

Premise

We need to have a bridge built to an island we have inherited, 50 metres from the shoreline of a major river. We are spending our own money on this, so it is important to us! How do we go about choosing how will design and build our bridge and what do we expect from them?

Design

Accreditation

Do we expect the designer of our bridge to have any particular qualifications?
Level of education?
Professional Qualification?
Member of a professional body?
Professional Indemnity?

Track Record

Should they have done this before?
How similar to our bridge?
Do we want leading edge or proven technology?

Specification

What should we specify?

A type of bridge (suspension, cantilever etc.)?
A type of material (steel, concrete...)?
A precise material?

Buy Vs. Build

What balance between fabrication & standard components?

A higher level set of requirements?

Build cost?
Operating cost?
Height above water?
Carrying capacity?
Disaster Resistance?

Other Concerns? (External factors)

<p>Are there any aesthetic considerations?</p> <p>Might the neighbours object?</p> <p>What about existing roads and infrastructure?</p> <p>Are there any legal requirements?</p> <p>Are there any de-facto requirements? (Driving on the left?)</p>
<p>How should we specify?</p>
<p>Back of an envelope?</p> <p>Formal document?</p> <p>What level of flexibility do we need?</p>

Build

<p>What do expect of the people who will build our bridge?</p>
<p>Accreditation</p> <p>Track Record</p>
<p>What do we expect of the materials & techniques that they will use?</p>
<p>That they meet the specifications laid down by the designer</p> <p>Adhere to industry, legal or de-facto standards</p>
<p>Do we need to track the progress of construction?</p>
<p>If so, how?</p> <p>Project Plan</p> <p>Milestones</p>

Accept

<p>How do we know that we have got what we asked for?</p> <p>Acceptance Test Procedure</p>
--

Operate

<p>What do we need to do to our bridge to keep it in working order?</p>

Modify

Might we want to modify our bridge in future? (Add toll booths?)
Should we state this in the original specification?
What are the trade-offs?