

## Example

Before filling out the Application Proposal in the Online Application System, the applicant shall complete the TRL Self-Assessment Form, through which the current TRL and expected achievable TRL of the project proposed upon its conclusion are to be assessed. The following examples are for your reference.

The forms are generated by the Application System, the applicant shall fill in the information required through the Application System.

### TRL Self-Assessment Form

List of Critical Technology Elements (CTEs)						
Project title	Project xxx					
S/N	Name of CTE	Relation with project objectives	Importance weight	TRL self-assessment information		
				Assessment type	Current TRL	Target TRL
1	Pure electric commercial vehicle wheel side drive axle	Major deliverable 1	70.00%	General hardware	TRL4	TRL7
2	Pure electric passenger vehicle wheel hub motor drive system	Major deliverable 2	30.00%	General criteria	TRL2	TRL5
...	...	...	...	...	...	...
<b>TRL of project</b>					<b>TRL2</b>	<b>TRL5</b>

**Commented [MOU1]:** Multiple CTEs for a project are allowed. The applicant may define one or more CTEs for the project proposed.

**Commented [MOU2]:** Fill in the current TRL and expected achievable TRL upon project conclusion.

**Commented [MOU3]:** It refers to No.1 CTE stated in the List of Critical Technology Elements (CTEs). This form is provided for the applicant to objectively assess the current TRL and expected achievable TRL of the project proposed upon its conclusion.

### TRL self-assessment of CTE1

Name of CTE	Pure electric commercial vehicle wheel side drive axle		Assessment type	General hardware
Function description	S/N	Expected function	Current function	Remarks
	1	To improve the full condition cycle efficiency to 94%	30% currently	Use the product of xx Company, hub motor (Type: xxx) as a reference.
	2	To reduce motor vibration and noise during operation	Noise > 50 dB(A)	
	...	...	...	...
Technology index	S/N	Expected index	Index currently achieved	Remarks
	1	Peak power 120kW	Current peak power 100kW	
	2	Maximum speed RPM=6000	Current maximum speed RPM=5000	
	...	...	...	...

**Commented [MOU4]:** Multiple functions are allowed.

**Commented [MOU5]:** Multiple technology indexes are allowed.

## Example

<b>Current TRL assessment</b>	<b>Current TRL</b>	TRL4			
	<b>Current TRL definition</b>	Critical functional samples/modules validated by test or simulation in laboratory environment			
	<b>Summary of current TRL</b>	Prototype system, prototype design report, test plan, vehicle power matching report			
	<b>Degree of compliance with assessment criteria</b>	<b>TRL assessment criteria</b>	<b>Weight</b>	<b>Work completed corresponding to assessment criteria</b>	<b>Degree of compliance with criteria</b>
		Critical functional samples/modules/components are developed.	30%	Prototype produced	100%
		The functions and performance of critical functional samples/modules/components are tested or simulated in laboratory environment.	30%	Laboratory environment for prototype established	80%
		Critical functional samples/modules/components are trial-produced.	10%	Functional components formed	80%
		System integration of critical functional samples/modules/components is conducted.	10%	Function integration of engine components and connector components	100%
		Critical manufacturing processes are assessed.	10%	Preliminary formation of manufacturing processes	80%
		The files about the design process of critical functional samples/modules/components are clear.	10%	Data archiving	80%
<b>Compliance level</b>		<b>88%</b>		<b>Valid assessment</b>	
<b>Target TRL assessment</b>	<b>Target TRL</b>	TRL7			
	<b>Target TRL definition</b>	Engineering prototype produced, and validated in an actual operational environment			
	<b>Summary of research objectives</b>	Vehicle system formed and vehicle carrying validated			
	<b>Degree of compliance with assessment criteria</b>	<b>TRL assessment criteria</b>	<b>Weight</b>	<b>Work completed corresponding to assessment criteria</b>	<b>Degree of compliance with criteria (expected)</b>

## Example

	<b>Degree of compliance with assessment criteria</b>	The engineering development of the system product/prototype is completed.	30%	Prototype is to be completed upon project conclusion	100%
		The functions and performance of the system product/prototype are validated in the actual operational environment.	30%	Functions and performance of prototype are to be validated upon project conclusion	100%
		Applications of the system product/prototype are tested.	10%	Applications are to be tested upon project conclusion	80%
		The production and assembly process, manufacturing process and testing methods of the product/prototype are validated.	10%	Assembly process, manufacturing process and testing methods are to be tested upon project conclusion	80%
		A preliminary quality control system or standard for the product/prototype is established.	10%	Quality control standards are to be established upon project conclusion	60%
		Target cost design is validated.	10%	Pending	0%
		<b>Compliance level</b>		<b>82%</b>	<b>Valid assessment</b>

### TRL self-assessment of CTE2

Name of CTE	Pure electric passenger vehicle wheel hub motor drive system		Assessment type	General criteria
Function description	S/N	Expected function	Current function	Remarks
	1	An efficient water cooling structure that can reduce the temperature and improve the power density	None	Use the external rotor direct-drive motor system developed by xx University in 2010 as a reference.
	2	Integrated system with improved efficiency	Non-integrated	
	...	...	...	...
Technology index	S/N	Expected index	Index currently achieved	Remarks

**Commented [MOU6]:** It refers to No.2 CTE stated in the List of Critical Technology Elements (CTEs). This form is provided for the applicant to objectively assess the current TRL and expected achievable TRL of the project proposed upon its conclusion.

**Commented [MOU7]:** Multiple functions are allowed.

## Example

	1	Torque jump (50% peak torque) Response time <=10ms	<=15ms		
	2	Peak torque density Nm/kg=20	14		
	...	...	...	...	
Current TRL assessment	Current TRL	TRL2			
	Current TRL definition	Technical solution formulated			
	Summary of current TRL	Research and demonstration of the technical solution of motor drive system			
	Degree of compliance with assessment criteria	TRL assessment criteria	Weight	Work completed corresponding to assessment criteria	Degree of compliance with criteria
		Technical solution is proposed, and almost completely identified in an application area.	100%	System technology and development scheme formulated	100%
		Compliance level	100%		Valid assessment
Target TRL assessment	Target TRL	TRL5			
	Target TRL definition	Sub-system formed and validated			
	Summary of research objectives	To complete 2 sets of prototype samples of hub motors, build the assembly test platform and submit the R&D and test report, publish papers related to the patent			
	Degree of compliance with assessment criteria	TRL assessment criteria	Weight	Work completed corresponding to assessment criteria	Degree of compliance with criteria (expected)
		Functional sub-system is formed and validated.	100%	Prototype validated as expected	100%
		Compliance level	100%		Valid assessment

Commented [MOU8]: Multiple technology indexes are allowed.