

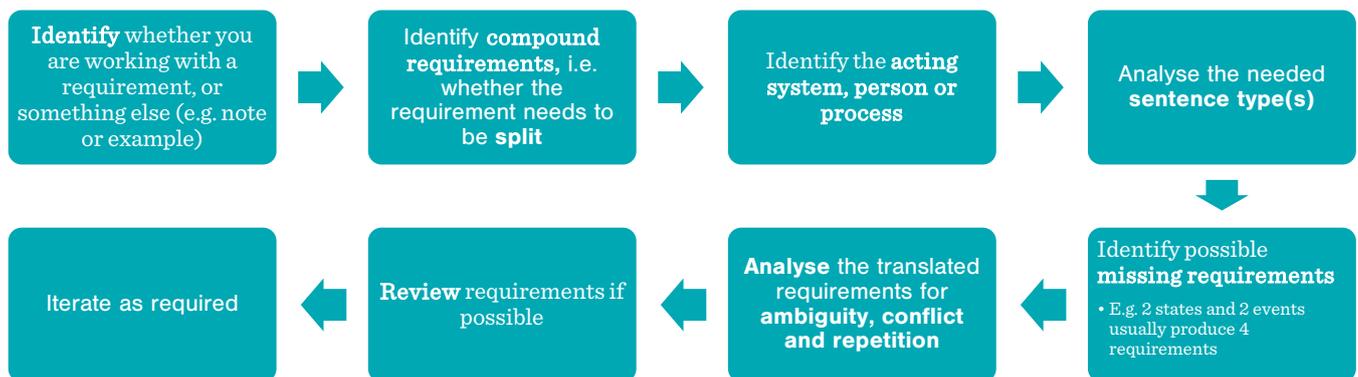
EARS quick reference sheet

Easy Approach to Requirements Syntax

Sentence types

Ubiquitous	<ul style="list-style-type: none"> •The <system name> shall <system response> •<i>The kitchen system shall have an input hatch.</i>
Event-driven	<ul style="list-style-type: none"> •When <optional preconditions> <trigger>, the <system> shall <system response> •<i>When the chef inserts a potato to the input hatch, the kitchen system shall peel the potato.</i>
State-driven	<ul style="list-style-type: none"> •While <in a state>, the <system> shall <system response> •<i>While the kitchen system is in maintenance mode, the kitchen system shall reject all input.</i>
Unwanted behavior	<ul style="list-style-type: none"> •If <optional preconditions> <trigger>, then the <system> shall <system response> •<i>If a spoon is inserted to the input hatch, then the kitchen system shall eject the spoon.</i>
Optional	<ul style="list-style-type: none"> •Where <feature>, the <system> shall <system response> •<i>Where the kitchen system has a food freshness sensor, the kitchen system shall detect rotten foodstuffs.</i>

Steps to take in applying EARS



Some characteristics of a good requirement



EARS: Using combined sentences

Example: Optional feature combined with state-driven and event-driven

- Where the car has an ABS system, while the car is moving, when the driver applies brake, the ABS system shall detect blocked wheels.
- When the ABS system detects a blocked wheel, the ABS system shall reduce effective brake pressure for that wheel until the wheel is unblocked.

Troubleshooting *EARS* problems

No sentence type fits!

- Are you translating a requirement?

I can't identify the actor!

- Use a higher abstraction level until it makes sense
- Or get more information from relevant stakeholder

There's no system response!

- Usually the case with nonfunctional requirements
- Can be expressed as "the system shall **be** ..."

There's no template for "shall not"!

- Feature of EARS, try stating as "shall be immune" or similar workaround
- As last resort just use "shall not" structure

EARS produces too many atomic requirements!

- Deep technical requirements aren't well suited to EARS
- If necessary, use a list as accompaniment
- Consider other format for technical requirements if EARS seems inappropriate

Beyond EARS: Other good practices

Use a template that:

- Provides for necessary metadata, e.g. requirement identifier
- Has provision for non-requirements, e.g. notes and examples
- But don't be dragged down by too heavy templates

Remember to keep your requirements up to date

Remember characteristics of good requirements

Requirements are about communicating between stakeholders

- Ensure you can see the forest from the trees
- Methods aren't the meaning, they are a means to an end