table>
The annotations show the match to the instrument-specific marking guide (ISMG) performance-level descriptors.

Exploring [4–5]
appropriate analysis of redesign opportunities using data about existing designed solutions and sustainability to identify features and constraints

Part A

Unit 4
Sustainable Design

Context:
1. A new design that can be supported indefinitely in terms of economic - money, financial cost, social - human centered, society needs, cultural, ecological - how does it affect the world, environmental - the wellbeing of humans, products, services, and environments are often designed for specific cultural celebrations and events, political and local life is often limited

How can I extend the life of something with design?

- Innovative - aesthetic - enduring - accessible - useful - sustainable

Participles of Design

What do I need to do?
1. Identify a design opportunity
   - based on a redesign of a product/service/environment
   - something positive
   - something relative
   - something I care about
   - something that will make a difference and benefit many

2. Apply the design process to explore and develop the opportunity

3. Use circular design methods to improve
   - economic
   - social
   - ecological
   - sustainability
   - my concept

Who can benefit?

How will it look?

Is it already out there?

B Part A
Exploring [4–5]
appropriate analysis of redesign opportunities using data about existing designed solutions and sustainability to identify features and constraints

Representing and communicating [5–6]
considered representation of ideas, incorporating sustainability information using proficient schematic sketching and ideation sketching and/or low-fidelity prototyping to progress understanding in the explore and develop phases

specific cultural celebrations and events

What specific cultural celebrations and events exist? Who do they appeal to? What factors are common to them? Can I identify an opportunity?
Exploring [4–5]
appropriate analysis of redesign opportunities using data about existing designed solutions and sustainability to identify features and constraints.
Exploring [4–5]

adequate description of features and sustainable requirements that define a redesign problem and some design criteria based on the requirements of the opportunity and the principles of good design.
Exploring (4–5)
appropriate analysis of redesign opportunities using data about existing designed solutions and sustainability to identify features and constraints

Representing and communicating (5–6)
considered representation of ideas, a physical prototype and communicating information with accuracy. schematic sketching and ideation sketching and/or low-fidelity prototyping to progress understanding in the explore and develop phases

Exploring [4–5]
appropriate analysis of redesign opportunities using data about existing designed solutions and sustainability to identify features and constraints

Exploring [4–5]
appropriate analysis of redesign opportunities using data about existing designed solutions and sustainability to identify features and constraints

Representing and communicating [5–6]
considered representation of ideas, a physical prototype and communicating information with accuracy. schematic sketching and ideation sketching and/or low-fidelity prototyping to progress understanding in the explore and develop phases

what already exists...

Platforms

database

portals

profiles

resumes

websites

mobile app

how are these accessed?? delivered?? marketed??

volunteering

x voluntary qlt / hokum
x facebook group / burnin pages
x festivals currently - online app / portals
x snapchat group
x instameet

+ word of mouth !

v.promote

x connect

x link

x promote

to be used by

festival organisers + junior volunteer workforce

how to adapt this... concept - adult workforce/volunteering = burnin ... fest

festival organisers

junior volunteer workforce

construct a platform as a way of linking the two stakeholders to ensure wellbeing and benefit to both

construct a platform as a way of linking the two stakeholders to ensure wellbeing and benefit to both

music festivals

design

2019 v1.1

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Queensland Curriculum & Assessment Authority
June 2018

Page 11 of 17
Exploring [4–5]

adequate description of features and sustainable requirements that define a redesign problem and some design criteria based on the requirements of the opportunity and the principles of good design

**Opportunity**

Platform for which high school people could ‘write’ at festivals and create employment, skills and networking...

- identified stakeholders...
- potential paid staff members (to consider - economic case)...

1. Festival organisers / event managers
   - HAVE: staff already = but not guaranteed.
     - (casual workforce)
   - cool event with musicians.

2. Junior volunteer workforce? (Me and my friends? - music festival attendees that can’t always afford music lovers/live music!!!)
   - NEED: young hipsters to help promote their event to keep it relevant
   - low cost ways of ensuring staffing their events.
   - WANT: a sustainable business that has a socio-economic conscience.
   - growing workforce - like people have worked their way up as young adults, attended as consumers and promote their event in the best - (promotional wealth for free)!!!
   - ongoing business - to make money also.

3. Junior volunteer workforce (students aged 15–18)
   - HAVE: different interests, music, food, tech, sport, values - varied availability and free time
   - already a bank of skills and attributes to offer employers
   - school work / family commitments
   - NEED: opportunities to build their resume whilst still at school
     - to increase ‘social network’ for future adults
     - WANT: to volunteer to help others and be part of the bigger community
     - meet other like minded people in an environment that is fun and awesome
     - exposure to diverse environments that are varied and different to the usual
     - to increase employability skills and secure future money making potential
     - to attend cool music festivals and other events for minimal $$$ money
Devising (2–3)

Ideas appropriately devised — with each idea incorporating creative and detailed attributes — using a divergent thinking framework and methods of creative design methods to respond to a redesign problem in the develop phase.

Develop

A database “hub” dedicated to music festival organisers and the junior workforce. A platform whose social connection can occur to benefit all involved to ensure successful music festivals!! and happy teens!!

- Webpage with 2 access points
  - each is themed and aimed at the appropriate audience
    - Business like for festival organisers
    - cool easy profiles/images etc for junior workforce volunteers
  - able to upload profile — trade Facebook/insta? to see history and skills etc.
  - business/event organiser have their own profiles. (think Instagram?)
  - only for age 15–18 — exclusivity/contemporary/vibrant — can go to other job seeking apps after school.
  - rating system can apply for both users and venue preference etc can be added.

Festival organisers can utilise the social media skills of their volunteer workforce to promote their event.

Strengths:
- Sustainable

Limitations:
- Indiscernible

Indications:
- Indispensible

Need a brand? a name? identifying + for the

How will it look?

Who can benefit?

Who will look after it?

Benefits:
- A living portal which will change and evolve as the users age + change.
  - sponsorship as paid for website workforce by the employers e.g.: the businesses involved in the festivals/events businesses.
  - live feeds of photos of work/sells learned/friendship made etc.
  - businesses can create more paid jobs at festivals by incentivised patronage created by the junior workforce.
  - cheap music festivals for students.
  - the economic benefits as far both parties — free workforce/labour for event organisations.
Representing and communicating [5–6]

critical representation of ideas, a design concept and sustainability information using proficient, purposeful sketching and ideation techniques and/or low-fidelity prototyping to progress understanding in the design and planning process.

Devising [2–3]

Ideas appropriately and effectively described, annotated and detailed, and aspects of ideas, using a divergent thinking strategy, and attributes of circular design methods to respond to a redesign problem in the design process.

Synthesising and evaluating [2–3]

Critical evaluation of the strengths and limitations of ideas and sustainable design concepts against some design criteria to make adequate progress.
Representing and communicating [5–6]

- Consideration of ideas, design concept and sustainability information
- Proficient schematic sketching and ideation sketching and/or low-fidelity prototyping to progress understanding in the explore and develop phases

Synthesising and evaluating [2–3]

- Feasible evaluation of the strengths and limitations of ideas and sustainable design concept against some design criteria to make adequate refinements

Devising [2–3]

- Appropriately devised, each idea incorporating credible and detailed attributes—using a divergent thinking strategy and aspects of circular design methods in response to a redesign problem in the develop phase

Useful
- Accessible
- Aesthetic
- Innovative
- Sustainable

- Convenient to use
- Data can be kept and reused by both parties
- Familiar format, a redesign of Gardens logbook
Part B

Design Brief
Festivals are common in Australia however, many large festivals such as Big Day Out and Future Music have not been socially and economically sustainable and are no longer in existence. The target market for these festivals is young people (18 to 25). Volunteering helps the organisers to keep costs down, allows young people to access expensive festivals and builds a sustainable social network that supports the ongoing viability of festivals. A further benefit is that a junior volunteer workforce would be developing employability skills that could be recorded and added to their resume. Volunteers need to be recognisable at festivals without the use of merchandise that is quickly disposed of after the festival.

There is an opportunity to redesign how volunteers are managed at events. This includes how they are identified within the festival environment and how organisers and volunteers communicate.

Design Criteria
Design a service that

- allows organisers and volunteers to communicate in the festival environment (useful)
- provides a way of identifying volunteers at the event (useful)
- is easily understood by organisers and volunteers with a minimum of training (accessible)
- encourages young people to feel a sense of social connection including visual identity (aesthetic)
- includes new or unique ways of improving communication (innovative)
- has ongoing relevance for future festivals and avoids elements that are discarded at the conclusion of a festival (sustainable)
Part C

Event Volunteer Logbook
a service for 21st century festivals connecting volunteers and event organisers.

App Strengths
- task description and history with performance rating
- familiar format, easily understood, minimum training
- redesign based on Qld Learner Logbook

Limitations
- cost
- distribution of wristbands
- app must be downloaded prior to festival where internet is not available

Implications
- field testing is needed to identify how well EVL will relate to and encourage young people to volunteer

Wristband Strengths
- multi festival use
- volunteers easily identified
- notifications received during festival, light and vibrate function
- app & band linked to festival
  wifi hubs

Representing and communicating [2–3]
effective decision making about, and proficient use of, illustrations and/or low fidelity prototypes to promote a design opportunity with sustainable attributes for relevant stakeholders.

Synthesising and evaluating [2–3]
simple synthesis by combining ideas and sustainability information to propose a sustainable design concept.

Synthesising and evaluating [2–3]
effective evaluation of the design synthesis and sustainable design concept against some design criteria to make adequate refinements.