



Should I Implement the Terminology CIR in My Project?

S1000D User Forum
October 7, 2025



Background

The terminology common information repository (CIR)

- Was introduced to S1000D in Issue 6.
- Allows projects to reuse lists of terms/symbols and their definitions.
- Improves quality and efficiency.

EEC Air Data Computer AP AFDS Aircraft Communications Addressing ELCF

Heads-Up Display VNAV Autothrottle Electrical Load Control Function

FOB Mode Control Panel ACARS Engine Electronic Control

Autopilot & Flight Director System Engine Indicating and Crew Alerting System

FMS EICAS Vertical Navigation MCP

Fuel Onboard HUD AT

Autopilot Aircraft Communications Addressing and Reporting System

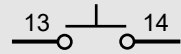
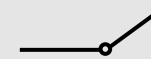
FMC Flight Management System

PMGT ADC Flight Management Computer BTMU

Brake Temperature Monitor Unit Permanent Magnet Generator

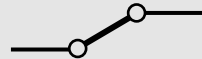
Acronym	Description
ACARS	Aircraft Communications Addressing and Reporting System
ADC	Air Data Computer
AFDS	Autopilot & Flight Director System
AP	Autopilot
AT	Autothrottle
BTMU	Brake Temperature Monitor Unit
EEC	Engine Electronic Control
EICAS	Engine Indicating and Crew Alerting System
ELCF	Electrical Load Control Function
FMC	Flight Management Computer
FMS	Flight Management System
FOB	Fuel Onboard
HUD	Heads-Up Display
MCP	Mode Control Panel
PMGT	Permanent Magnet Generator
VNAV	Vertical Navigation

Push Button Switch (N.C.)



SPST Toggle Switch

It is the symbol of a switch that disconnects current when open.



It is a symbol that denotes Momentary switch – normally open.

This denotes the symbol of a Momentary switch – normally closed.

SPDT Toggle Switch



This symbol is for a switch that selects between two connections.



Push Button (N.O.)

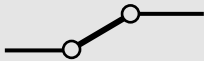
Symbol



SPST Toggle Switch.

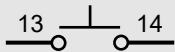
Description

It is the symbol for a switch that disconnects the current when open.



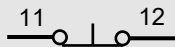
SPDT Toggle Switch.

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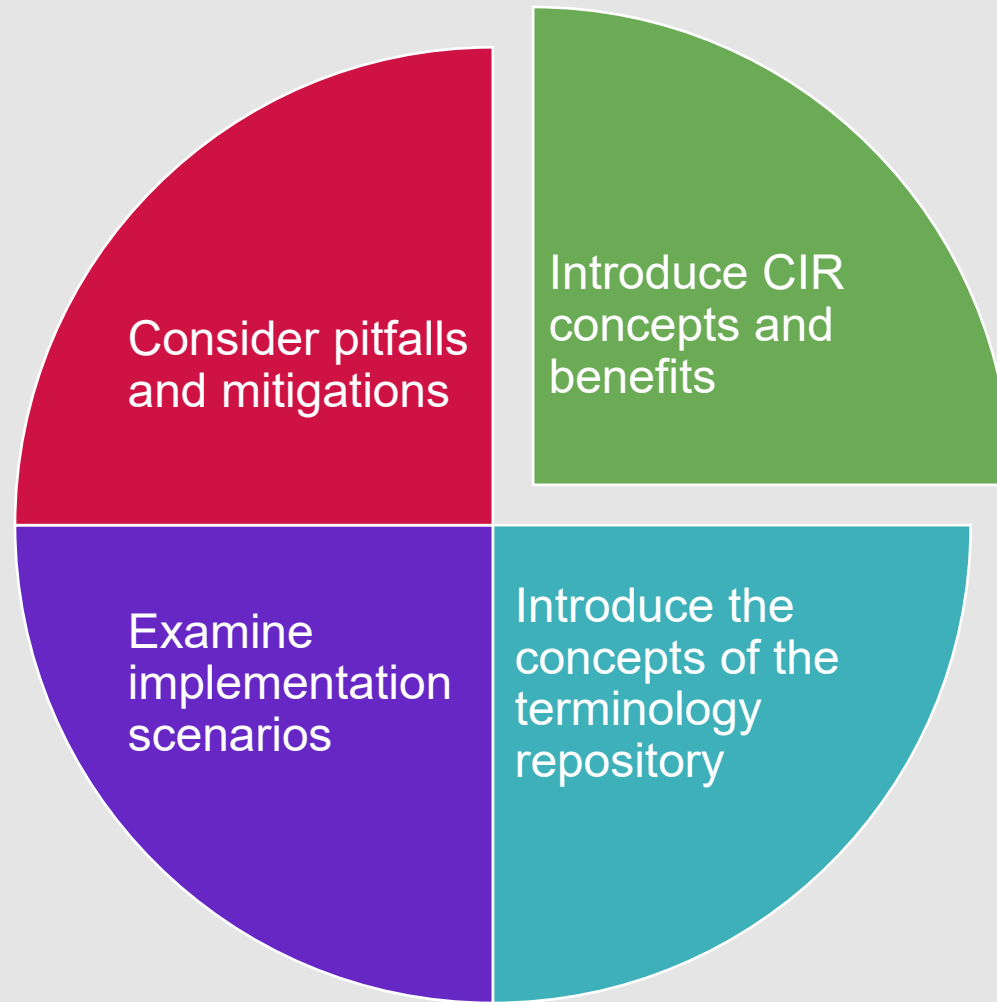
Push Button (N.O.).

It is a symbol that denotes a Momentary switch – normally open.

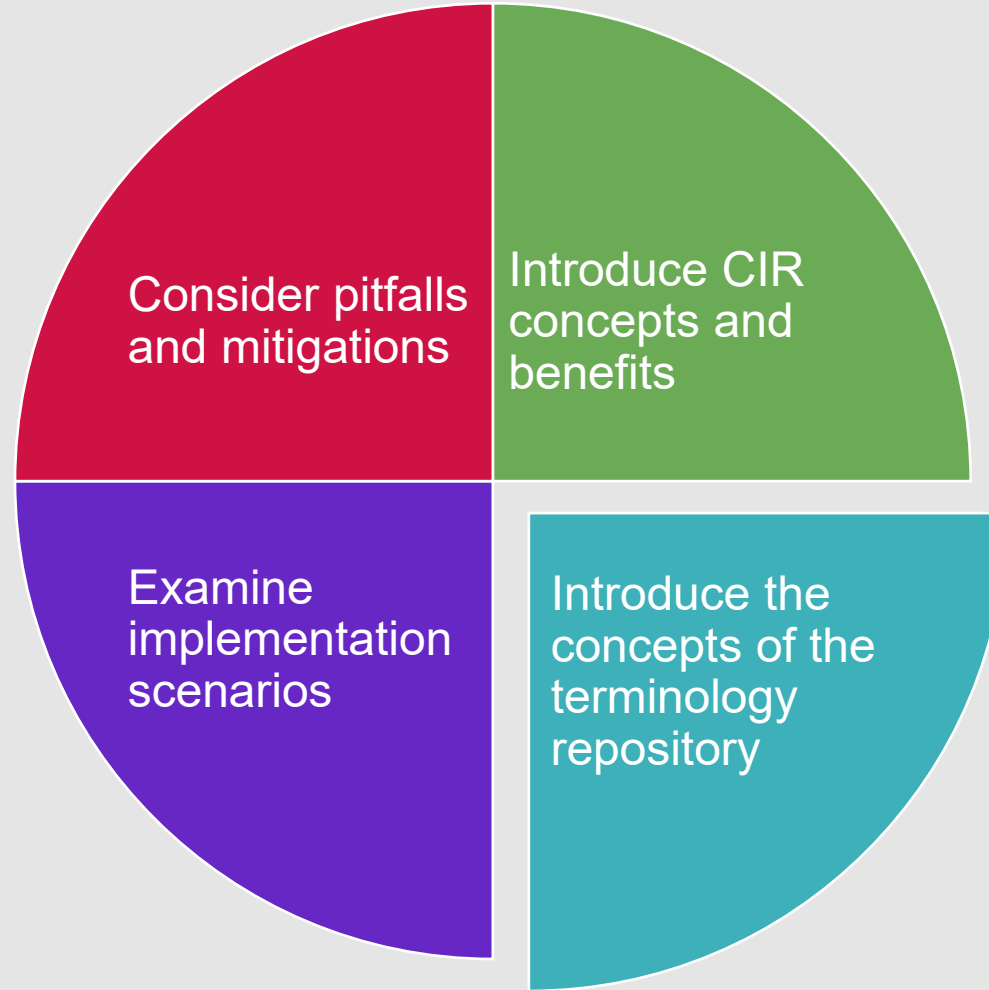


Push Button Switch (N.C.). This denotes the symbol of a Momentary switch – normally closed.

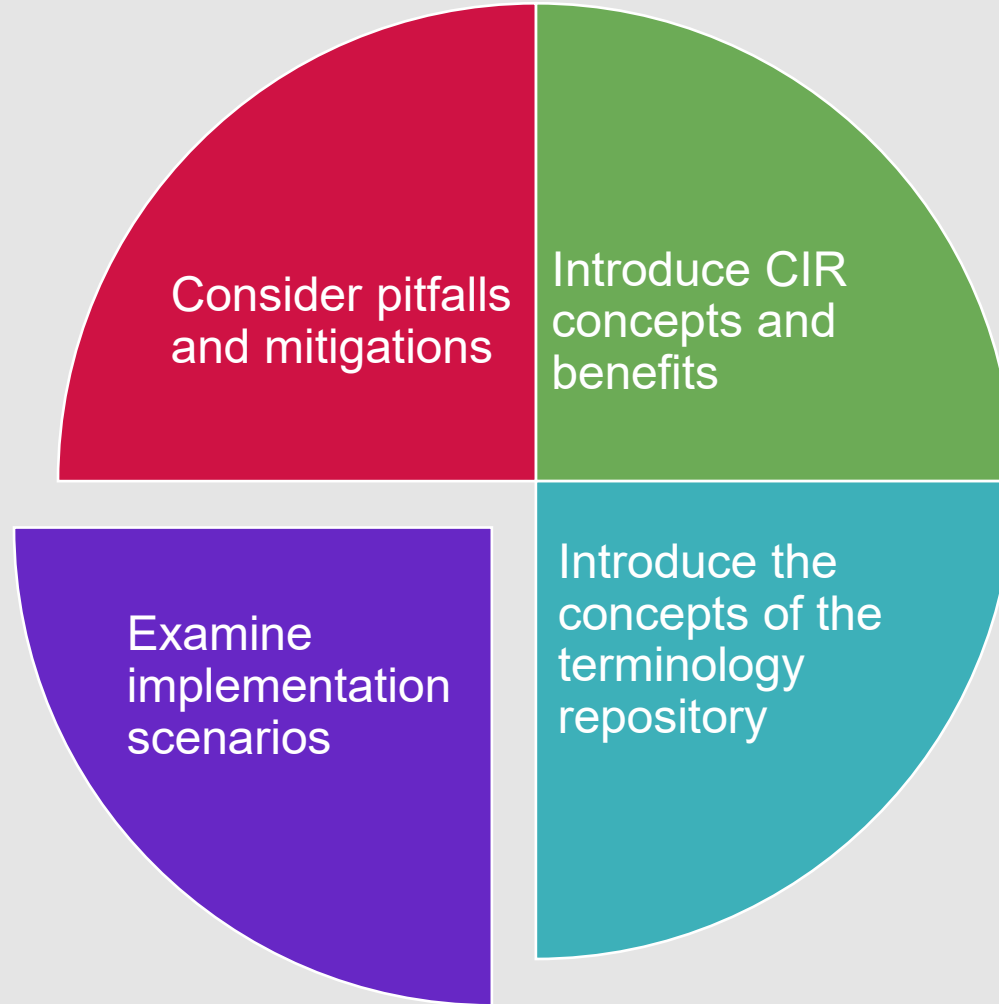
Objectives



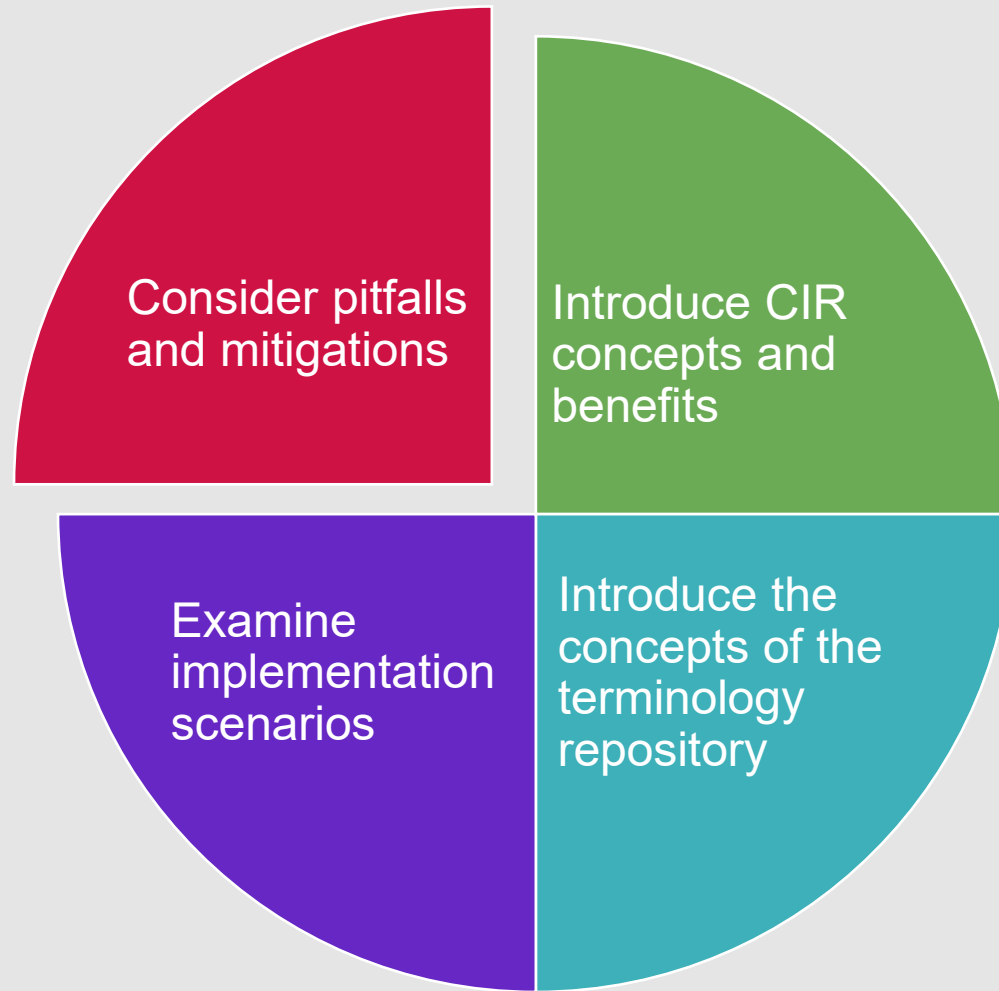
Objectives



Objectives



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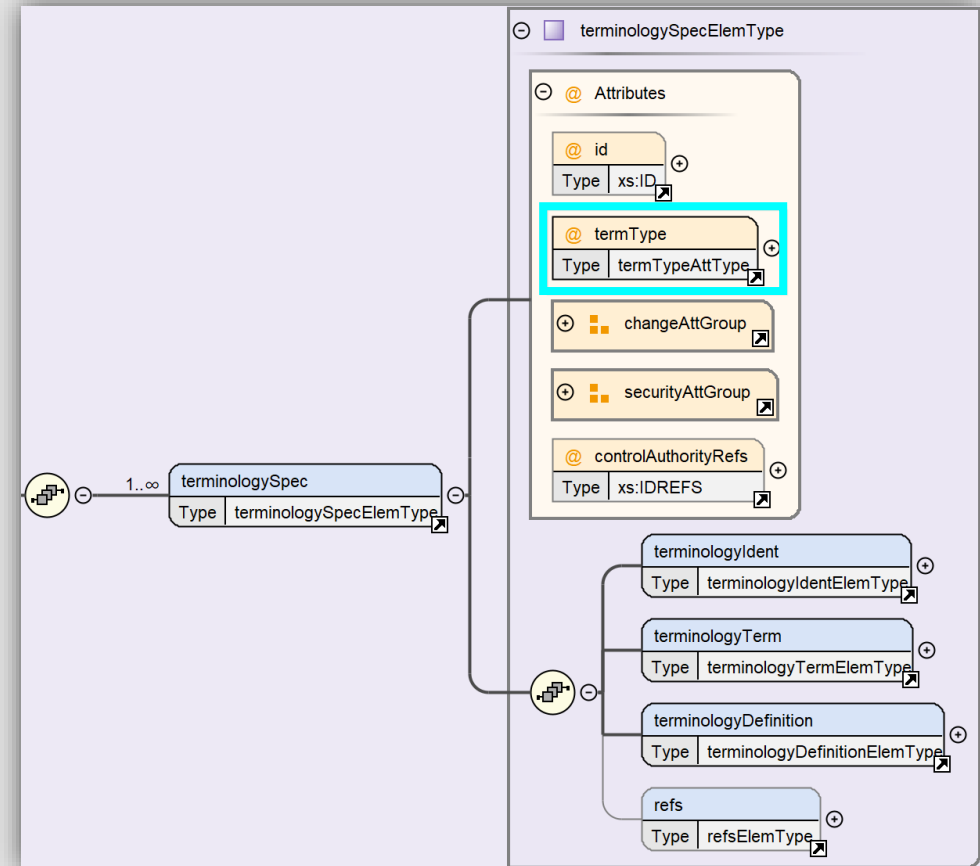
Common Information Repository

- CIRs are data modules that list types of information objects and structured data about them.
- Because the information is centralized and reused, CIRs can greatly enhance
 - Data consistency.
 - Authoring efficiency.
- CIRs can be used to
 - Publish stand-alone datasets.
 - Exchange with partners.

- 🔖 Chapter 3.9.5.2.11 Content section - Common information repository
 - 🔖 Chapter 3.9.5.2.11.1 Common information repository - Functional items
 - 🔖 Chapter 3.9.5.2.11.2 Common information repository - Circuit breakers
 - 🔖 Chapter 3.9.5.2.11.3 Common information repository - Parts
 - 🔖 Chapter 3.9.5.2.11.4 Common information repository - Zones
 - 🔖 Chapter 3.9.5.2.11.5 Common information repository - Access points
 - 🔖 Chapter 3.9.5.2.11.6 Common information repository - Enterprise information
 - 🔖 Chapter 3.9.5.2.11.7 Common information repository - Supplies
 - 🔖 Chapter 3.9.5.2.11.8 Common information repository - Supplies, requirements
 - 🔖 Chapter 3.9.5.2.11.9 Common information repository - Tools
 - 🔖 Chapter 3.9.5.2.11.10 Common information repository - Functional and/or physical areas
 - 🔖 Chapter 3.9.5.2.11.11 Common information repository - Controls and indicators
 - 🔖 Chapter 3.9.5.2.11.12 Common information repository - Applicability annotations
 - 🔖 Chapter 3.9.5.2.11.13 Common information repository - Warnings
 - 🔖 Chapter 3.9.5.2.11.14 Common information repository - Cautions
 - 🔖 Chapter 3.9.5.2.11.15 Common information repository - Hazards
 - 🔖 Chapter 3.9.5.2.11.16 Common information repository - Terminology

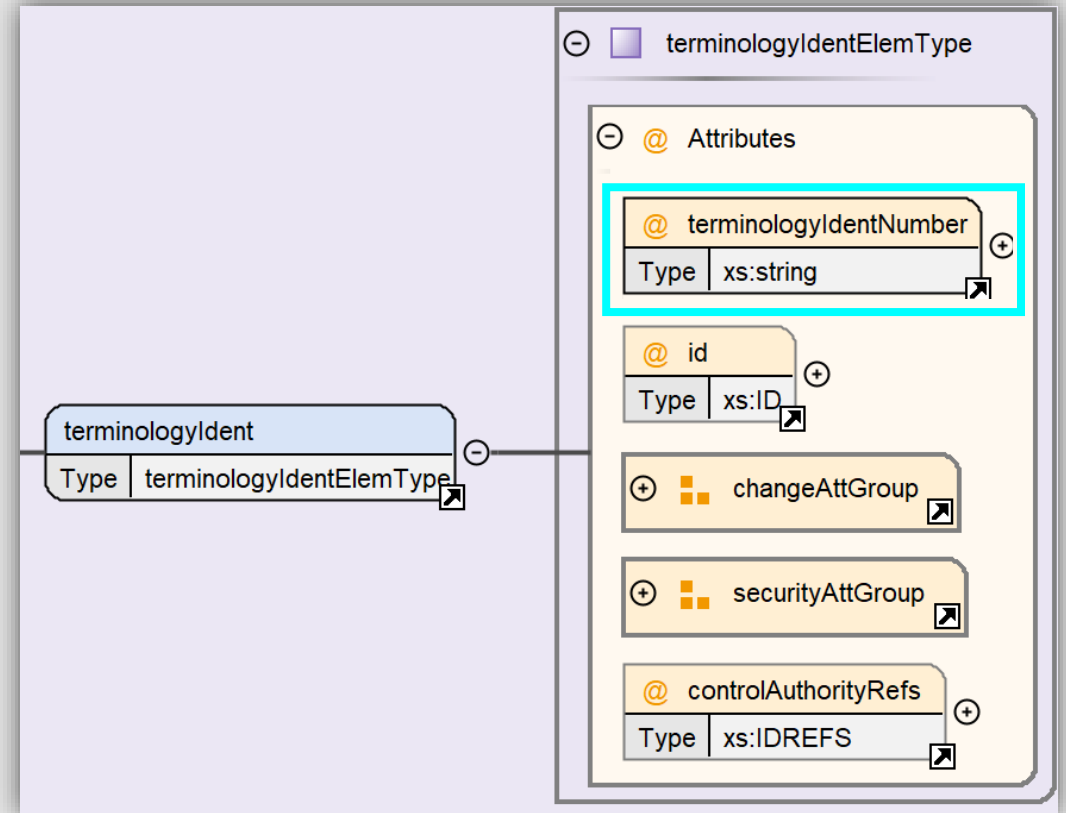
Terminology CIR - Structure

- `<terminologyRepository>` is a branch of the CIR comrep schema, which includes one or more child.
- `<terminologySpec>` includes mandatory attribute `termType`.
 - `<terminologyIdent>` includes mandatory attribute `terminologyIdentNumber`.
 - `<terminologyTerm>` is the acronym, abbreviation or symbol being defined.
 - `<terminologyDefinition>` is the definition.



Terminology CIR – Structure (cont.)

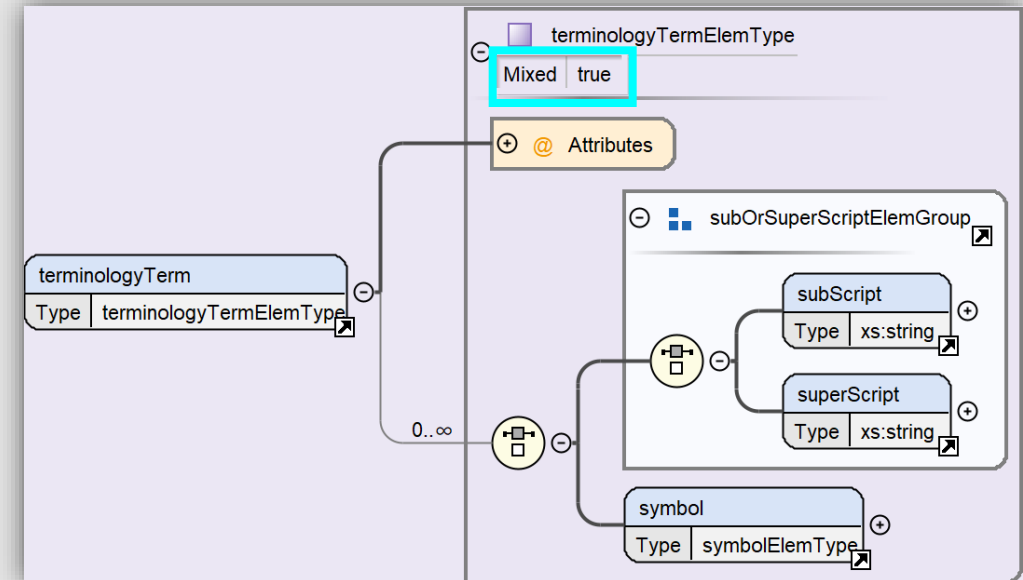
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Terminology CIR – Structure (cont.)

`<terminologyRepository>` is a branch of the CIR `comrep` schema, which includes one or more child:

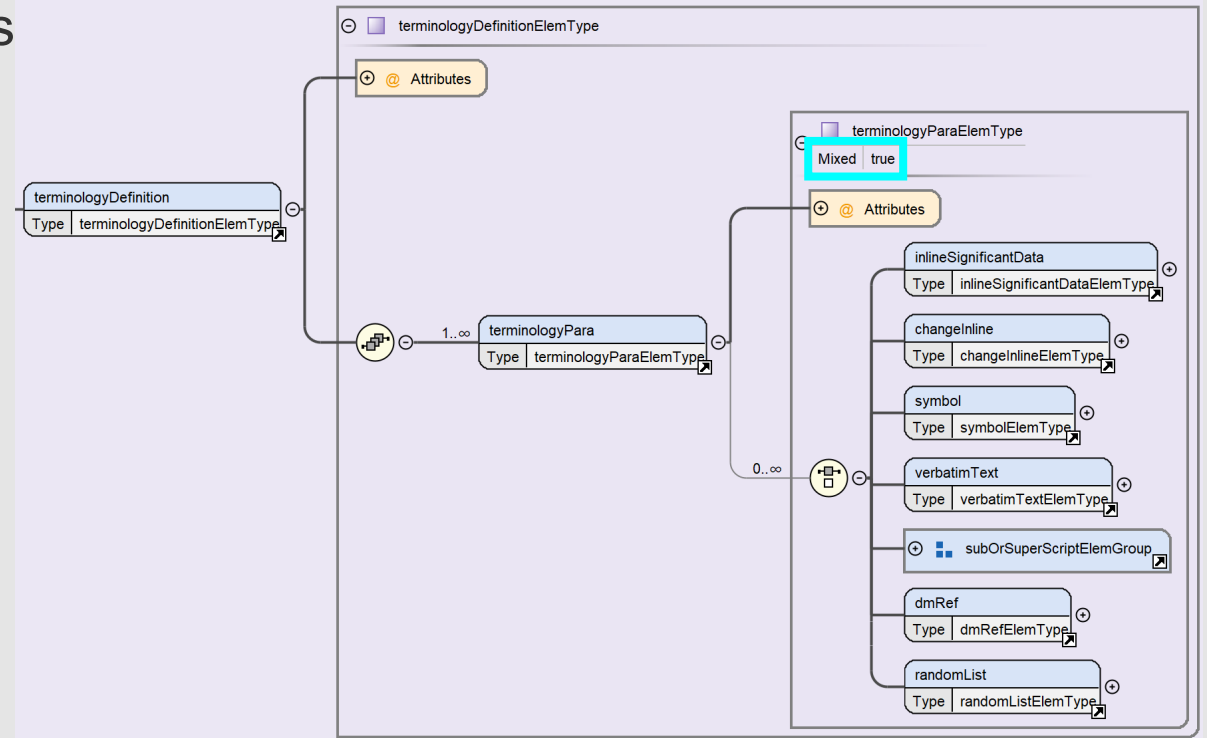
- `<terminologySpec>`
Includes mandatory attribute `termType`.
 - `<terminologyIdent>`
includes mandatory attribute `terminologyIdentNumber`.
 - `<terminologyTerm>`
is the acronym, abbreviation, or symbol being defined.
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 - `<terminologyDefinition>`
is the definition.



Terminology CIR - Coding

Example of an acronym stored in a terminology CIR

```
<terminologySpec id="trm-acr-0001" termType="tt01">  
  <terminologyIdent terminologyIdentNumber="trm-acr00a5001-1"/>  
  <terminologyTerm>TDWG</terminologyTerm>  
  <terminologyDefinition>  
    <terminologyPara>Technical Data Working Group</terminologyPara>  
  </terminologyDefinition>  
</terminologyspec>
```


Terminology CIR – Coding (cont.)

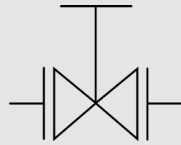
Example of a symbol stored in a terminology CIR

```
<terminologySpec id="trm-sym-0001" termType="tt04">  
  <terminologyIdent terminologyIdentNumber="trm-sym00a9001-1"/>  
  <terminologyTerm>  
    <symbol infoEntityIdent="ICN-ABCDE-FGH09-001-01"  
      reproductionHeight="0.5in" reproductionWidth=".5in"/>  
  </terminologyTerm>  
  <terminologyDefinition>  
    <terminologyPara>Shutoff Valve. Valve that stops the flow of  
      fluids</terminologyPara>  
  </terminologyDefinition>  
</terminologyspec>
```

Terminology CIR – Coding (cont.)

Example of a symbol stored in a terminology CIR

Symbol

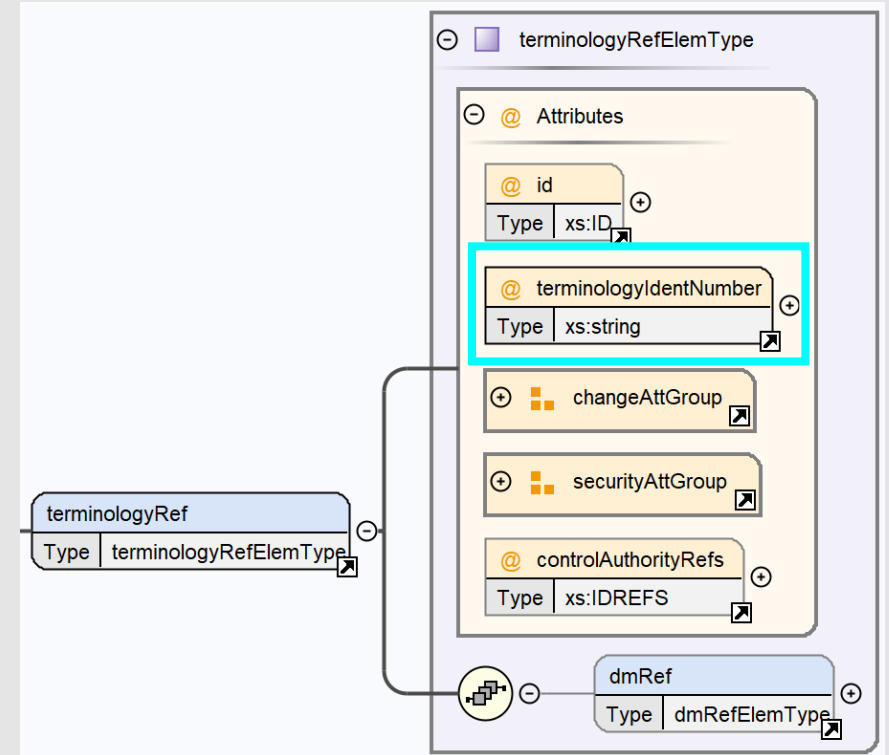


Description

Shutoff Valve. This symbol is for a valve that stops the flow of fluids.

Terminology CIR - Referencing Mechanism

- `<terminologyRef>` was added everywhere that `<acronym>` is allowed, including:
attentionListItemPara, notePara,
safetyInformation, warningAndCautionPara,
reducedListItemPara, reducedPara,
reqCond, thumbTabText, action, caseCond,
changeInline, emphasis, listItemTrm,
reasonForAmendment, title, para
- Data modules may include `<terminologyRef>` (referring to the CIR), `<acronym>`, and `<symbol>` (both defined locally) in any combination.
- Attribute `terminologyIdentNumber` is mandatory.



Terminology CIR - Referencing Mechanism (cont.)

Explicit Referencing

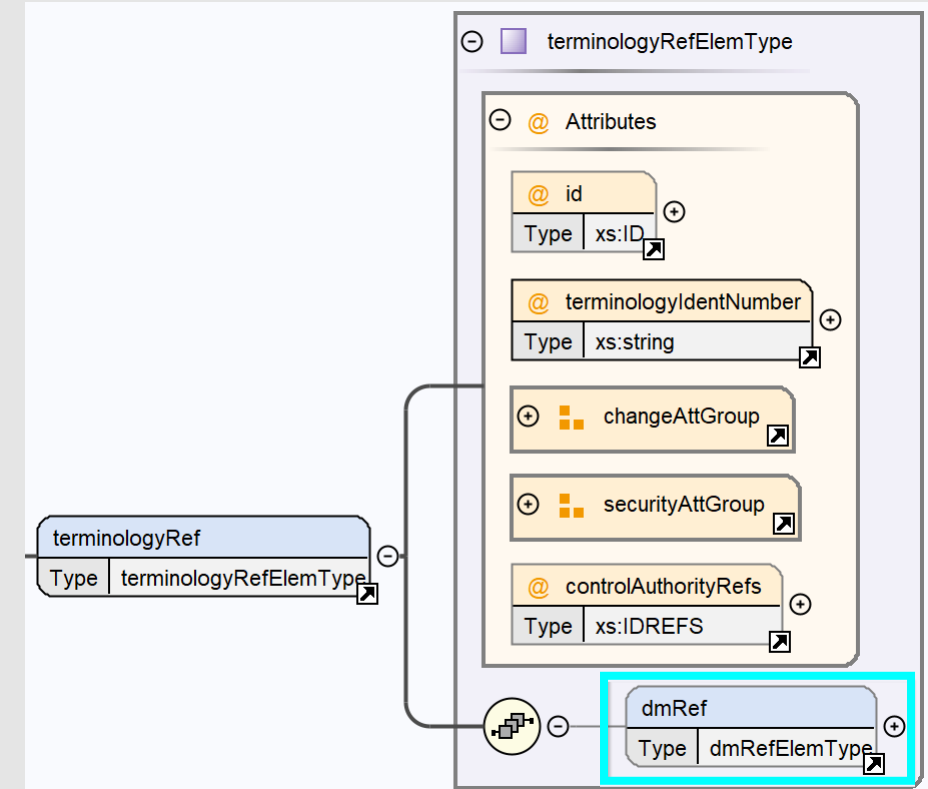
Optional element `<dmRef>` is used to link to the relevant terminology CIR.

The terminology processor would use mandatory attribute `terminologyIdentifierNumber` for locating the term.

Implicit Referencing

Implicit referencing is used for locating the term.

The terminology processor must be coded with rules regarding how to locate the terminology CIR data module relevant to the reference.



Terminology CIR – Business Rules

Business rule decision point BRDP-S1-00581 - Use of the terminology repository with other text elements:

- Decide whether to use CIR for all terminologies or use a mix of CIR and other text elements (eg, <acronym>, <acronymTerm>, <symbol>).
- The schemas allow for either local text elements, references to the terminology CIR, or a mix of both.
- Projects must decide whether the additional flexibility of mixed implementations outweighs the variability that decision would introduce into the data.

Terminology CIR – Business Rules (cont.)

Business rule decision point BRDP-S1-00582 - Types of terms to markup using the attribute `termType` in the element `<terminologySpec>`:

- Decide how to use the configurable attribute `termType` and which types of data to mark up and in what contexts.

S1000D Issue 6 defines terminology type with the values noted here.

termType - Value of terminology type

Allowable values	S1000D interpretation
"tt01"	Acronym
"tt02"	Abbreviation
"tt03"	Citation
"tt04"	Symbol
"tt51" - "tt99"	Available for projects

Terminology CIR – Business Rules (cont.)

Business rule decision point BRDP-S1-00582 - Types of terms to markup using the attribute `termType` in the element `<terminologySpec>`:

- Decide how to use the configurable attribute `termType` and which types of data to mark up and in what contexts.

An example of project tailoring is ATA Spec 1000BR_6: Civil Aviation Business Rules for S1000D issue 6, where `tt03` "Citation" is not allowed.



termType - Value of terminology type

Allowable values	S1000D interpretation
" <code>tt01</code> "	Acronym
" <code>tt02</code> "	Abbreviation
" <code>tt03</code> "	Citation
" <code>tt04</code> "	Symbol
" <code>tt51</code> " - " <code>tt99</code> "	Available for projects

Terminology CIR – Implementation Scenarios

Is your project new, creating new data in S1000D Issue 6 for a new product?

Implementing a terminology CIR at the beginning would reap many benefits in data harmonization and reduced variability and sustainment costs.

Are you converting data from S1000D Issue 4.0.1+ to Issue 6?

Implementing a terminology CIR during conversion would require time spent harmonizing the terms library but would reap benefits in reduced variability and reduced sustainment costs.

Will your downstream customers want to receive data with CIR references?

Or will they want them to be flattened into stand-alone data modules for delivery?

Terminology CIR – Pitfalls and Mitigations

When converting legacy data, you must analyze the conversion dataset for acronyms, abbreviations, and symbols.

- Where in the source data are the terms defined?
- Does each term have the same definition across the **entire** dataset?

Mandatory attribute

`<terminologyIdentNumber>` allows projects to repeat a single term in a CIR with multiple definitions. This increases the risk that a link to the wrong definition will be chosen during authoring.

If a coherent list exists, e.g., within a system or in fault data, a project can set up multiple active terminology CIR data modules and link to them based on parameters like SNS or data type. This can quickly become complicated to track/manage.

If the source data is too messy to fit nicely into CIRs, converting using a mix of local text elements and references to the terminology CIR is possible. However, sustaining such data becomes more complex, and quality gains are reduced.

Terminology CIR – Pitfalls and Mitigations

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Terminology CIR – Pitfalls and Mitigations

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Terminology CIR – Pitfalls and Mitigations

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Terminology CIR – Pitfalls and Mitigations

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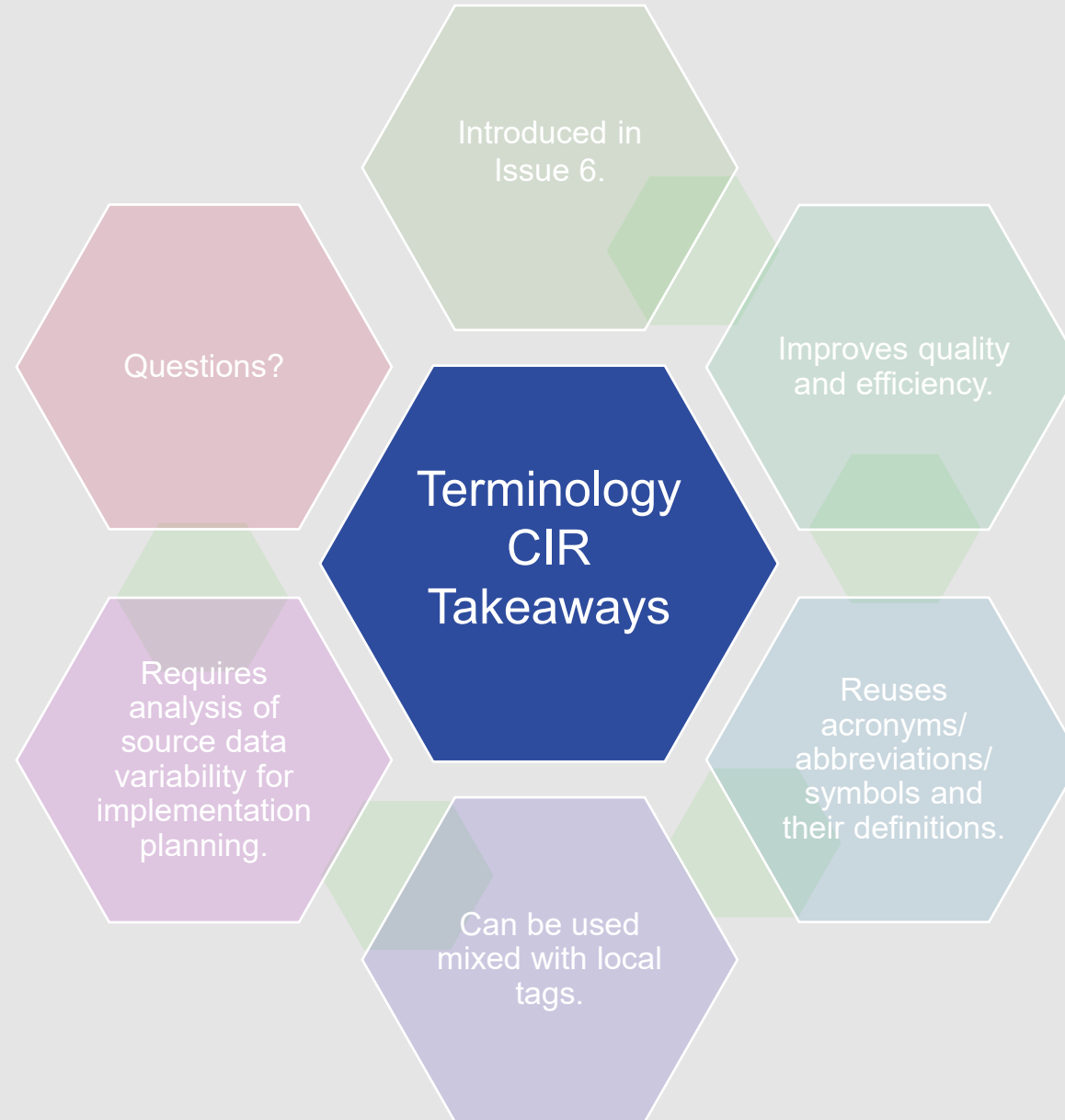
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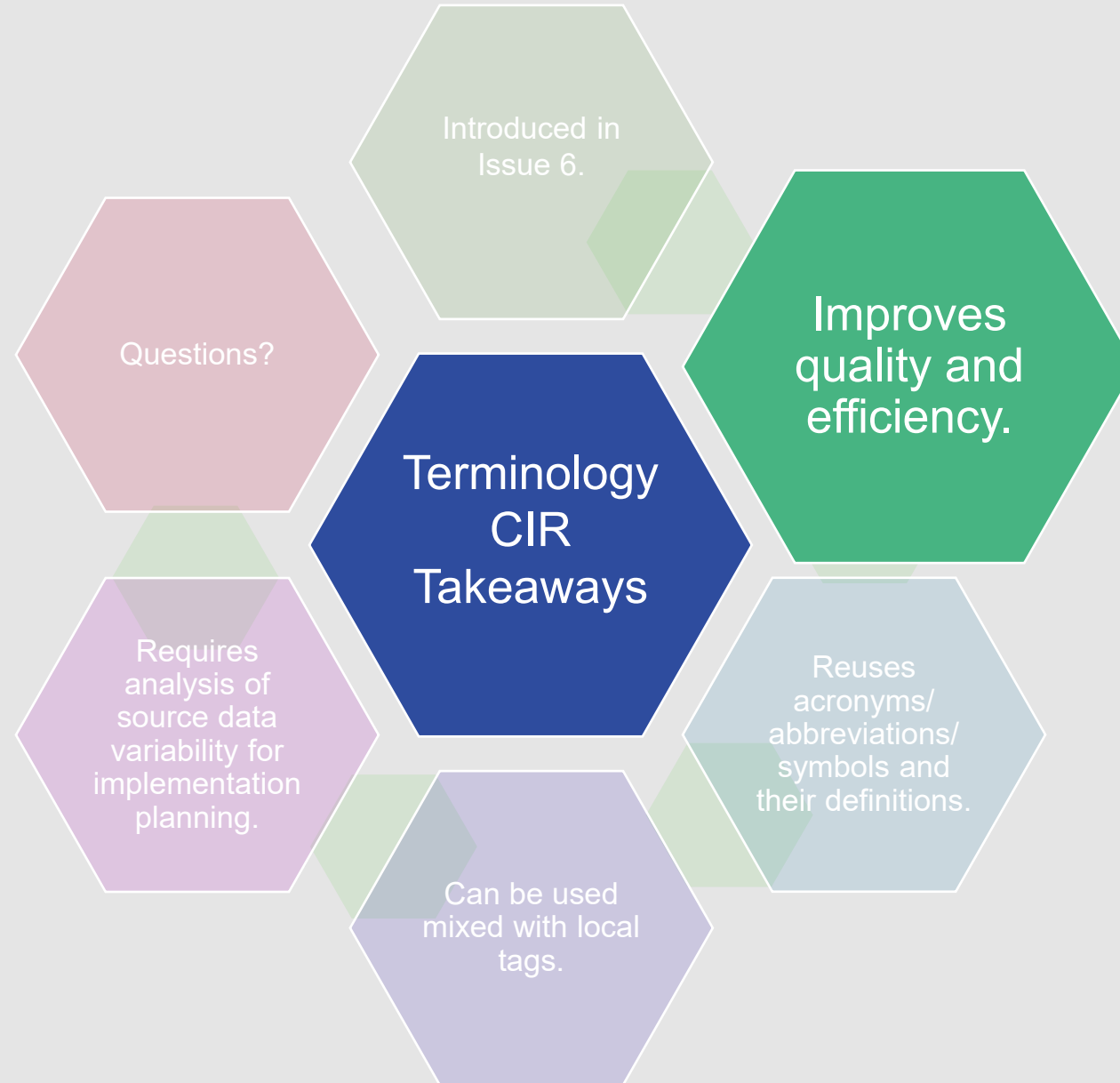
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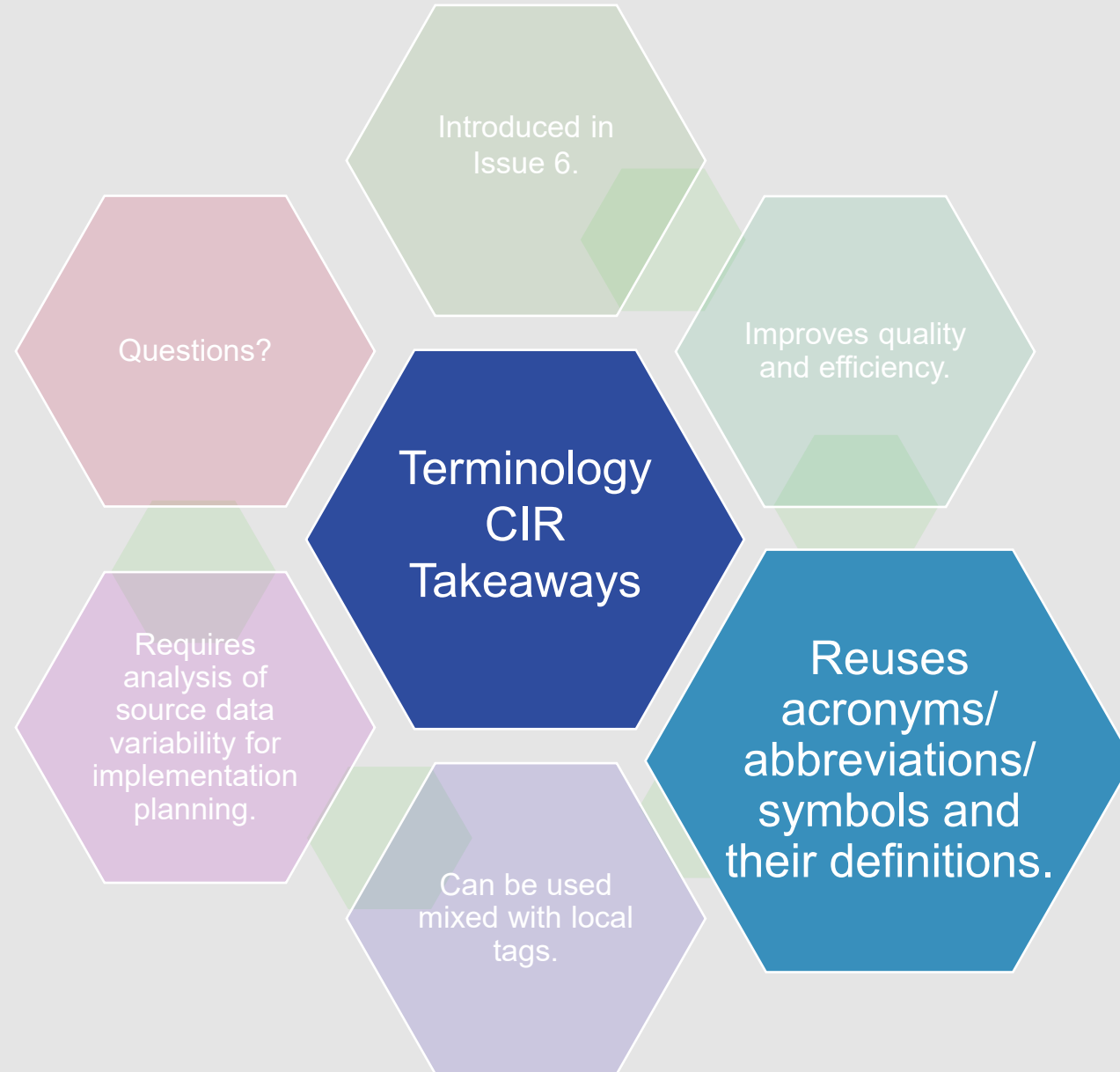
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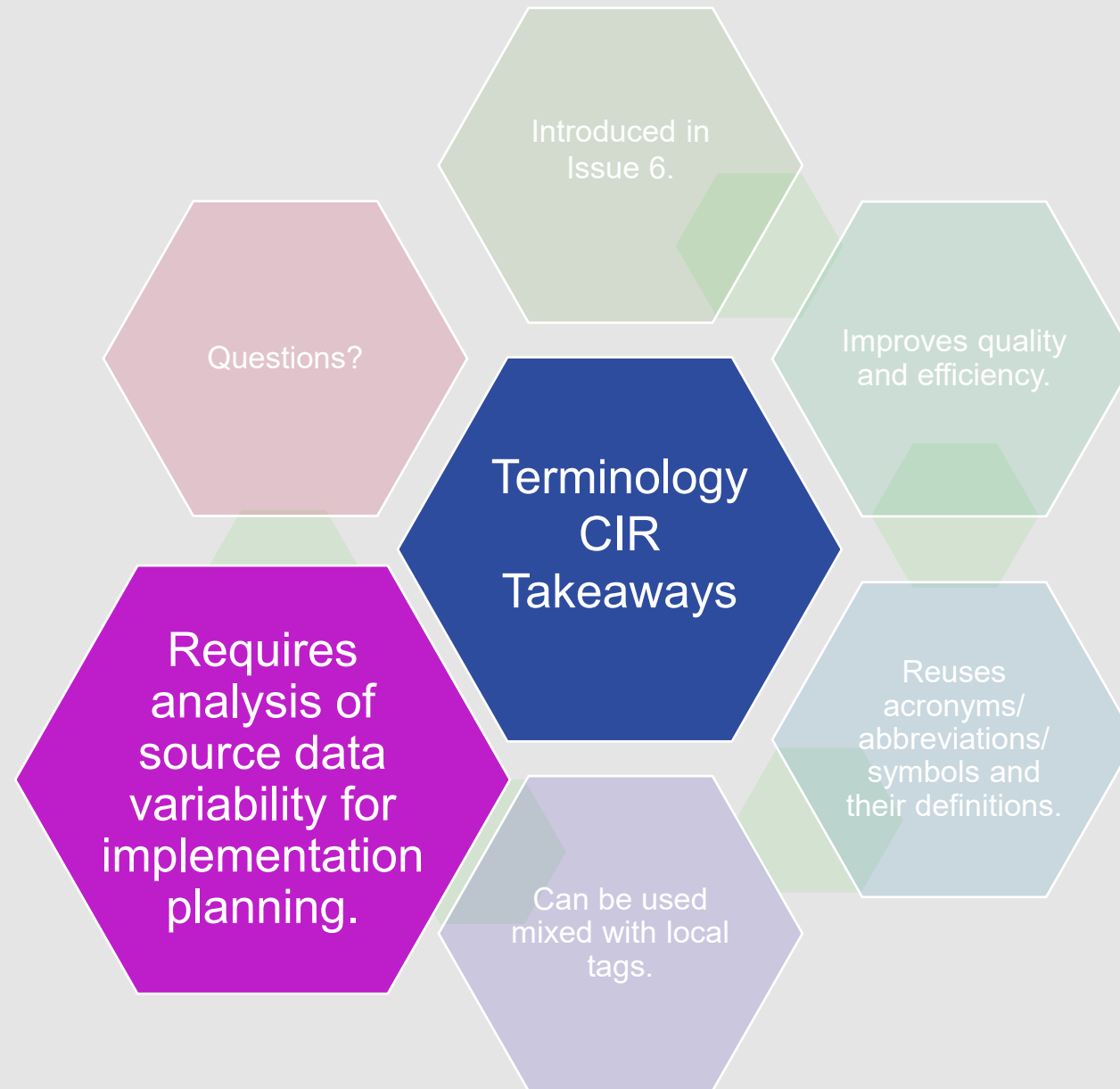














Questions?

Contact

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Thank you!