

This is unreleased documentation for UN Transparency Protocol **Next** version.

For up-to-date documentation, see the [latest version](#) (0.2.0).

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Version: **Next**

# v0.6.0

## ! INFO

Please note that this content is under development and is not ready for implementation. This status message will be updated as content development progresses.

## Overview

This guide outlines:

- The migration from UNTP (UN Transparency Protocol) version 0.5.0 to 0.6.0 across all supported data models in the Reference Implementation. This update introduces structural changes, enhanced schema definitions, improved data validation patterns, and updated JSON-LD contexts.
- Functional updates to the Reference Implementation, including updates to dependent services, credential rendering, and configuration changes.

## Functional Updates

### Dependent Service Updates

The Reference Implementation now uses the following updated services:

- **Storage Service:** v1.0.1 ([Repository](#))
- **VCKit Service:** v1.1.0 ([Repository](#))
- **Identity Resolver Service:** v1.0.0 ([Repository](#))

The `docker-compose` configuration has been updated to use the corresponding images for these service versions. Refer to the respective changelogs in each service’s repository for detailed information.

### Key Changes for Existing Implementations

#### 1. Storage Service Configuration

The Storage Service configuration URL has been updated:

##### Previous Configuration:

```
"storage": {
  "url": "http://localhost:3334/v1/documents",
  "params": {
    "bucket": "verifiable-credentials"
  },
  "options": {
    "method": "POST",
    "headers": {
      "Content-Type": "application/json"
    }
  }
}
```

##### New Configuration:

```
"storage": {
  "url": "http://localhost:3334/api/1.0.0/documents",
  "params": {
    "bucket": "verifiable-credentials"
  },
  "options": {
    "method": "POST",
    "headers": {
      "Content-Type": "application/json"
    }
  }
}
```

**Note:** The `url` has changed from `/v1/documents` to `/api/1.0.0/documents`.

#### 2. Identity Resolver (IDR) Service Configuration

The IDR Service configuration URL and `linkRegisterPath` have been updated:

##### Previous Configuration:

```
"dlr": {
  "dlrAPIUrl": "http://localhost:3000",
  "dlrAPIKey": "test123",
  "namespace": "gs1",
  "linkRegisterPath": "/api/resolver"
}
```

New Configuration:

```
"dlr": {
  "dlrAPIUrl": "http://localhost:3000/api/1.0.0",
  "dlrAPIKey": "test123",
  "namespace": "gs1",
  "linkRegisterPath": "resolver"
}
```

**Note:** The `dlrAPIUrl` now includes the `/api/1.0.0` path, and the `linkRegisterPath` no longer has a leading `/`.

3. Identity Provider Configuration (Mock IDR GS1 Register)

The Identity Provider configuration URL has been updated:

Previous Configuration:

```
"identifyProvider": {
  "type": "gs1",
  "url": "http://localhost:3001",
  "namespace": "gs1"
}
```

New Configuration:

```
"identifyProvider": {
  "type": "gs1",
  "url": "http://localhost:3001/api/1.0.0",
  "namespace": "gs1"
}
```

**Note:** The `url` now includes the `/api/1.0.0` path.

These URL updates ensure the system remains stable when underlying service API versions change.

Seed Script Updates

The IDR Service and Mock GS1 IDR Service seed scripts have been updated to reflect the new link structure. To ensure compatibility:

- Update any custom or additional seed scripts to align with the new URL structures (`/api/1.0.0`).
- Clear all data in the corresponding object store (e.g., delete the `minio_data` directory or reset the cloud-based object store) to ensure the system uses the new URLs.

API versions are now included in the seed scripts. If you are using Docker Compose, this is handled automatically. Otherwise, refer to the seed script section in the repository's README.

VCKit Render Package Update

The `@uncefact/vckit-renderer` package has been updated from version `1.0.0-next.50` to `1.0.0-next.59`.

This update addresses an issue where the previous implementation used malformed IRIs to extract render templates from credentials (see [details here](#)). With UNTP v0.6.0 and the updated package, the system now uses valid IRIs for rendering.

**Important:** Credentials issued with previous versions will no longer render. You must use the v0.6.0 data models for credentials to render correctly with the this latest version of the Reference Implementation.

Data Model Updates

Digital Facility Record (DFR)

Summary of Changes

The main changes for Digital Facility Records in UNTP 0.6.0 include:

- **Enhanced validation patterns:** The updated schema validations simplify the extension of UNTP credential types.
- **Improved identifier structure:** Simplified identifier scheme with better organisation and removal of nested `idScheme` references
- **Updated JSON-LD contexts:** New vocabulary context path structure with improved semantic mappings and vocabulary organisation

- **Schema refinements:** Better property organisation, improved abstraction, and enhanced data model consistency

Data Model Changes

1. JSON-LD Context

Before (0.5.0):

```
"@context": [
  "https://www.w3.org/ns/credentials/v2",
  "https://vocabulary.uncefact.org/untp/dfr/0.5.0/"
]
```

After (0.6.0):

```
"@context": [
  "https://www.w3.org/ns/credentials/v2",
  "https://test.uncefact.org/vocabulary/untp/dfr/0.6.0/"
]
```

2. Credential Subject Structure

The `credentialSubject` property has been restructured from a direct `Facility` reference to a `FacilityRecord` that contains the facility.

Example data structure change:

Before (0.5.0):

```
{
  "credentialSubject": {
    "type": ["Facility"],
    "id": "https://id.gs1.org/414/1321202290648",
    "name": "Greenacres battery factory",
    "conformityClaim": [...]
  }
}
```

After (0.6.0):

```
{
  "credentialSubject": {
    "type": ["FacilityRecord"],
    "facility": {
      "type": ["Facility"],
      "id": "https://id.gs1.org/414/1321202290648",
      "name": "Greenacres battery factory"
    },
    "conformityClaim": [...]
  }
}
```

3. Issuer Identifier Structure

The issuer identifier `otherIdentifier` property has been replaced with a new `issuerAlsoKnownAs` property.

Example data structure change:

Before (0.5.0):

```
{
  "issuer": {
    "type": ["CredentialIssuer"],
    "id": "did:web:identifiers.example-company.com:12345",
    "name": "Example Company Pty Ltd",
    "otherIdentifier": [
      {
        "type": ["Identifier"],
        "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
        "name": "Example Company Pty Ltd.",
        "registeredId": "90664869327",
        "idScheme": {
          "type": ["IdentifierScheme"],
          "id": "https://abr.business.gov.au/ABN/",
          "name": "Australian Business Number (ABN)"
        }
      }
    ]
  }
}
```

After (0.6.0):

```
{
  "issuer": {
    "type": ["CredentialIssuer"],
    "id": "did:web:identifiers.example-company.com:12345",
    "name": "Example Company Pty Ltd",
    "issuerAlsoKnownAs": [
      {

```

```
      "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
      "name": "Example Company Pty Ltd.",
      "registeredId": "90664869327"
    }
  ]
}
```

4. Facility Structure

Key Changes:

- `otherIdentifier` property replaced with new `facilityAlsoKnownAs` property
- `operatedByParty` structure simplified from `Identifier`.

Example: `facilityAlsoKnownAs` structure change

Before (0.5.0):

```
{
  "credentialSubject": {
    "type": ["Facility"],
    "otherIdentifier": [
      {
        "type": ["Identifier"],
        "id": "https://id.gs1.org/414/1321202290648",
        "name": "Greenacres battery factory",
        "registeredId": "1321202290648",
        "idScheme": {
          "type": ["IdentifierScheme"],
          "id": "https://id.gs1.org/414/",
          "name": "Global Location Number"
        }
      }
    ]
  }
}
```

After (0.6.0):

```
{
  "credentialSubject": {
    "type": ["FacilityRecord"],
    "facility": {
      "type": ["Facility"],
      "facilityAlsoKnownAs": [
        {
          "id": "https://id.gs1.org/414/1321202290648",
          "name": "Greenacres battery factory",
          "registeredId": "1321202290648"
        }
      ]
    }
  }
}
```

Example: `operatedByParty` structure change

Before (0.5.0):

```
{
  "credentialSubject": {
    "type": ["Facility"],
    "operatedByParty": {
      "type": ["Identifier"],
      "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
      "name": "Example Company Pty Ltd.",
      "registeredId": "90664869327",
      "idScheme": {
        "type": ["IdentifierScheme"],
        "id": "https://abr.business.gov.au/ABN/",
        "name": "Australian Business Number (ABN)"
      }
    }
  }
}
```

After (0.6.0):

```
{
  "credentialSubject": {
    "type": ["FacilityRecord"],
    "facility": {
      "type": ["Facility"],
      "operatedByParty": {
        "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
        "name": "Example Company Pty Ltd.",
        "registeredId": "90664869327"
      }
    }
  }
}
```

Reference Implementation Updates

1. Schema URL Updates

Before (0.5.0):

```
"schema": {
  "url":
    "https://jargon.sh/user/unece/DigitalFacilityRecord/v/working/artefacts/jsonSchemas/Facility
    class=Facility"
}
```

After (0.6.0):

```
"schema": {
  "url":
    "https://jargon.sh/user/unece/DigitalFacilityRecord/v/0.6.0/artefacts/jsonSchemas/FacilityRe
    class=FacilityRecord"
}
```

2. Context Configuration in Services

Before (0.5.0):

```
"digitalFacilityRecord": {
  "context": ["https://test.uncefact.org/vocabulary/untp/dfr/0.5.0/"]
}
```

After (0.6.0):

```
"digitalFacilityRecord": {
  "context": ["https://test.uncefact.org/vocabulary/untp/dfr/0.6.0/"]
}
```

3. Form Data Structure Updates

If you’re passing pre-populated data into the JsonForm component, update the data structure to conform to the new FacilityRecord schema:

Before (0.5.0):

```
"data": {
  "type": ["Facility"],
  "id": "https://id.gs1.org/414/1321202290648",
  "name": "Greenacres battery factory",
  "operatedByParty": {
    "type": ["Identifier"],
    "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
    "name": "Example Company Pty Ltd.",
    "registeredId": "90664869327",
    "idScheme": {
      "type": ["IdentifierScheme"],
      "id": "https://abr.business.gov.au/ABN/",
      "name": "Australian Business Number (ABN)"
    }
  },
  "conformityClaim": [...]
}
```

After (0.6.0):

```
"data": {
  "type": ["FacilityRecord"],
  "facility": {
    "type": ["Facility"],
    "id": "https://id.gs1.org/414/1321202290648",
    "name": "Greenacres battery factory",
    "operatedByParty": {
      "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
      "name": "Example Company Pty Ltd.",
      "registeredId": "90664869327"
    }
  },
  "conformityClaim": [...]
}
```

4. Render Template Updates

Update the render template to use the new 0.6.0 compliant template. The updated template can be found at:

```
packages/mock-app/src/templates/v0.6.0/digital_facility_record/template.hbs
```

Example template configuration update:

Before (0.5.0):

```
"renderTemplate": [
  {
    "type": "WebRenderingTemplate2022",
    "template": "{v0.5.0-template}..."
  }
]
```



```
}  
]
```

After (0.6.0):

```
"renderTemplate": [  
  {  
    "type": "WebRenderingTemplate2022",  
    "template": "{v0.6.0-template}..."  
  }  
]
```

5. VCKit Issuer Structure Updates

Update the VCKit issuer configuration to use the new identifier structure:

Before (0.5.0):

```
"vckit": {  
  "vckitAPIUrl": "http://localhost:3332/v2",  
  "issuer": {  
    "type": ["CredentialIssuer"],  
    "id": "did:web:uncefact.github.io:project-vckit:test-and-development",  
    "name": "Example Company Pty Ltd",  
    "otherIdentifier": [  
      {  
        "type": ["Identifier"],  
        "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",  
        "name": "Example Company Pty Ltd.",  
        "registeredId": "90664869327",  
        "idScheme": {  
          "type": ["IdentifierScheme"],  
          "id": "https://abr.business.gov.au/ABN/",  
          "name": "Australian Business Number (ABN)"  
        }  
      }  
    ]  
  },  
  "headers": {...}  
}
```

After (0.6.0):

```
"vckit": {  
  "vckitAPIUrl": "http://localhost:3332/v2",  
  "issuer": {  
    "type": ["CredentialIssuer"],  
    "id": "did:web:uncefact.github.io:project-vckit:test-and-development",  
    "name": "Example Company Pty Ltd",  
    "issuerAlsoKnownAs": [  
      {  
        "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",  
        "name": "Example Company Pty Ltd.",  
        "registeredId": "90664869327"  
      }  
    ]  
  },  
  "headers": {...}  
}
```

Digital Identity Anchor (DIA)

Summary of Changes

The main change to the Digital Identity Anchor in UNTP 0.6.0 is the same change present for the other UNTP credentials: the credential issuer’s `otherIdentifier` field was changed in name and format. See the [details above](#), together with the other smaller changes that are mostly version number updates.

Data Model Changes

1. JSON-LD Context Updates

Before (0.2.1):

```
"@context": [  
  "https://www.w3.org/ns/credentials/v2",  
  "https://vocabulary.uncefact.org/untp/dia/0.2.1/"  
]
```

After (0.6.0):

```
"@context": [  
  "https://www.w3.org/ns/credentials/v2",  
  "https://test.uncefact.org/vocabulary/untp/dia/0.6.0/"  
]
```

2. Issuer Identifier Structure Changes

The issuer identifier `otherIdentifier` property has been replaced with a new `issuerAlsoKnownAs` property.

Example data structure change:

Before (0.2.1):

```
{
  "issuer": {
    "type": ["CredentialIssuer"],
    "id": "did:web:identifiers.example-company.com:12345",
    "name": "Example Company Pty Ltd",
    "otherIdentifier": [
      {
        "type": ["Identifier"],
        "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
        "name": "Example Company Pty Ltd.",
        "registeredId": "90664869327",
        "idScheme": {
          "type": ["IdentifierScheme"],
          "id": "https://abr.business.gov.au/ABN/",
          "name": "Australian Business Number (ABN)"
        }
      }
    ]
  }
}
```

After (0.6.0):

```
{
  "issuer": {
    "type": ["CredentialIssuer"],
    "id": "did:web:identifiers.example-company.com:12345",
    "name": "Example Company Pty Ltd",
    "issuerAlsoKnownAs": [
      {
        "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
        "name": "Example Company Pty Ltd.",
        "registeredId": "90664869327"
      }
    ]
  }
}
```

3. RegisteredIdentity Structure Updates

Key Changes:

- Removed Identifier type inheritance from RegisteredIdentity

Example: RegisteredIdentity type change

Before (0.2.1):

```
{
  "credentialSubject": {
    "type": ["RegisteredIdentity", "Identifier"],
    "id": "did:web:samplecompany.com/123456789",
    "name": "Sample business Ltd",
    "registeredId": "123456789",
    "idScheme": {
      "type": ["IdentifierScheme"],
      "id": "https://id.gs1.org/01/",
      "name": "Global Trade Identification Number (GTIN)"
    }
  }
}
```

After (0.6.0):

```
{
  "credentialSubject": {
    "type": ["RegisteredIdentity"],
    "id": "did:web:samplecompany.com/123456789",
    "name": "Sample business Ltd",
    "registeredId": "123456789",
    "idScheme": {
      "type": ["IdentifierScheme"],
      "id": "https://id.gs1.org/01/",
      "name": "Global Trade Identification Number (GTIN)"
    }
  }
}
```

Reference Implementation Updates

1. Schema URL Updates

Before (0.2.1):

```
"schema": {
  "url":
  "https://jargon.sh/user/unece/DigitalIdentityAnchor/v/working/artefacts/jsonSchemas/Register
class=RegisteredIdentity"
}
```

After (0.6.0):

```
"schema": {
  "url":
    "https://jargon.sh/user/unece/DigitalIdentityAnchor/v/0.6.0/artefacts/jsonSchemas/Registered
    class=RegisteredIdentity"
}
```

2. Context Configuration in Services

Before (0.2.1):

```
"digitalIdentityAnchor": {
  "context": ["https://test.uncefact.org/vocabulary/untp/dia/0.2.1/"]
}
```

After (0.6.0):

```
"digitalIdentityAnchor": {
  "context": ["https://test.uncefact.org/vocabulary/untp/dia/0.6.0/"]
}
```

3. Form Data Structure Updates

If you're passing pre-populated data into the JsonForm component, update the data structure to conform to the new schema:

Before (0.2.1):

```
"data": {
  "type": ["RegisteredIdentity", "Identifier"],
  "id": "did:web:samplecompany.com/123456789",
  "name": "Sample business Ltd",
  "registeredId": "123456789",
  "idScheme": {
    "type": ["IdentifierScheme"],
    "id": "https://id.gs1.org/01/",
    "name": "Global Trade Identification Number (GTIN)"
  }
}
```

After (0.6.0):

```
"data": {
  "type": ["RegisteredIdentity"],
  "id": "did:web:samplecompany.com/123456789",
  "name": "Sample business Ltd",
  "registeredId": "123456789",
  "idScheme": {
    "type": ["IdentifierScheme"],
    "id": "https://id.gs1.org/01/",
    "name": "Global Trade Identification Number (GTIN)"
  }
}
```

4. Render Template Updates

Update the render template to use the new 0.6.0 compliant template. The updated template can be found at:

```
packages/mock-app/src/templates/v0.6.0/digital_identity_anchor/template.hbs
```

Example template configuration update:

Before (0.2.1):

```
"renderTemplate": [
  {
    "type": "WebRenderingTemplate2022",
    "template": "{v0.2.1-template}..."
  }
]
```

After (0.6.0):

```
"renderTemplate": [
  {
    "type": "WebRenderingTemplate2022",
    "template": "{v0.6.0-template}..."
  }
]
```

5. VCKit Issuer Structure Updates

Update the VCKit issuer configuration to use the new identifier structure:

Before (0.2.1):



```
"vckit": {
  "vckitAPIUrl": "http://localhost:3332/v2",
  "issuer": {
    "type": ["CredentialIssuer"],
    "id": "did:web:uncefact.github.io:project-vckit:test-and-development",
    "name": "Example Company Pty Ltd",
    "otherIdentifier": [
      {
        "type": ["Identifier"],
        "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
        "name": "Example Company Pty Ltd.",
        "registeredId": "90664869327",
        "idScheme": {
          "type": ["IdentifierScheme"],
          "id": "https://abr.business.gov.au/ABN/",
          "name": "Australian Business Number (ABN)"
        }
      }
    ]
  },
  "headers": {...}
}
```

After (0.6.0):

```
"vckit": {
  "vckitAPIUrl": "http://localhost:3332/v2",
  "issuer": {
    "type": ["CredentialIssuer"],
    "id": "did:web:uncefact.github.io:project-vckit:test-and-development",
    "name": "Example Company Pty Ltd",
    "issuerAlsoKnownAs": [
      {
        "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
        "name": "Example Company Pty Ltd.",
        "registeredId": "90664869327"
      }
    ]
  },
  "headers": {...}
}
```

Digital Conformity Credential (DCC)

Summary of Changes

The main changes to the Digital Conformity Credential in UNTP 0.6.0 include:

- **Simplified issuer identifier:** The `otherIdentifier` property is replaced with `issuerAlsoKnownAs`, removing the nested `idScheme` structure.
- **Simplified party structures:** The `issuedToParty`, `assessedOrganisation`, and `auditor` properties now use inline objects instead of referencing the `Identifier` or `Party` schemas, removing `idScheme`.
- **New verification structures:**
  - `assessedProduct` now uses `ProductVerification` instead of `Product`, incorporating an inline `product` object and `IDverifiedByCAB`.
  - `assessedFacility` now uses `FacilityVerification` instead of `Facility`, with an inline `facility` object and `IDverifiedByCAB`.
- **Updated JSON-LD context:** The context URL is updated to reflect version 0.6.0.
- **Schema refinements:** Improved validation patterns and consistency with other UNTP credentials. See the [details above](#).

Data Model Changes

1. JSON-LD Context Updates

Before (0.5.0):

```
"@context": [
  "https://www.w3.org/ns/credentials/v2",
  "https://vocabulary.uncefact.org/untp/dcc/0.5.0/"
]
```

After (0.6.0):

```
"@context": [
  "https://www.w3.org/ns/credentials/v2",
  "https://test.uncefact.org/vocabulary/untp/dcc/0.6.0/"
]
```

2. Issuer Identifier Structure Changes

The issuer identifier `otherIdentifier` property has been replaced with a new `issuerAlsoKnownAs` property, simplifying the structure by removing the `idScheme` reference.

Example data structure change:

Before (0.5.0):

```
{
  "issuer": {
    "type": ["CredentialIssuer"],
    "id": "did:web:identifiers.example-company.com:12345",
    "name": "Example Company Pty Ltd",
    "otherIdentifier": [
      {
        "type": ["Identifier"],
        "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
        "name": "Example Company Pty Ltd.",
        "registeredId": "90664869327",
        "idScheme": {
          "type": ["IdentifierScheme"],
          "id": "https://abr.business.gov.au/ABN/",
          "name": "Australian Business Number (ABN)"
        }
      }
    ]
  }
}
```

After (0.6.0):

```
{
  "issuer": {
    "type": ["CredentialIssuer"],
    "id": "did:web:identifiers.example-company.com:12345",
    "name": "Example Company Pty Ltd",
    "issuerAlsoKnownAs": [
      {
        "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
        "name": "Example Company Pty Ltd.",
        "registeredId": "90664869327"
      }
    ]
  }
}
```

3. Party Structure Changes

Key Changes:

- `issuedToParty` simplified from an `Identifier` reference to an inline object structure, removing `idScheme`.
- Similar simplifications applied to `assessedOrganisation` and `auditor` properties within the `assessment` array.

Example: issuedToParty structure change

Before (0.5.0):

```
{
  "credentialSubject": {
    "type": ["ConformityAttestation", "Attestation"],
    "issuedToParty": {
      "type": ["Party"],
      "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
      "name": "Sample Company Pty Ltd.",
      "registeredId": "90664869327",
      "idScheme": {
        "type": ["IdentifierScheme"],
        "id": "https://abr.business.gov.au/ABN/",
        "name": "Australian Business Number (ABN)"
      }
    }
  }
}
```

After (0.6.0):

```
{
  "credentialSubject": {
    "type": ["ConformityAttestation", "Attestation"],
    "issuedToParty": {
      "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
      "name": "Sample Company Pty Ltd.",
      "registeredId": "90664869327",
      "description": "A leading electric energy storage company"
    }
  }
}
```

4. Assessment Structure Updates

Key Changes:

- `assessedProduct` simplified from a generic `Product` with complex identifiers to `ProductVerification` with an inline `product` object and `IDverifiedByCAB` boolean.
- `assessedFacility` simplified from a generic `Facility` with complex identifiers to `FacilityVerification` with an inline `facility` object and `IDverifiedByCAB` boolean.
- `assessedOrganisation` and `auditor` simplified to inline party objects, removing `idScheme` references.

Example: assessedProduct structure change

Before (0.5.0):

```
{
  "credentialSubject": {
    "assessment": [
      {
        "assessedProduct": [
          {
            "type": ["Product"],
            "id": "https://id.gs1.org/01/09520123456788/21/12345",
            "name": "EV battery 300Ah.",
            "registeredId": "09520123456788.21.12345",
            "idScheme": {
              "type": ["IdentifierScheme"],
              "id": "https://id.gs1.org/01/",
              "name": "Global Trade Identification Number (GTIN)"
            }
          }
        ]
      }
    ]
  }
}
```

After (0.6.0):

```
{
  "credentialSubject": {
    "assessment": [
      {
        "assessedProduct": [
          {
            "type": ["ProductVerification"],
            "product": {
              "id": "https://id.gs1.org/01/09520123456788/21/12345",
              "name": "EV battery 300Ah.",
              "registeredId": "09520123456788.21.12345",
              "serialNumber": "12345678",
              "batchNumber": "6789"
            },
            "IDverifiedByCAB": true
          }
        ]
      }
    ]
  }
}
```

Example: assessedFacility structure change

Before (0.5.0):

```
{
  "credentialSubject": {
    "assessment": [
      {
        "assessedFacility": [
          {
            "type": ["Facility"],
            "id": "https://sample-facility-register.com/1234567",
            "name": "Greenacres battery factory",
            "registeredId": "1234567",
            "idScheme": {
              "type": ["IdentifierScheme"],
              "id": "https://id.gs1.org/414/",
              "name": "Global Location Number"
            }
          }
        ]
      }
    ]
  }
}
```

After (0.6.0):

```
{
  "credentialSubject": {
    "assessment": [
      {
        "assessedFacility": [
          {
            "type": ["FacilityVerification"],
            "facility": {
              "id": "https://sample-facility-register.com/1234567",
              "name": "Greenacres battery factory",
              "registeredId": "1234567"
            },
            "IDverifiedByCAB": true
          }
        ]
      }
    ]
  }
}
```

```
}  
}
```

Example: assessedOrganisation structure change

Before (0.5.0):

```
{  
  "credentialSubject": {  
    "assessment": [  
      {  
        "assessedOrganisation": {  
          "type": ["Party"],  
          "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",  
          "name": "Sample Company Pty Ltd.",  
          "registeredId": "90664869327",  
          "idScheme": {  
            "type": ["IdentifierScheme"],  
            "id": "https://abr.business.gov.au/ABN/",  
            "name": "Australian Business Number (ABN)"  
          }  
        }  
      }  
    ]  
  }  
}
```

After (0.6.0):

```
{  
  "credentialSubject": {  
    "assessment": [  
      {  
        "assessedOrganisation": {  
          "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",  
          "name": "Sample Company Pty Ltd.",  
          "registeredId": "90664869327",  
          "description": "A leading electric energy storage company"  
        }  
      }  
    ]  
  }  
}
```

Example: auditor structure change

Before (0.5.0):

```
{  
  "credentialSubject": {  
    "assessment": [  
      {  
        "auditor": {  
          "type": ["Party"],  
          "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",  
          "name": "Sample Auditor Ltd.",  
          "registeredId": "90664869327",  
          "idScheme": {  
            "type": ["IdentifierScheme"],  
            "id": "https://abr.business.gov.au/ABN/",  
            "name": "Australian Business Number (ABN)"  
          }  
        }  
      }  
    ]  
  }  
}
```

After (0.6.0):

```
{  
  "credentialSubject": {  
    "assessment": [  
      {  
        "auditor": {  
          "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",  
          "name": "Sample Auditor Ltd.",  
          "registeredId": "90664869327",  
          "description": "A certified conformity assessment body"  
        }  
      }  
    ]  
  }  
}
```

Reference Implementation Updates

1. Schema URL Updates

Before (0.5.0):

```
"schema": {  
  "url":  
    "https://jargon.sh/user/unece/ConformityCredential/v/working/artefacts/jsonSchemas/Conformit
```

```
class=ConformityAttestation"
}
```

After (0.6.0):

```
"schema": {
  "url":
    "https://jargon.sh/user/unece/ConformityCredential/v/0.6.0/artefacts/jsonSchemas/ConformityA
class=ConformityAttestation"
}
```

2. Context Configuration in Services

Before (0.5.0):

```
"digitalConformityCredential": {
  "context": ["https://uncefact.org/vocabulary/untp/dcc/0.5.0/"]
}
```

After (0.6.0):

```
"digitalConformityCredential": {
  "context": ["https://test.uncefact.org/vocabulary/untp/dcc/0.6.0/"]
}
```

3. Form Data Structure Updates

If you’re passing pre-populated data into the JsonForm component, update the data structure to conform to the new schema, reflecting the simplified party structures, new verification structures, and updated auditor structure.

Before (0.5.0):

```
"data": {
  "type": ["ConformityAttestation", "Attestation"],
  "issuedToParty": {
    "type": ["Party"],
    "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
    "name": "Sample Company Pty Ltd.",
    "registeredId": "90664869327",
    "idScheme": {
      "type": ["IdentifierScheme"],
      "id": "https://abr.business.gov.au/ABN/",
      "name": "Australian Business Number (ABN)"
    }
  },
  "assessment": [
    {
      "assessedProduct": [
        {
          "type": ["Product"],
          "id": "https://id.gs1.org/01/09520123456788/21/12345",
          "name": "EV battery 300Ah.",
          "registeredId": "09520123456788.21.12345",
          "idScheme": {
            "type": ["IdentifierScheme"],
            "id": "https://id.gs1.org/01/",
            "name": "Global Trade Identification Number (GTIN)"
          }
        }
      ]
    },
    {
      "assessedFacility": [
        {
          "type": ["Facility"],
          "id": "https://sample-facility-register.com/1234567",
          "name": "Greenacres battery factory",
          "registeredId": "1234567",
          "idScheme": {
            "type": ["IdentifierScheme"],
            "id": "https://id.gs1.org/414/",
            "name": "Global Location Number"
          }
        }
      ]
    },
    {
      "assessedOrganisation": {
        "type": ["Party"],
        "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
        "name": "Sample Company Pty Ltd.",
        "registeredId": "90664869327",
        "idScheme": {
          "type": ["IdentifierScheme"],
          "id": "https://abr.business.gov.au/ABN/",
          "name": "Australian Business Number (ABN)"
        }
      }
    }
  ],
  "auditor": {
    "type": ["Party"],
    "id": "https://abr.business.gov.au/ABN/View?abn=12345678901",
    "name": "Sample Auditor Ltd.",
    "registeredId": "12345678901",
    "idScheme": {
      "type": ["IdentifierScheme"],
      "id": "https://abr.business.gov.au/ABN/",
      "name": "Australian Business Number (ABN)"
    }
  }
}
```

```
    }
  }
]
}
```

After (0.6.0):

```
"data": {
  "type": ["ConformityAttestation", "Attestation"],
  "issuedToParty": {
    "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
    "name": "Sample Company Pty Ltd.",
    "registeredId": "90664869327",
    "description": "A leading electric energy storage company"
  },
  "assessment": [
    {
      "assessedProduct": [
        {
          "type": ["ProductVerification"],
          "product": {
            "id": "https://id.gs1.org/01/09520123456788/21/12345",
            "name": "EV battery 300Ah.",
            "registeredId": "09520123456788.21.12345",
            "serialNumber": "12345678",
            "batchNumber": "6789"
          },
          "IDverifiedByCAB": true
        }
      ],
      "assessedFacility": [
        {
          "type": ["FacilityVerification"],
          "facility": {
            "id": "https://sample-facility-register.com/1234567",
            "name": "Greenacres battery factory",
            "registeredId": "1234567"
          },
          "IDverifiedByCAB": true
        }
      ],
      "assessedOrganisation": {
        "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
        "name": "Sample Company Pty Ltd.",
        "registeredId": "90664869327",
        "description": "A leading electric energy storage company"
      },
      "auditor": {
        "id": "https://abr.business.gov.au/ABN/View?abn=12345678901",
        "name": "Sample Auditor Ltd.",
        "registeredId": "12345678901",
        "description": "A certified conformity assessment body"
      }
    }
  ]
}
```

4. Render Template Updates

Update the render template to use the new 0.6.0 compliant template. The updated template can be found at:

```
packages/mock-app/src/templates/v0.6.0/digital_conformity_credential/template.hbs
```

Example template configuration update:

Before (0.5.0):

```
"renderTemplate": [
  {
    "type": "WebRenderingTemplate2022",
    "template": "{v0.5.0-template}..."
  }
]
```

After (0.6.0):

```
"renderTemplate": [
  {
    "type": "WebRenderingTemplate2022",
    "template": "{v0.6.0-template}..."
  }
]
```

5. VCKit Issuer Structure Updates

Update the VCKit issuer configuration to use the new `issuerAlsoKnownAs` structure:

Before (0.5.0):

```
"vckit": {
  "vckitAPIUrl": "http://localhost:3332/v2",
  "issuer": {
    "type": ["CredentialIssuer"],
```



```
"id": "did:web:uncefact.github.io:project-vckit:test-and-development",
"name": "Example Company Pty Ltd",
"otherIdentifier": [
  {
    "type": ["Identifier"],
    "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
    "name": "Example Company Pty Ltd.",
    "registeredId": "90664869327",
    "idScheme": {
      "type": ["IdentifierScheme"],
      "id": "https://abr.business.gov.au/ABN/",
      "name": "Australian Business Number (ABN)"
    }
  }
]
},
"headers": {...}
}
```

After (0.6.0):

```
"vckit": {
  "vckitAPIUrl": "http://localhost:3332/v2",
  "issuer": {
    "type": ["CredentialIssuer"],
    "id": "did:web:uncefact.github.io:project-vckit:test-and-development",
    "name": "Example Company Pty Ltd",
    "issuerAlsoKnownAs": [
      {
        "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
        "name": "Example Company Pty Ltd.",
        "registeredId": "90664869327"
      }
    ]
  },
  "headers": {...}
}
```

Digital Product Passport (DPP)

Summary of Changes

The main changes to the Digital Product Passport in UNTP 0.6.0 include:

- **Restructured credential subject:** The `CredentialSubject` now uses a `ProductPassport` type with an embedded `product` object, replacing the direct `Product` reference, to better encapsulate claims and metadata.
- **Simplified issuer identifier:** The `otherIdentifier` property in the issuer is replaced with `issuerAlsoKnownAs`, removing the nested `idScheme` structure.
- **Simplified party and facility structures:** The `producedByParty` and `producedAtFacility` properties in the `product` removed the nested `idScheme` structure.
- **New characteristics field:** Added a `characteristics` property to the `product` object as an extension point for industry-specific attributes.
- **Renamed material properties:** In the `Material` schema, `massAmount` is renamed to `mass`, and `recycledAmount` is renamed to `recycledMassFraction` for clarity.
- **Enhanced criterion schema:** The `Criterion` schema now includes `description`, `conformityTopic`, `status`, `subCriterion`, `thresholdValue`, `performanceLevel`, and `tags`.
- **Updated JSON-LD context:** The context URL is updated to reflect version 0.6.0.
- **Schema refinements:** Improved validation patterns, including stricter type constraints and date-time formats, for consistency with other UNTP credentials. See the [details above](#).

Data Model Changes

1. JSON-LD Context Updates

Before (0.5.0):

```
"@context": [
  "https://www.w3.org/ns/credentials/v2",
  "https://vocabulary.uncefact.org/untp/dpp/0.5.0/"
]
```

After (0.6.0):

```
"@context": [
  "https://www.w3.org/ns/credentials/v2",
  "https://test.uncefact.org/vocabulary/untp/dpp/0.6.0/"
]
```

2. Credential Subject Structure

The `CredentialSubject` has been restructured to use a `ProductPassport` type, which encapsulates a `product` object and additional metadata like `granularityLevel` and claims.

Example data structure change:

Before (0.5.0):

```
{
  "id": "did:web:uncefact.github.io:project-vckit:test-and-development",
  "name": "Example Company Pty Ltd",
  "otherIdentifier": [
    {
      "type": ["Identifier"],
      "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
      "name": "Example Company Pty Ltd.",
      "registeredId": "90664869327",
      "idScheme": {
        "type": ["IdentifierScheme"],
        "id": "https://abr.business.gov.au/ABN/",
        "name": "Australian Business Number (ABN)"
      }
    }
  ]
}
```

```
{
  "credentialSubject": {
    "type": ["Product"],
    "id": "https://id.gs1.org/01/09520123456788/21/12345",
    "name": "EV battery 300Ah.",
    "registeredId": "09520123456788.21.12345",
    "idScheme": {
      "type": ["IdentifierScheme"],
      "id": "https://id.gs1.org/01/",
      "name": "Global Trade Identification Number (GTIN)"
    },
    "conformityClaim": [...]
  }
}
```

After (0.6.0):

```
{
  "credentialSubject": {
    "type": ["ProductPassport"],
    "id": "example:product/1234",
    "product": {
      "type": ["Product"],
      "id": "https://id.gs1.org/01/09520123456788/21/12345",
      "name": "EV battery 300Ah.",
      "registeredId": "09520123456788.21.12345"
    },
    "granularityLevel": "item",
    "conformityClaim": [...]
  }
}
```

3. Issuer Identifier Structure

The issuer’s `otherIdentifier` property is replaced with `issuerAlsoKnownAs`, simplifying the structure by removing the `idScheme` reference.

Example data structure change:

Before (0.5.0):

```
{
  "issuer": {
    "type": ["CredentialIssuer"],
    "id": "did:web:identifiers.example-company.com:12345",
    "name": "Example Company Pty Ltd",
    "otherIdentifier": [
      {
        "type": ["Identifier"],
        "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
        "name": "Example Company Pty Ltd.",
        "registeredId": "90664869327",
        "idScheme": {
          "type": ["IdentifierScheme"],
          "id": "https://abr.business.gov.au/ABN/",
          "name": "Australian Business Number (ABN)"
        }
      }
    ]
  }
}
```

After (0.6.0):

```
{
  "issuer": {
    "type": ["CredentialIssuer"],
    "id": "did:web:identifiers.example-company.com:12345",
    "name": "Example Company Pty Ltd",
    "issuerAlsoKnownAs": [
      {
        "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
        "name": "Example Company Pty Ltd.",
        "registeredId": "90664869327"
      }
    ]
  }
}
```

4. Product Structure Changes

Key Changes:

- `producedByParty` and `producedAtFacility` properties removed the nested `idScheme` structure.
- Added `characteristics` property as an extension point for industry-specific attributes.
- Removed `idScheme` from the `product` object itself, as it’s no longer required in the inline structure.

Example: producedByParty structure change

Before (0.5.0):

```
{
  "product": {
    "type": ["Product"],
    "id": "https://id.gs1.org/01/09520123456788/21/12345",
    "name": "EV battery 300Ah.",
    "registeredId": "09520123456788.21.12345",
    "idScheme": {
      "type": ["IdentifierScheme"],
      "id": "https://id.gs1.org/01/",
      "name": "Global Trade Identification Number (GTIN)"
    },
    "conformityClaim": [...]
  }
}
```

```
{
  "credentialSubject": {
    "type": ["Product"],
    "producedByParty": {
      "type": ["Identifier"],
      "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
      "name": "Sample Company Pty Ltd.",
      "registeredId": "90664869327",
      "idScheme": {
        "type": ["IdentifierScheme"],
        "id": "https://abr.business.gov.au/ABN/",
        "name": "Australian Business Number (ABN)"
      }
    }
  }
}
```

After (0.6.0):

```
{
  "credentialSubject": {
    "type": ["ProductPassport"],
    "product": {
      "type": ["Product"],
      "producedByParty": {
        "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
        "name": "Sample Company Pty Ltd.",
        "registeredId": "90664869327"
      }
    }
  }
}
```

Example: producedAtFacility structure change

Before (0.5.0):

```
{
  "credentialSubject": {
    "type": ["Product"],
    "producedAtFacility": {
      "type": ["Identifier"],
      "id": "https://sample-facility-register.com/1234567",
      "name": "Greenacres battery factory",
      "registeredId": "1234567",
      "idScheme": {
        "type": ["IdentifierScheme"],
        "id": "https://id.gs1.org/414/",
        "name": "Global Location Number"
      }
    }
  }
}
```

After (0.6.0):

```
{
  "credentialSubject": {
    "type": ["ProductPassport"],
    "product": {
      "type": ["Product"],
      "producedAtFacility": {
        "id": "https://sample-facility-register.com/1234567",
        "name": "Greenacres battery factory",
        "registeredId": "1234567"
      }
    }
  }
}
```

Example: characteristics addition

After (0.6.0):

```
{
  "credentialSubject": {
    "type": ["ProductPassport"],
    "product": {
      "type": ["Product"],
      "characteristics": {
        "type": ["Characteristics"],
        "capacity": "300 Ah"
      }
    }
  }
}
```

5. Material Structure Changes

Key Changes:

- Renamed `massAmount` to `mass` and `recycledAmount` to `recycledMassFraction`.

- Simplified `issuingParty` in the `Standard` and `administeredBy` in `Regulation` by removing the nested `idScheme` structure.

Example: material structure change

Before (0.5.0):

```
{
  "credentialSubject": {
    "type": ["Product"],
    "materialsProvenance": [
      {
        "type": ["Material"],
        "name": "Lithium Spodumene",
        "massAmount": {
          "type": ["Measure"],
          "value": 10,
          "unit": "KGM"
        },
        "recycledAmount": 0.5
      }
    ]
  }
}
```

After (0.6.0):

```
{
  "credentialSubject": {
    "type": ["ProductPassport"],
    "materialsProvenance": [
      {
        "name": "Lithium Spodumene",
        "mass": {
          "value": 10,
          "unit": "KGM"
        },
        "recycledMassFraction": 0.5
      }
    ]
  }
}
```

Example: issuingParty structure change (Standard schema)

Before (0.5.0):

```
{
  "credentialSubject": {
    "type": ["Product"],
    "conformityClaim": [
      {
        "type": ["Claim", "Declaration"],
        "referenceStandard": {
          "type": ["Standard"],
          "id": "https://www.globalbattery.org/media/publications/gba-rulebook-v2.0-master.pdf",
          "name": "GBA Battery Passport Greenhouse Gas Rulebook - V.2.0",
          "issuingParty": {
            "type": ["Identifier"],
            "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
            "name": "Global Battery Alliance",
            "registeredId": "90664869327",
            "idScheme": {
              "type": ["IdentifierScheme"],
              "id": "https://abr.business.gov.au/ABN/",
              "name": "Australian Business Number (ABN)"
            }
          }
        }
      }
    ]
  }
}
```

After (0.6.0):

```
{
  "credentialSubject": {
    "type": ["ProductPassport"],
    "conformityClaim": [
      {
        "type": ["Claim", "Declaration"],
        "referenceStandard": {
          "type": ["Standard"],
          "id": "https://www.globalbattery.org/media/publications/gba-rulebook-v2.0-master.pdf",
          "name": "GBA Battery Passport Greenhouse Gas Rulebook - V.2.0",
          "issuingParty": {
            "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
            "name": "Global Battery Alliance",
            "registeredId": "90664869327"
          }
        }
      }
    ]
  }
}
```

```
}  
}
```

Example: administeredBy structure change (Regulation schema)

Before (0.5.0):

```
{  
  "credentialSubject": {  
    "type": ["Product"],  
    "conformityClaim": [  
      {  
        "type": ["Claim", "Declaration"],  
        "referenceRegulation": {  
          "type": ["Regulation"],  
          "id": "https://www.legislation.gov.au/F2008L02309/latest/versions",  
          "name": "National Greenhouse and Energy Reporting (Measurement) Determination",  
          "administeredBy": {  
            "type": ["Identifier"],  
            "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",  
            "name": "Australian Government Department of Climate Change",  
            "registeredId": "90664869327",  
            "idScheme": {  
              "type": ["IdentifierScheme"],  
              "id": "https://abr.business.gov.au/ABN/",  
              "name": "Australian Business Number (ABN)"  
            }  
          }  
        }  
      }  
    ]  
  }  
}
```

After (0.6.0):

```
{  
  "credentialSubject": {  
    "type": ["ProductPassport"],  
    "conformityClaim": [  
      {  
        "type": ["Claim", "Declaration"],  
        "referenceRegulation": {  
          "type": ["Regulation"],  
          "id": "https://www.legislation.gov.au/F2008L02309/latest/versions",  
          "name": "National Greenhouse and Energy Reporting (Measurement) Determination",  
          "administeredBy": {  
            "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",  
            "name": "Australian Government Department of Climate Change",  
            "registeredId": "90664869327"  
          }  
        }  
      }  
    ]  
  }  
}
```

6. Criterion Structure Enhancements

`Criterion` now includes additional fields: `description`, `conformityTopic`, `status`, `subCriterion`, `thresholdValue` (replacing `thresholdValues`), `performanceLevel`, and `tags`. The `thresholdValues` property has been renamed to `thresholdValue` to reflect a singular metric focus per criterion. The `subCriterion` property allows for hierarchical structuring, enabling a criterion to reference subordinate criteria.

Example: criterion structure change

Before (0.5.0):

```
{  
  "credentialSubject": {  
    "conformityClaim": [  
      {  
        "type": ["Claim", "Declaration"],  
        "assessmentCriteria": [  
          {  
            "type": ["Criterion"],  
            "id": "https://www.globalbattery.org/media/publications/gba-rulebook-v2.0-master.pdf#BatteryAssembly",  
            "name": "GBA Battery rule book v2.0 battery assembly guidelines.",  
            "thresholdValues": [  
              {  
                "metricName": "Recyclability",  
                "metricValue": {  
                  "value": 0.73,  
                  "unit": "fraction"  
                }  
              }  
            ]  
          }  
        ]  
      }  
    ]  
  }  
}
```

```
{
  "credentialSubject": {
    "type": ["ProductPassport"],
    "conformityClaim": [
      {
        "type": ["Claim", "Declaration"],
        "assessmentCriteria": [
          {
            "type": ["Criterion"],
            "id": "https://www.globalbattery.org/media/publications/gba-rulebook-v2.0-master.pdf#BatteryAssembly",
            "name": "GBA Battery rule book v2.0 battery assembly guidelines.",
            "description": "Battery is designed for easy disassembly and recycling at end-of-life.",
            "conformityTopic": "circularity.design",
            "status": "active",
            "thresholdValue": {
              "metricName": "Recyclability",
              "metricValue": {
                "value": 0.73,
                "unit": "fraction"
              }
            },
            "performanceLevel": "Category 3 recyclable with 73% recyclability",
            "tags": "battery, recycling",
            "subCriterion": [
              {
                "type": ["Criterion"],
                "id": "https://www.globalbattery.org/media/publications/gba-rulebook-v2.0-master.pdf#BatteryDisassembly",
                "name": "Battery disassembly requirements",
                "description": "Ensures battery components can be separated without specialized tools.",
                "conformityTopic": "circularity.design",
                "status": "active",
                "thresholdValue": {
                  "metricName": "Disassembly Time",
                  "metricValue": {
                    "value": 30,
                    "unit": "minutes"
                  }
                },
                "performanceLevel": "Category 3 efficient disassembly",
                "tags": "battery, disassembly"
              }
            ]
          }
        ]
      }
    ]
  }
}
```

## 1. Schema URL Updates

```
"schema": {
  "url":
    "https://jargon.sh/user/unece/DigitalProductPassport/v/working/artefacts/jsonSchemas/Product
    class=Product"
}
```

```
"schema": {
  "url":
    "https://jargon.sh/user/unece/DigitalProductPassport/v/0.6.0/artefacts/jsonSchemas/ProductPassport.json",
  "class=ProductPassport"
}
```

### Before (0.5.0):

```
"dpp": {
  "context": ["https://vocabulary.uncefact.org/untp/dpp/0.5.0/"]
}
```

```
"dpp": {
  "context": ["https://test.uncefact.org/vocabulary/untp/dpp/0.6.0/"]
}
```

Update the data structure for the JsonForm component to conform to the new `ProductPassport` schema, reflecting the restructured `credentialSubject`, simplified identifiers, and new fields.



Before (0.5.0):

```
"data": {
  "type": ["Product"],
  "id": "https://id.gs1.org/01/09520123456788/21/12345",
  "name": "EV battery 300Ah.",
  "registeredId": "09520123456788.21.12345",
  "idScheme": {
    "type": ["IdentifierScheme"],
    "id": "https://id.gs1.org/01/",
    "name": "Global Trade Identification Number (GTIN)"
  },
  "producedByParty": {
    "type": ["Identifier"],
    "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
    "name": "Sample Company Pty Ltd.",
    "registeredId": "90664869327",
    "idScheme": {
      "type": ["IdentifierScheme"],
      "id": "https://abr.business.gov.au/ABN/",
      "name": "Australian Business Number (ABN)"
    }
  },
  "materialsProvenance": [
    {
      "name": "Lithium Spodumene",
      "massAmount": {
        "value": 10,
        "unit": "KGM"
      },
      "recycledAmount": 0.5
    }
  ]
}
```

After (0.6.0):

```
"data": {
  "type": ["ProductPassport"],
  "id": "https://example.com/products/09520123456788",
  "product": {
    "type": ["Product"],
    "id": "https://id.gs1.org/01/09520123456788/21/12345",
    "name": "EV battery 300Ah.",
    "registeredId": "09520123456788.21.12345",
    "producedByParty": {
      "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
      "name": "Sample Company Pty Ltd.",
      "registeredId": "90664869327"
    },
    "characteristics": {
      "type": ["Characteristics"],
      "capacity": "300 Ah"
    }
  },
  "granularityLevel": "item",
  "materialsProvenance": [
    {
      "name": "Lithium Spodumene",
      "mass": {
        "value": 10,
        "unit": "KGM"
      },
      "recycledMassFraction": 0.5
    }
  ],
  "conformityClaim": [
    {
      "type": ["Claim", "Declaration"],
      "id": "https://example.com/claims/12345",
      "conformance": true,
      "conformityTopic": "circularity.design",
      "assessmentDate": "2024-03-15",
      "referenceStandard": {
        "type": ["Standard"],
        "id": "https://www.globalbattery.org/media/publications/gba-rulebook-v2.0-master.pdf",
        "name": "GBA Battery Passport Greenhouse Gas Rulebook - V.2.0",
        "issuingParty": {
          "id": "https://example.com/parties/gba",
          "name": "Global Battery Alliance",
          "registeredId": "GBA123"
        }
      },
      "referenceRegulation": {
        "type": ["Regulation"],
        "id": "https://www.legislation.gov.au/F2008L02309/latest/versions",
        "name": "National Greenhouse and Energy Reporting (Measurement) Determination",
        "administeredBy": {
          "id": "https://example.com/parties/dcceew",
          "name": "Australian Government Department of Climate Change",
          "registeredId": "DCCEEW123"
        }
      },
      "assessmentCriteria": [
        {
          "type": ["Criterion"],
          "id": "https://www.globalbattery.org/media/publications/gba-rulebook-v2.0-master.pdf#BatteryAssembly",
          "name": "GBA Battery rule book v2.0 battery assembly guidelines.",
          "description": "Battery is designed for easy disassembly and recycling at end-
```

```
of-life.",
  "conformityTopic": "circularity.design",
  "status": "active",
  "thresholdValue": {
    "metricName": "Recyclability",
    "metricValue": {
      "value": 0.73,
      "unit": "fraction"
    }
  },
  "performanceLevel": "Category 3 recyclable with 73% recyclability",
  "tags": "battery, recycling",
  "subCriterion": [
    {
      "type": ["Criterion"],
      "id": "https://www.globalbattery.org/media/publications/gba-rulebook-v2.0-master.pdf#BatteryDisassembly",
      "name": "Battery disassembly requirements",
      "description": "Ensures battery components can be separated without specialized tools.",
      "conformityTopic": "circularity.design",
      "status": "active",
      "thresholdValue": {
        "metricName": "Disassembly Time",
        "metricValue": {
          "value": 30,
          "unit": "minutes"
        }
      },
      "performanceLevel": "Category 3 efficient disassembly",
      "tags": "battery, disassembly"
    }
  ]
}
]
}
]
}
]
}
```

4. Render Template Updates

Update the render template to use the new 0.6.0 compliant template. The updated template can be found at:

packages/mock-app/src/templates/v0.6.0/digital\_product\_passport/template.hbs

Example template configuration update:

Before (0.5.0):

```
"renderTemplate": [
  {
    "type": "WebRenderingTemplate2022",
    "template": "{v0.5.0-template}..."
  }
]
```

After (0.6.0):

```
"renderTemplate": [
  {
    "type": "WebRenderingTemplate2022",
    "template": "{v0.6.0-template}..."
  }
]
```

5. VCKit Issuer Structure Updates

Update the VCKit issuer configuration to use the new `issuerAlsoKnownAs` structure:

Before (0.5.0):

```
"vckit": {
  "vckitAPIUrl": "http://localhost:3332/v2",
  "issuer": {
    "type": ["CredentialIssuer"],
    "id": "did:web:uncefact.github.io:project-vckit:test-and-development",
    "name": "Example Company Pty Ltd",
    "otherIdentifier": [
      {
        "type": ["Identifier"],
        "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
        "name": "Example Company Pty Ltd.",
        "registeredId": "90664869327",
        "idScheme": {
          "type": ["IdentifierScheme"],
          "id": "https://abr.business.gov.au/ABN/",
          "name": "Australian Business Number (ABN)"
        }
      }
    ]
  },
  "headers": {...}
}
```

After (0.6.0):

```
"vckit": {
  "vckitAPIUrl": "http://localhost:3332/v2",
  "issuer": {
    "type": ["CredentialIssuer"],
    "id": "did:web:uncefact.github.io:project-vckit:test-and-development",
    "name": "Example Company Pty Ltd",
    "issuerAlsoKnownAs": [
      {
        "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
        "name": "Example Company Pty Ltd.",
        "registeredId": "90664869327"
      }
    ]
  },
  "headers": {...}
}
```

Digital Traceability Event (DTE)

Summary of Changes

The main changes to the Digital Traceability Event (DTE) in UNTP 0.6.0 include:

- **Simplified issuer identifier:** The `otherIdentifier` property in the issuer is replaced with `issuerAlsoKnownAs`, removing the nested `idScheme` structure.
- **Updated party identifiers in TransactionEvent:** The `sourcePartyId` and `destinationPartyId` properties are renamed to `sourceParty` and `destinationParty` respectively.
- **Updated JSON-LD context:** The context URL is updated to reflect version 0.6.0.
- **Schema refinements:** Improved validation patterns, including stricter type constraints and date-time formats, for consistency with other UNTP credentials. See the [details above](#).

Data Model Changes

1. JSON-LD Context Updates

Before (0.5.0):

```
"@context": [
  "https://www.w3.org/ns/credentials/v2",
  "https://vocabulary.uncefact.org/untp/dte/0.5.0/"
]
```

After (0.6.0):

```
"@context": [
  "https://www.w3.org/ns/credentials/v2",
  "https://test.uncefact.org/vocabulary/untp/dte/0.6.0/"
]
```

2. Issuer Identifier Structure

The issuer’s `otherIdentifier` property is replaced with `issuerAlsoKnownAs`, simplifying the structure by removing the `idScheme` reference.

Example data structure change:

Before (0.5.0):

```
{
  "issuer": {
    "type": ["CredentialIssuer"],
    "id": "did:web:identifiers.example-company.com:12345",
    "name": "Example Company Pty Ltd",
    "otherIdentifier": [
      {
        "type": ["Identifier"],
        "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
        "name": "Example Company Pty Ltd.",
        "registeredId": "90664869327",
        "idScheme": {
          "type": ["IdentifierScheme"],
          "id": "https://abr.business.gov.au/ABN/",
          "name": "Australian Business Number (ABN)"
        }
      }
    ]
  }
}
```

After (0.6.0):

```
{
  "issuer": {
    "type": ["CredentialIssuer"],
    "id": "did:web:identifiers.example-company.com:12345",
    "name": "Example Company Pty Ltd",
    "issuerAlsoKnownAs": [
      {
        "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
```

```
      "name": "Example Company Pty Ltd.",
      "registeredId": "90664869327"
    }
  ]
}
}
```

3. TransactionEvent Party Structure

Key Changes:

- sourcePartyId and destinationPartyId are renamed to sourceParty and destinationParty respectively.

Example: TransactionEvent structure change

Before (0.5.0):

```
{
  "type": ["TransactionEvent", "Event"],
  "id": "https://events.sample.com/b681df10-c682-454a-b11b-d0b9374c01bd",
  "processType": "Shipment",
  "eventTime": "2024-09-01T12:00:00",
  "action": "observe",
  "bizStep": "urn:epcglobal:cbv:bizStep:shipping",
  "disposition": "urn:epcglobal:cbv:disp:in_transit",
  "bizLocation": "https://id.gs1.org/414/9520123456788",
  "sourcePartyId": "https://abr.business.gov.au/ABN/View?abn=90664869327",
  "destinationPartyId": "https://abr.business.gov.au/ABN/View?abn=12345678901",
  "bizTransaction": "urn:epcglobal:cbv:btt:po",
  "epcList": [
    {
      "type": ["Item"],
      "id": "https://id.gs1.org/01/09520123456788/21/12345",
      "name": "EV battery 300Ah."
    }
  ]
}
```

After (0.6.0):

```
{
  "type": ["TransactionEvent", "Event"],
  "id": "https://events.sample.com/b681df10-c682-454a-b11b-d0b9374c01bd",
  "processType": "Shipment",
  "eventTime": "2024-09-01T12:00:00Z",
  "action": "observe",
  "bizStep": "urn:epcglobal:cbv:bizStep:shipping",
  "disposition": "urn:epcglobal:cbv:disp:in_transit",
  "bizLocation": "https://id.gs1.org/414/9520123456788",
  "sourceParty": "https://abr.business.gov.au/ABN/View?abn=90664869327",
  "destinationParty": "https://abr.business.gov.au/ABN/View?abn=12345678901",
  "bizTransaction": "urn:epcglobal:cbv:btt:po",
  "epcList": [
    {
      "type": ["Item"],
      "id": "https://id.gs1.org/01/09520123456788/21/12345",
      "name": "EV battery 300Ah."
    }
  ]
}
```

Reference Implementation Updates

1. Schema URL Updates

The schema URL depends on the specific event type being issued (e.g., TransactionEvent, ObjectEvent, AssociationEvent, AggregationEvent, TransformationEvent). Below is an example for TransactionEvent.

Before (0.5.0):

```
"schema": {
  "url":
    "https://jargon.sh/user/unece/traceabilityEvents/v/working/artefacts/jsonSchemas/Transaction
class=TransactionEvent"
}
```

After (0.6.0):

```
"schema": {
  "url":
    "https://jargon.sh/user/unece/traceabilityEvents/v/0.6.0/artefacts/jsonSchemas/TransactionEv
class=TransactionEvent"
}
```

**Note:** Replace TransactionEvent with the appropriate event type (e.g., ObjectEvent, AssociationEvent, AggregationEvent, TransformationEvent) based on the event being issued. For example, for an ObjectEvent:

Before (0.5.0):

```
"schema": {
  "url":
    "https://jargon.sh/user/unece/traceabilityEvents/v/working/artefacts/jsonSchemas/ObjectEvent
class=ObjectEvent"
}
```

After (0.6.0):

```
"schema": {
  "url":
    "https://jargon.sh/user/unece/traceabilityEvents/v/0.6.0/artefacts/jsonSchemas/ObjectEvent.j
class=ObjectEvent"
}
```

2. Context Configuration in Services

Before (0.5.0):

```
"traceabilityEvent": {
  "context": ["https://vocabulary.uncefact.org/untp/dte/0.5.0/"]
}
```

After (0.6.0):

```
"traceabilityEvent": {
  "context": ["https://test.uncefact.org/vocabulary/untp/dte/0.6.0/"]
}
```

3. Form Data Structure Updates (Transaction Event)

Update the data structure for the JsonForm component to conform to the new TransactionEvent schema, reflecting the renamed sourceParty and destinationParty properties.

Before (0.5.0):

```
"data": {
  "type": ["TransactionEvent", "Event"],
  "id": "https://events.sample.com/b681df10-c682-454a-b11b-d0b9374c01bd",
  "processType": "Shipment",
  "eventTime": "2024-09-01T12:00:00",
  "action": "observe",
  "bizStep": "urn:epcglobal:cbv:bizStep:shipping",
  "disposition": "urn:epcglobal:cbv:disp:in_transit",
  "bizLocation": "https://id.gs1.org/414/9520123456788",
  "sourcePartyId": "https://abr.business.gov.au/ABN/View?abn=90664869327",
  "destinationPartyId": "https://abr.business.gov.au/ABN/View?abn=12345678901",
  "bizTransaction": "urn:epcglobal:cbv:btt:po",
  "epcList": [
    {
      "type": ["Item"],
      "id": "https://id.gs1.org/01/09520123456788/21/12345",
      "name": "EV battery 300Ah."
    }
  ]
}
```

After (0.6.0):

```
"data": {
  "type": ["TransactionEvent", "Event"],
  "id": "https://events.sample.com/b681df10-c682-454a-b11b-d0b9374c01bd",
  "processType": "Shipment",
  "eventTime": "2024-09-01T12:00:00Z",
  "action": "observe",
  "bizStep": "urn:epcglobal:cbv:bizStep:shipping",
  "disposition": "urn:epcglobal:cbv:disp:in_transit",
  "bizLocation": "https://id.gs1.org/414/9520123456788",
  "sourceParty": "https://abr.business.gov.au/ABN/View?abn=90664869327",
  "destinationParty": "https://abr.business.gov.au/ABN/View?abn=12345678901",
  "bizTransaction": "urn:epcglobal:cbv:btt:po",
  "epcList": [
    {
      "type": ["Item"],
      "id": "https://id.gs1.org/01/09520123456788/21/12345",
      "name": "EV battery 300Ah."
    }
  ]
}
```

4. Render Template Updates

Update the render template to use the new 0.6.0 compliant template. The updated template can be found at:

```
packages/mock-app/src/templates/v0.6.0/digital_traceability_event/template.hbs
```

Example template configuration update:

Before (0.5.0):



```
"renderTemplate": [
  {
    "type": "WebRenderingTemplate2022",
    "template": "{v0.5.0-template}..."
  }
]
```

After (0.6.0):

```
"renderTemplate": [
  {
    "type": "WebRenderingTemplate2022",
    "template": "{v0.6.0-template}..."
  }
]
```

5. VCKit Issuer Structure Updates

Update the VCKit issuer configuration to use the new `issuerAlsoKnownAs` structure:

Before (0.5.0):

```
"vckit": {
  "vckitAPIUrl": "http://localhost:3332/v2",
  "issuer": {
    "type": ["CredentialIssuer"],
    "id": "did:web:uncefact.github.io:project-vckit:test-and-development",
    "name": "Example Company Pty Ltd",
    "otherIdentifier": [
      {
        "type": ["Identifier"],
        "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
        "name": "Example Company Pty Ltd.",
        "registeredId": "90664869327",
        "idScheme": {
          "type": ["IdentifierScheme"],
          "id": "https://abr.business.gov.au/ABN/",
          "name": "Australian Business Number (ABN)"
        }
      }
    ]
  },
  "headers": {...}
}
```

After (0.6.0):

```
"vckit": {
  "vckitAPIUrl": "http://localhost:3332/v2",
  "issuer": {
    "type": ["CredentialIssuer"],
    "id": "did:web:uncefact.github.io:project-vckit:test-and-development",
    "name": "Example Company Pty Ltd",
    "issuerAlsoKnownAs": [
      {
        "id": "https://abr.business.gov.au/ABN/View?abn=90664869327",
        "name": "Example Company Pty Ltd.",
        "registeredId": "90664869327"
      }
    ]
  },
  "headers": {...}
}
```

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