5th UCAAT User Conference on Advanced Automated Testing

ETSI

THE POWER OF VISUAL REPRESENTATION FOR AN EFFICIENT TEST DESIGN

FEEDBACK FROM AN IT IMPLEMENTATION PROJECT IN AN INDUSTRIAL COMPANY

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STREIT groupe

Smartesting

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CONTENT

- **Lightweight Model-Based Testing** approach based on the visual representation of the application workflows
- **Return on experience ERP** – Streit Group
- **Implementation of the approach in agile**

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Why Lightweight Model-Based Testing for enterprise IT

- Allow System Matter Experts, Business Analysts and Functional Testers to create and share easy-to-write (business-process oriented) visual representations for functional test design and implementation

➔ The power of MBT with 2 hours learning curve !

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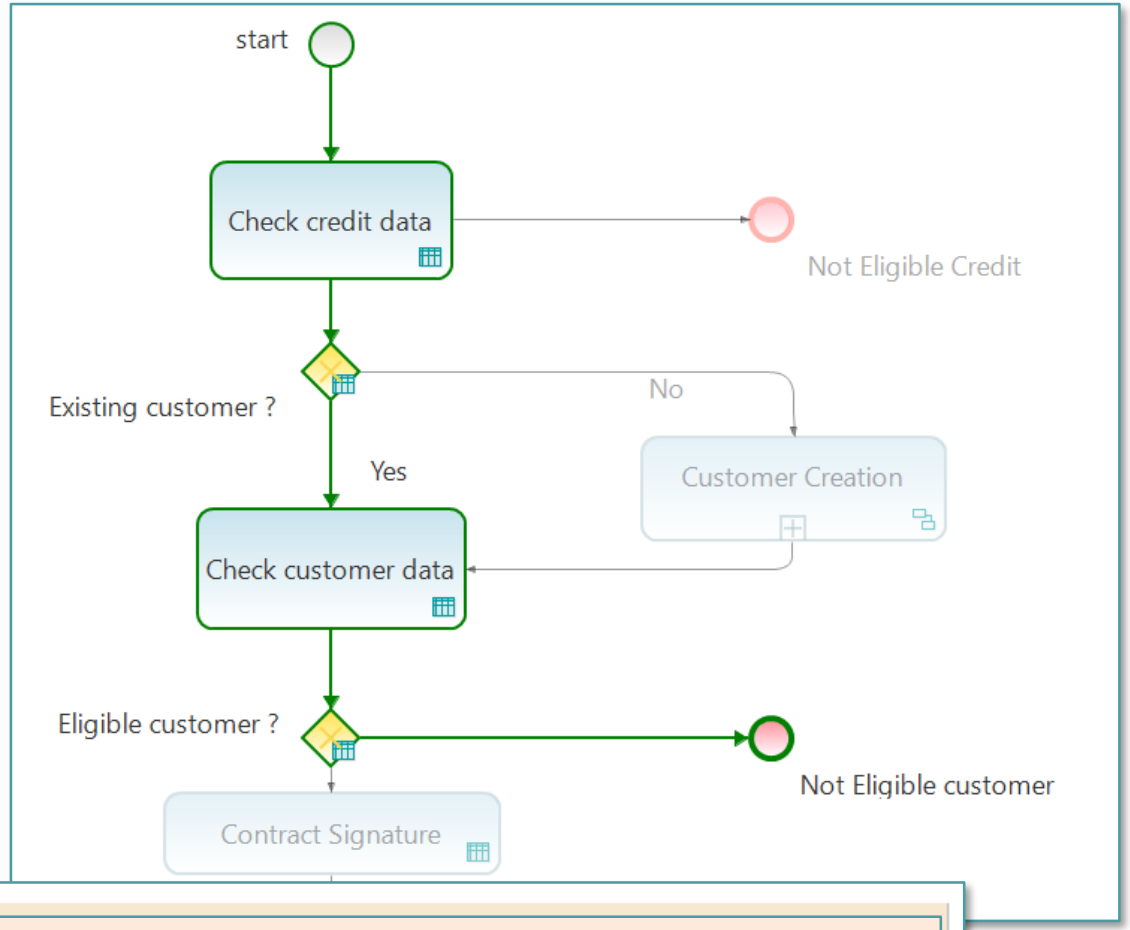
Simple notation: workflow and decision tables

- Visualize - Explain - Share

Application workflow



Decision table

	Client Type	Outcome
1	New	Existing customer ? → **No** → Customer Creation
2	Existing	Existing customer ? → **Yes** → Check customer data

Keep it simple: workflow modeling

Modeling elements:

start

Task

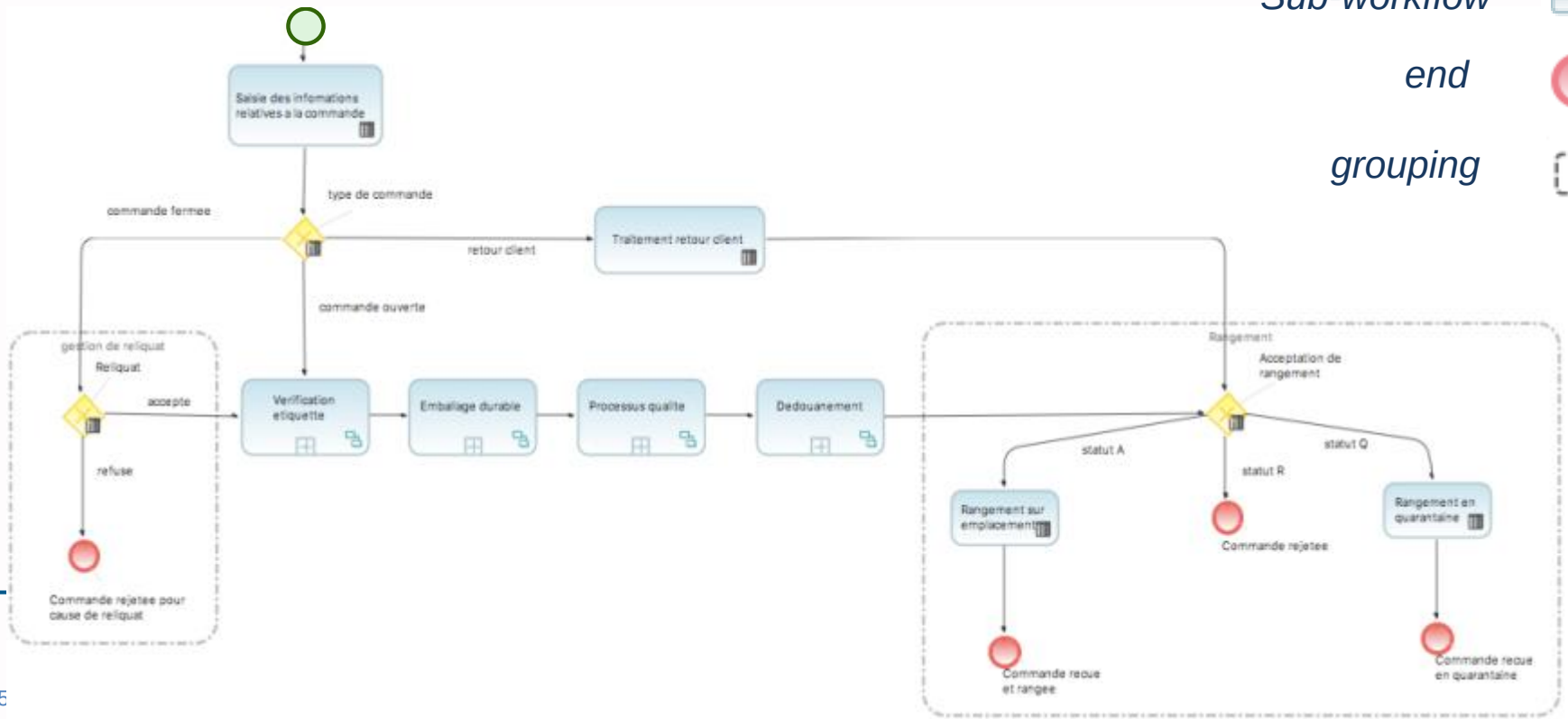
Choice point

Sub-workflow

end

grouping

Workflow sample – ERP Project



Simple notation: workflows and decision tables

Keep it simple: design test cases

Decision tables to identify test data and express business rules

	Statut_produit ?	Nouvelle_piece	Fournisseur	Nb...	Actions	Résultats attendus	Exigence
1	Q	Oui	non AQP	3	Réception	Contrôle qualité nécessaire	Contrôle qualité X10C
2	A	Non	AQP	0	Réception	Sans contrôle qualité	Contrôle qualité X10C
3	Q	Non	AQP	3	Réception	Contrôle qualité nécessaire	Contrôle qualité X10C

Decision table sample – ERP project

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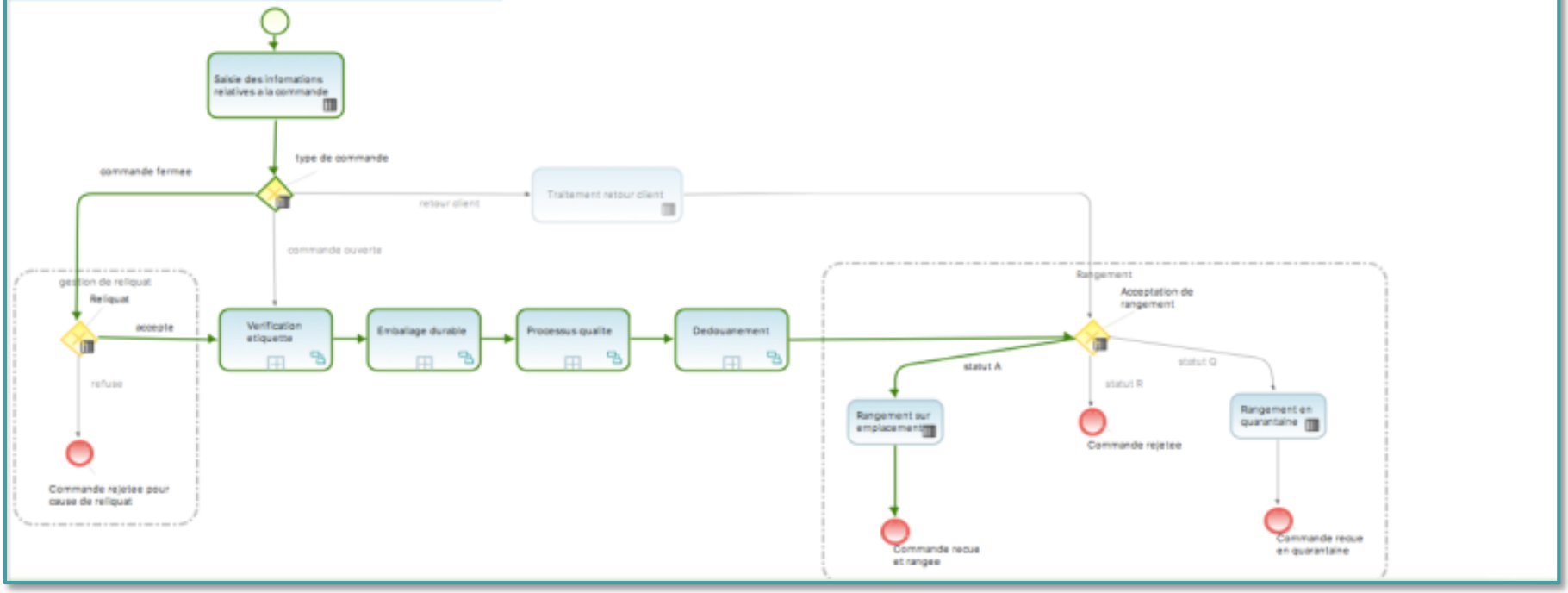
Generate your tests

Streit_ERP > generatedTestScenario37 — Fermer l'assistant — Basculer l'orientation d'affichage

	Actions	Résultats attendus
1	Arrivee d'une commande de type Reception stockee - Commande Fermee valide avec :	La commande a ete identifiee
2	Identification de reception de commande	Enregistrement d'arrivage de commande au quai
3	Reception de commande de	Commande avec n°commande
4	Saisie des informations relatives a la Commande Fermee: lot, version, quantite normale	
5	Verification presence des etiquettes	L'etiquette est presente
6	Verifier le code et couleur de l'etiquette. Verifier que le code (bleu/blanche/verte) correspondent au type	L'etiquette est coherente
7	Identifier les nombre d'elements	

1_Reception de commande > 2_Reception de commande stockee



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Publish it in your test management tool

Streit_ERP > generatedTestScenario37

Fermer l'assistant | Basculer l'orientation d'affichage

	Actions	Résultats attendus
1	Arrivee d'une commande de type Reception stockee - Commande Fermee valide avec :	La commande a ete identifiee
2	Identification de reception de commande	Enregistrement d'arrivage de commande au quai
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7	Identifier les nombre d'elements	

Informations | Pas de test | Paramètres | Pièces jointes | Exécutions

Réduire | Ajouter un pas de test | Appeler un cas de test | Copier | Coller | Supprimer

1	Identificaton et verification de la commande que tous les éléments sont corrects: cote Streit : code fournisseur, code article existant, n° commande, n° d'appel, n° de contrat et cote fournisseur: n° BL, n° commande, ligne de livraison	La commande a été identifiée
2	Identification de reception de commande avec son numéro de lot, emplacement, statut, code produit et quantite donnee	Enregistrement d'arrivage de commande au quai
3	Reception de commande de type Reception stockée	Commande avec n°commande 1234 arrivee
4	Reception de produit avec : Statut : A et un Fournisseur : AQP	Il n'est pas necessaire d'effectuer un controle qualite

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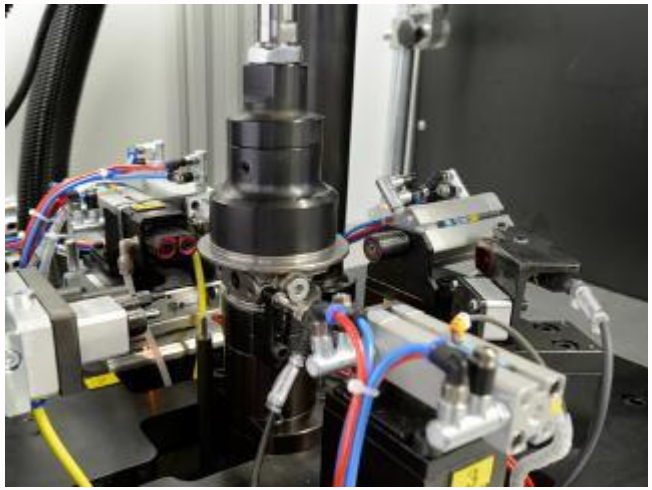

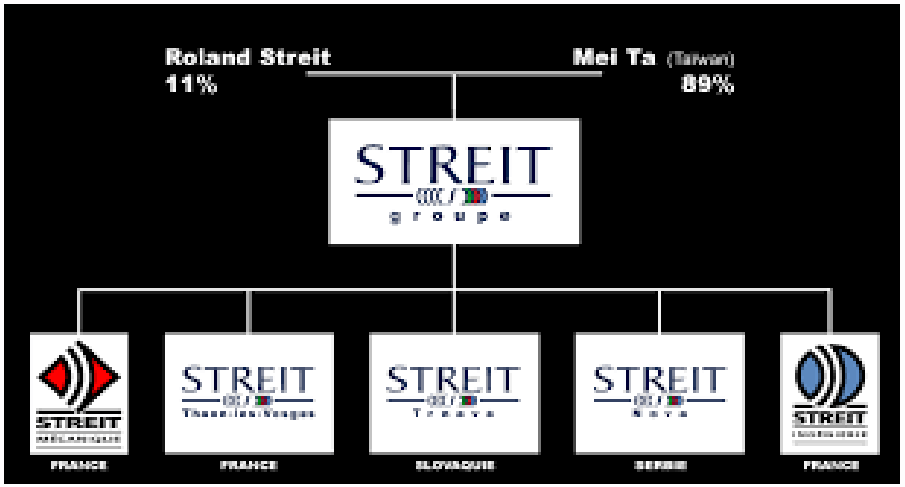

- 950 employees
- 5 production sites (France, Slovaquia, Serbia)
- 7.5 millions of parts per year for various industries (automotive, rail, defense, …)
- Certifications ISO 9001, 14001 – OHSAS 18001
- ERP Project is strategic for the Group

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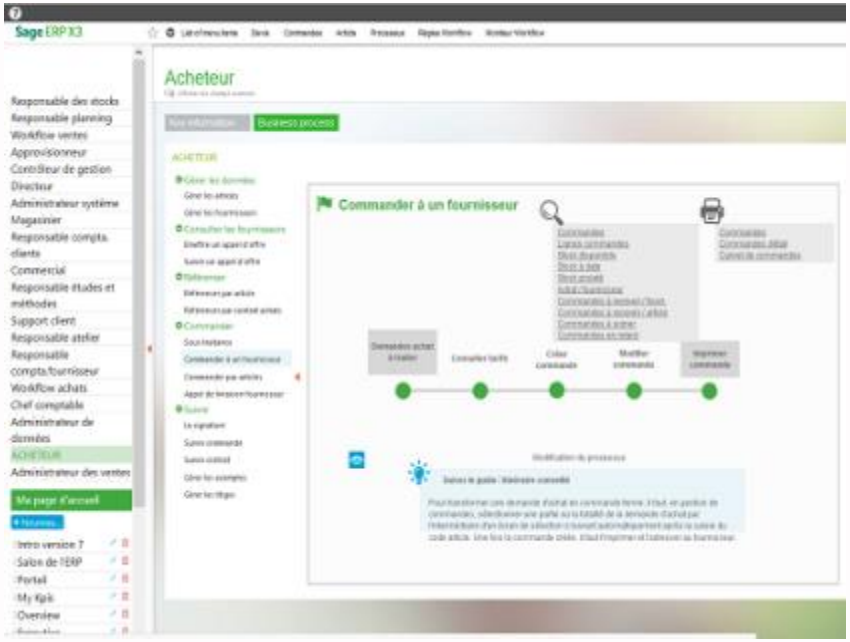

ERP – Sage X3 v7

- 7 business domains covered by the ERP functionalities
- 19 persons involved in the testing sub-project
- 32 business processes
- 750 test scenarios produced

<u>Goal of using Lightweight MBT approach for the ERP Project</u>: leverage user workflows visual representation per domain and end-to-end to produce the test scenarios

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Streit ERP project

- Training on Lightweight MBT and tooling
  - Organized by domain
  - A 2-hour getting started session + 1 day of support by the tool vendor
- The visual representations of the user workflows, the business rules and data sets enabled to:
  - Precisely monitor the test coverage
  - Clarify analysis and test needs for certain complex workflows
  - Accelerate the creation of the test cases
- Test cases are published in Excel sheet per test campaign
  - A familiar format for all the Streit Group testers
  - Enables the monitoring of the execution campaigns per domain and for end-to-end scenarios

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Streit ERP project

- **Easy-to-use :** a good adoption of the Lightweight MBT approach by domain experts
- **Efficiency :** approach and tool allowed the team to focus on the most important business processes to test
- **Sharing :** thru the visual representations, the teams to share a common vision of the business processes and rules that also enlarged their own perspective
- **Capitalization :** the visual representations of the user workflows on the ERP are an asset that will be reused in the other sites of the Group for the next ERP go-lives

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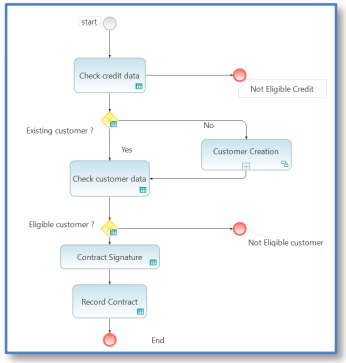
Lightweight MBT in agile

Developers

Agile testers

Product Owner



*Create acceptance test **as early as possible**:*

- ✓ *As soon as product features refinement is done in the backlog*

Expected workflows and Acceptance Criteria

*The **representations** of the application workflows and business rules **facilitate** alignment and acceptance test design within the **agile team***

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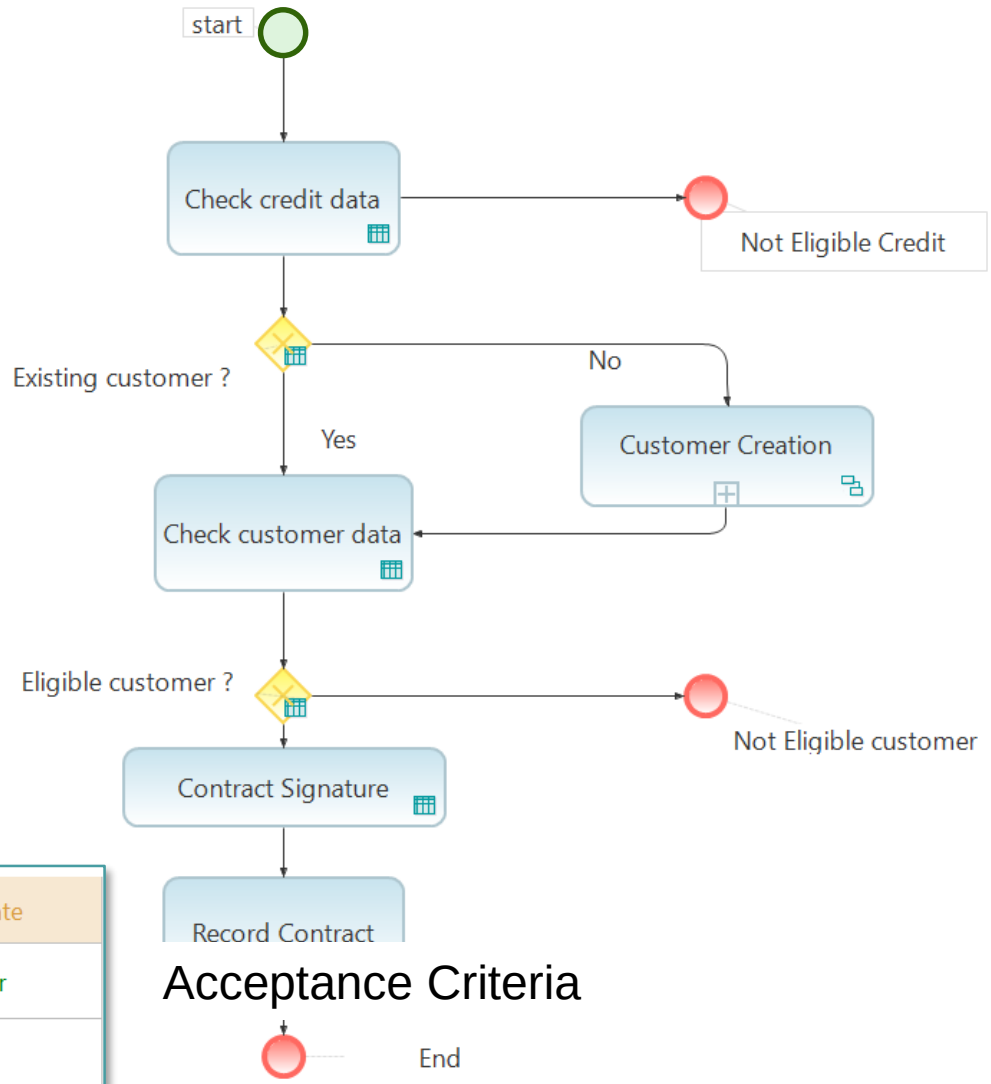
Lightweight MBT in agile

Subscription of a consumer credit from retailer

EPIC

As a bank employee, I can check customer data in order to verify the eligibility of the loan

USER STORY



Acceptance Criteria

	Loan_Amount	Situation	Direction suivante
1	>=1500	Student	→ Not Eligible customer
2	<30000	Employee	→ Contract Signature

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Thank You For Your Attention

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