draw.io

# draw.io and the automotive industry

The highway to team alignment

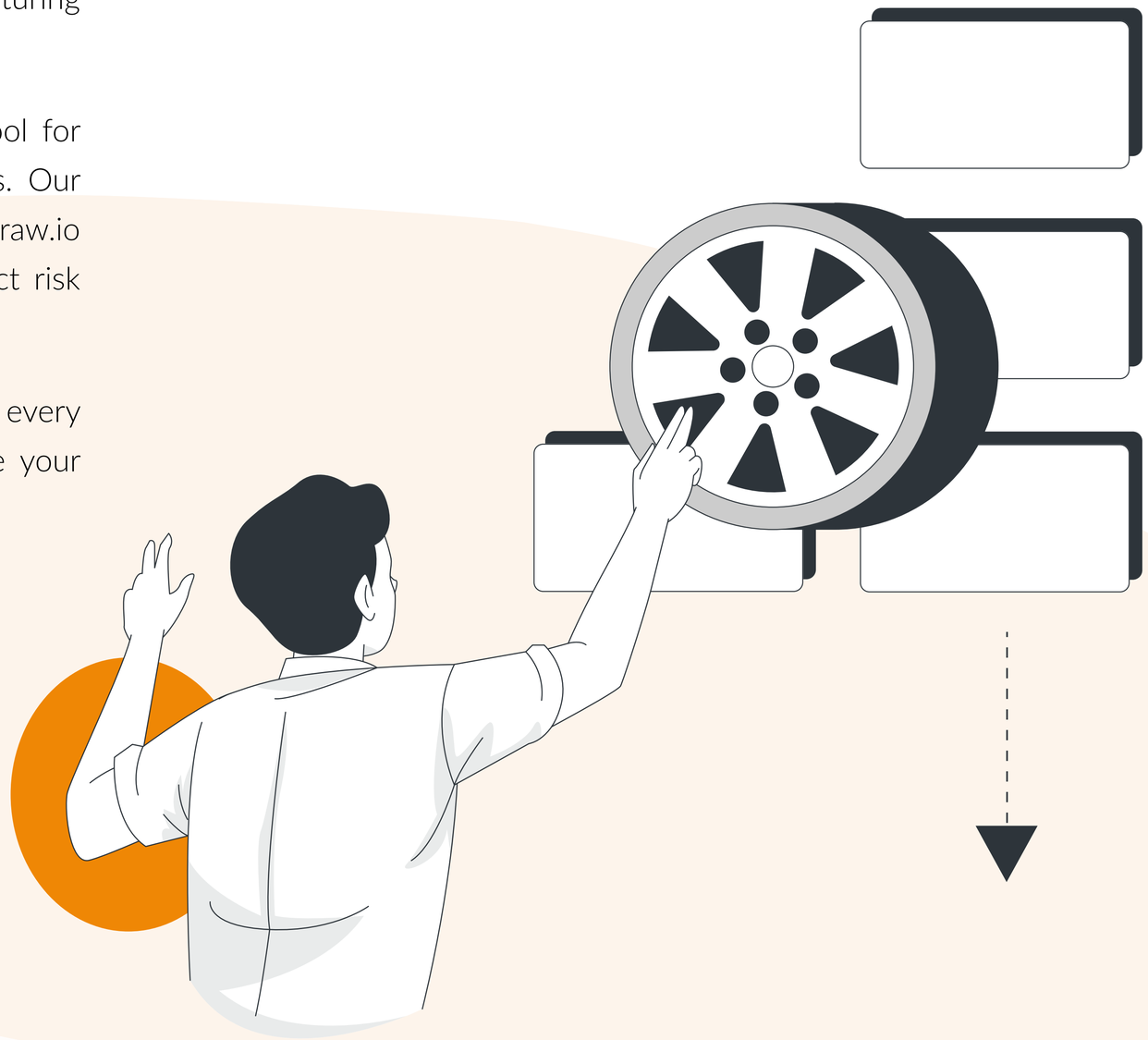
# Drivers, start your engines

The automotive industry is a myriad of moving parts, with success relying on the seamless integration of engineering precision, manufacturing efficiency, and rigorous safety standards.

For teams working in Confluence and Jira, draw.io is the one tool for capturing your technical specifications and production workflows. Our automotive campaign explores how engineers and managers use draw.io to track manufacturing steps, map electrical systems, and conduct risk assessments from design to delivery.

Because draw.io integrates natively within the Atlassian ecosystem, every technical schematic and process map is stored directly alongside your project documentation.

Let’s get started!



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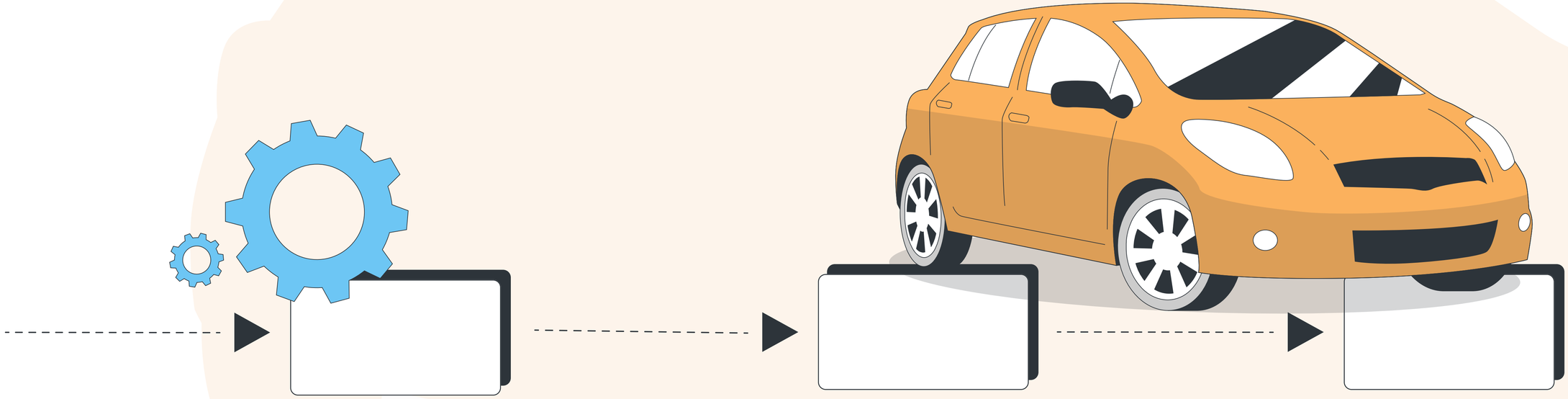


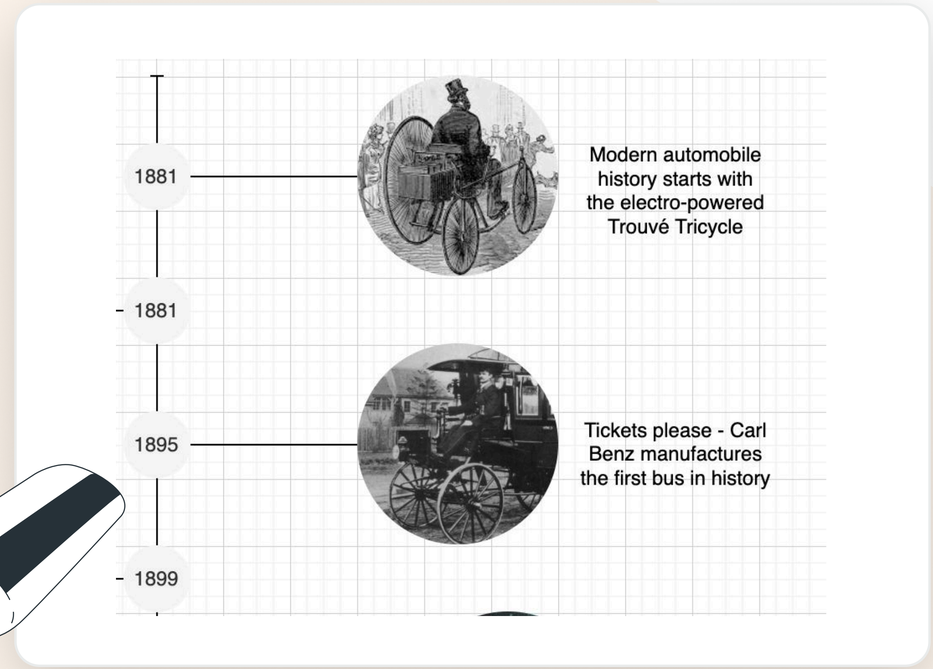
# A visual timeline of automotive innovation (1881-2026)

The history of the automobile is a testament to human craftsmanship and the pursuit of speed. While many associate the early days of motoring with the roar of combustion, the journey actually began with a quiet electric hum.

This vertical timeline tracks the evolution of the car, from the 1881 Trouvé Tricycle to the autonomous fleets of tomorrow. The diagram clearly maps out the massive historical shifts in the automotive industry, presenting a breadth of information in concise, digestible chunks. For example, it highlights pivotal moments like Henry Ford's introduction of the assembly line in 1908, and the first use of disc brakes on the 1955 Citroën DS.

Highlights for building your timelines in draw.io:

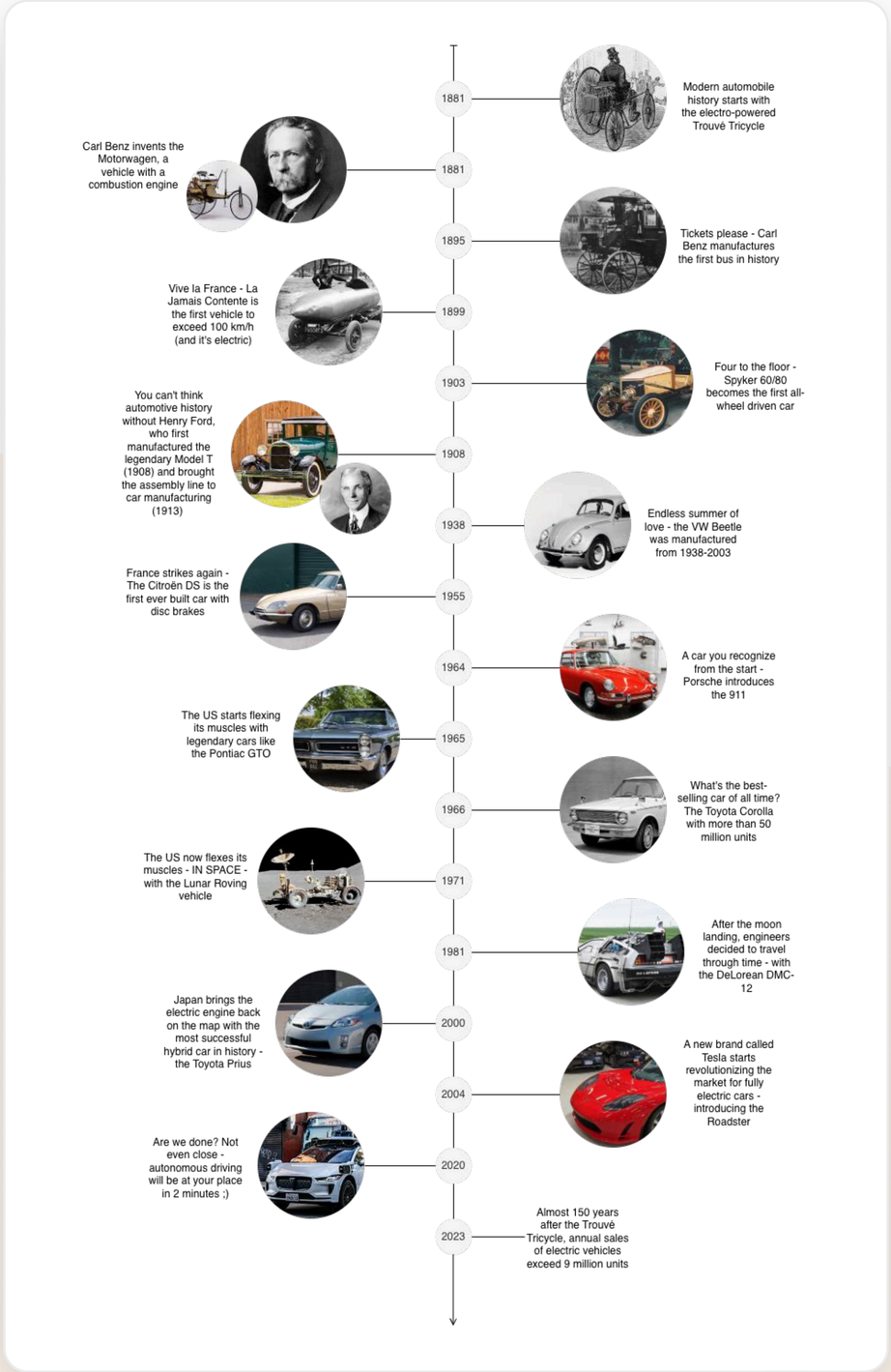
**Precise placement:** Use the gridlines to align elements to keep everything consistent for that professional look.



**Streamlined flow:** Use high-quality images and minimalist connectors so the focus remains on the diagram content as it moves from 19th-century tricycles to 21st-century electric roadsters.

**Market insights:** This diagram contains insights that go beyond a use case for car enthusiasts. Visualizing milestones helps teams track market shifts, such as the rise of hybrid technology in 2000 and the transition to autonomous driving in 2020.

- Blogpost: **Over a century of automotive engineering: A visual timeline of innovation (1881–2026)**
- YouTube Video: **150 years of speed: The complete history of automobile**
- Instagram Reel: **150 years of speed in 60 seconds**



## Shifting strategy with a car buyer decision tree

Choosing the right vehicle is often a daunting process for consumers. Strategy experts know that the best way to guide a buyer is to filter by utility first, then lifestyle. This car buyer decision tree shows how you can turn a complex psychological roadmap into a simple, 10-second visual guide.

Tips for success when building a decision tree:

**Establish a "North Star":** Start the diagram with a primary decision point, in this case, the vehicle's passenger capacity, to get the ball rolling.

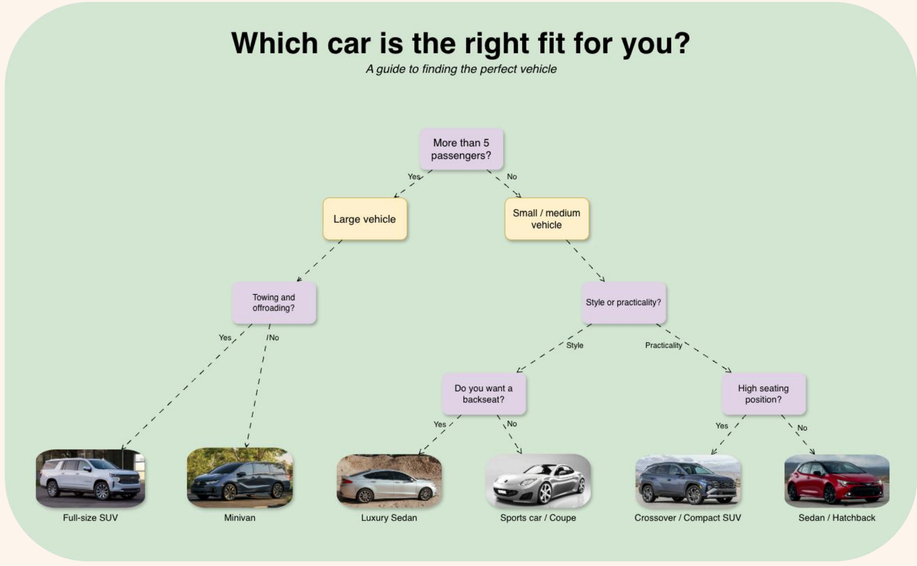
**Animate the logic:** Use Flow Animation to show the customer's path "driving" toward a result. These connectors stay animated in the draw.io editor and the Confluence page preview, providing a helpful visualization experience when presenting to stakeholders.

**Visual context:** Drag and drop images under the final nodes to represent vehicle classes, e.g. Luxury Sedan or Compact SUV. This allows stakeholders to quickly distinguish between models, and for customers to get a feel for each car type.

Building a decision tree like this allows brands to identify gaps in their portfolio, or could even be presented to customers directly to help them make their decision.

Building these trees helps brands identify portfolio gaps, but can also be used as guides for customers looking to purchase. By visually weighing style vs. practicality, teams ensure their market strategy never hits a dead end. This approach transforms high-performance data and potentially complex choices into an engaging, accessible experience.

- YouTube Video: **Don't buy the wrong car: Use this simple decision tree**
- Instagram Reel: **A decision tree that drives itself**



# Three technical diagrams for every automotive expert (FTA, VSM, BPMN)

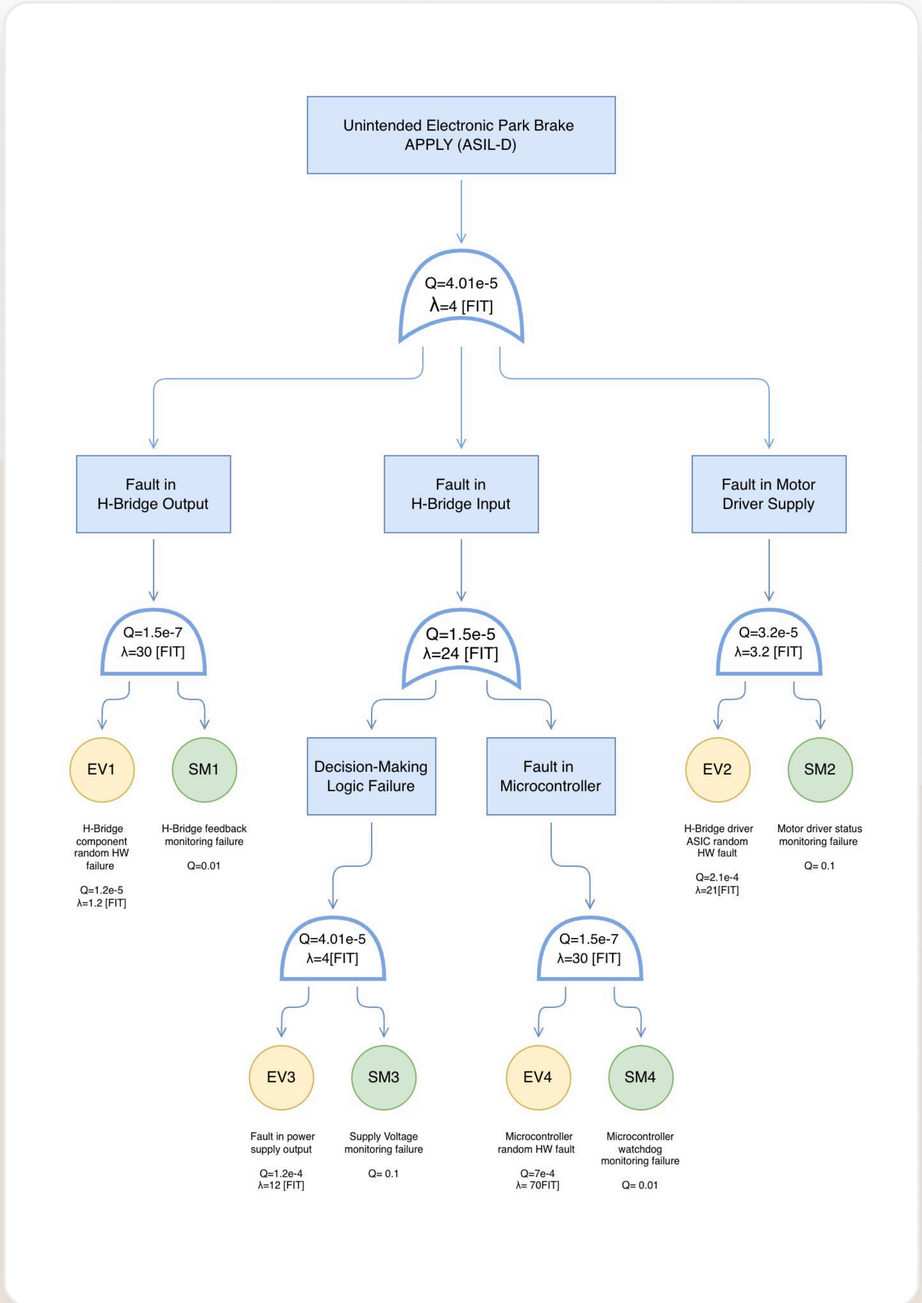
Safety, efficiency, and governance are the pillars of automotive success. To uphold these, engineers rely on precise documentation. Here, we outline three specific methods used to analyze failures, optimize production, and standardize workflows.

## 1. Fault tree analysis (FTA)

Safety and reliability engineers use FTA to trace the chain of events leading to an undesired state, such as brake failure.

FTA at a glance:

- **Compliance:** Provides documented proof for safety requirements like ISO 26262.
- **Logical gates:** Used to connect sub-causes and show how multiple failures combined can lead to a hazard.



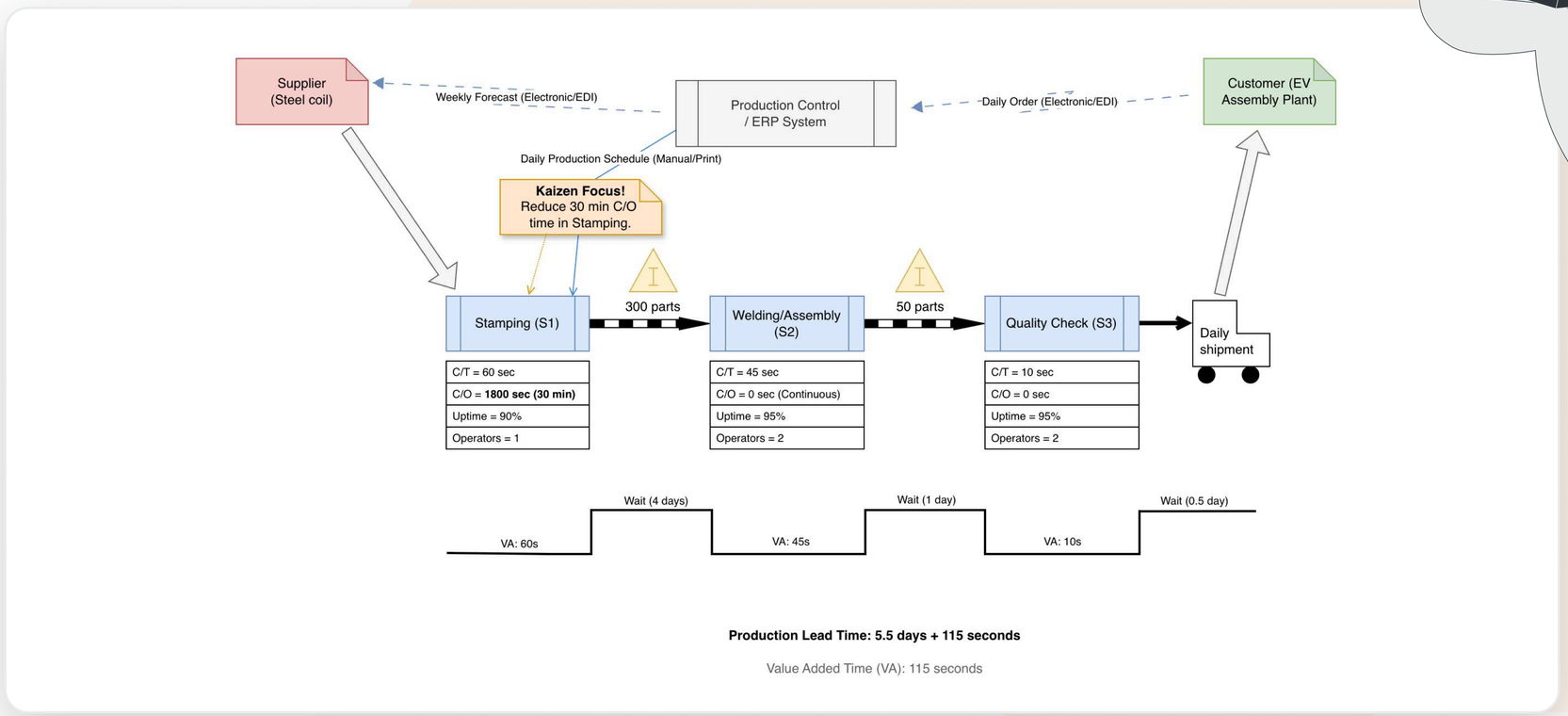
## 2. Value-stream mapping (VSM)

Industrial engineers use VSM to visualize the flow of materials from supplier to customer.

VSM at a glance:

- **Lean principles:** Focus on reducing the "Three Ms": Muda (waste), Muri (overburden), and Mura (unevenness).
- **Shape libraries:** draw.io offers a bespoke Value Stream Mapping shape library to keep assembly plants running smoothly.





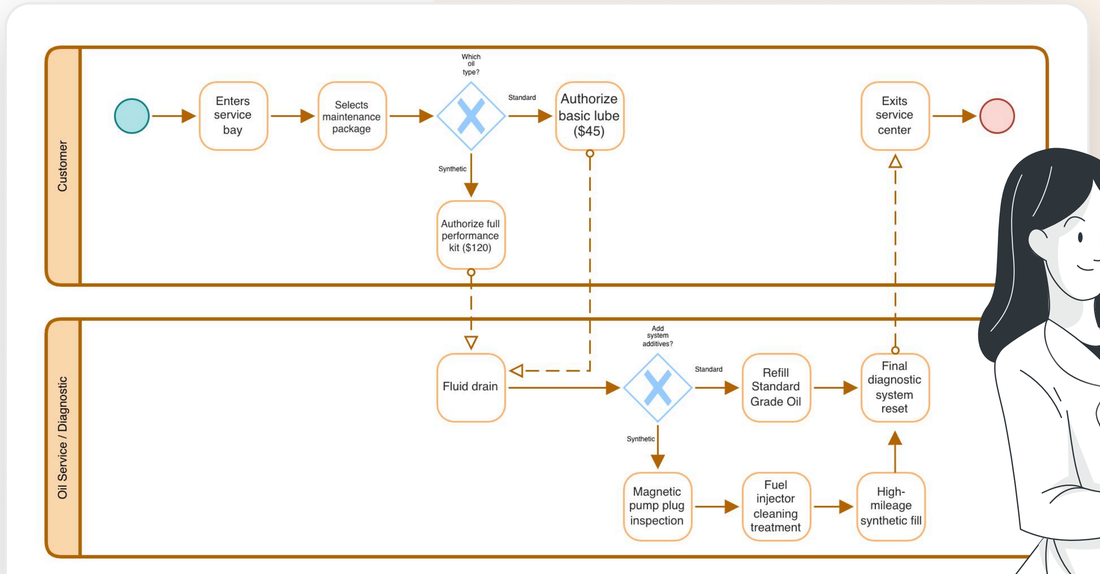
## 3. Business Process Model and Notation (BPMN)

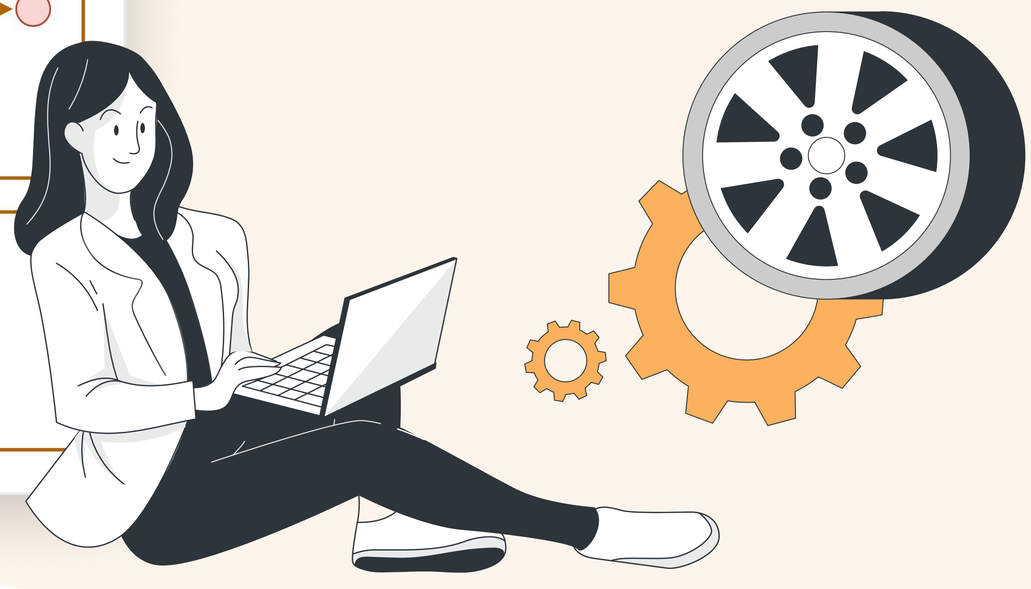
Operations managers use BPMN to standardize high-level business workflows and ensure ASPICE compliance.

BPMN at a glance:

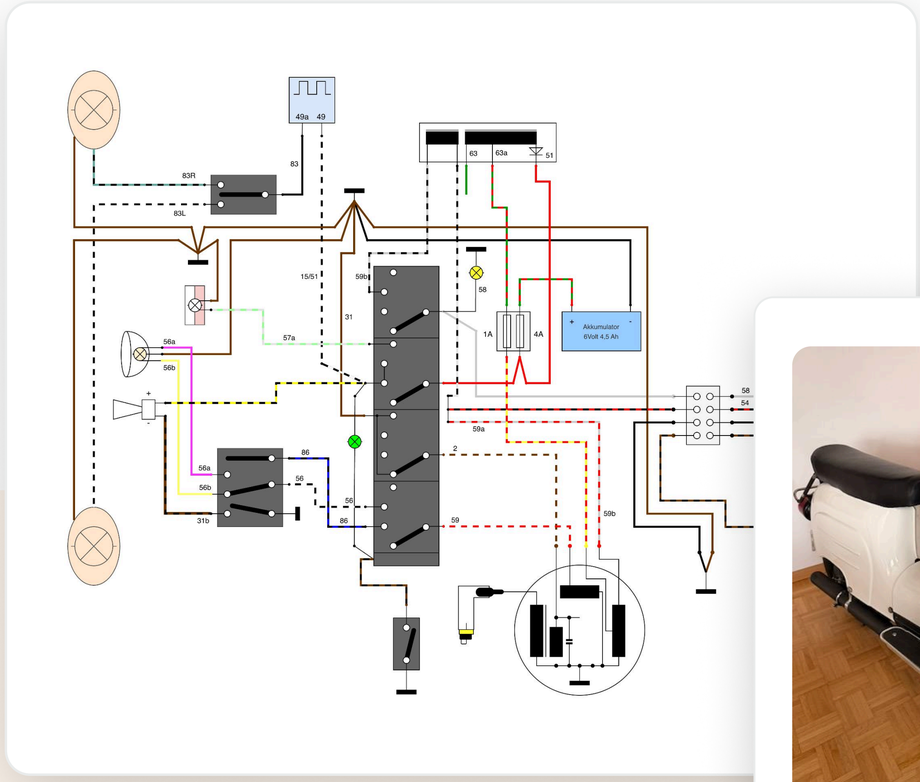
- **Collaboration:** Uses swimlanes to separate customer actions from technician tasks.
- **Gateways:** Manage service authorizations and "if-then" scenarios, such as choosing oil types.

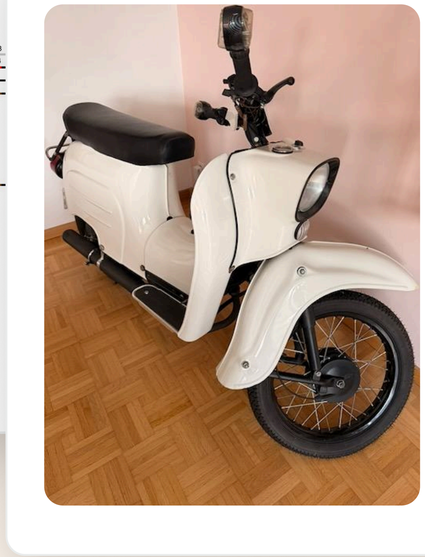
- Blogpost: **3 technical diagrams every automotive expert needs (FTA, VSM, BPMN)**
- YouTube Video: **3 technical diagrams for the automotive expert**
- Instagram Reel: **3 technical diagrams auto experts will love**



# Building wiring diagrams: A Simson Schwalbe case study



The 1964 Simson Schwalbe moped is a GDR icon built on the philosophy of maximum efficiency. Restoring such a piece of history requires a clear plan.

This case study from Basti, our Subject Matter Expert and Schwalbe enthusiast, shows how to bring vintage engineering into the digital age with professional-grade schematics.

Features to help you build your next wiring diagram:

- **The Scratchpad:** Once you've built a custom component like a specific charging diode, click the plus icon (+) to add it to your Scratchpad for reuse across all of your diagrams.
- **Layered troubleshooting:** Use Layers to separate different circuits. This allows you to toggle specific systems on or off, avoiding confusing overlapping wires and making it easier to troubleshoot a single component.
- **Color-coded connectors:** Match your digital connectors to the physical wires of the system (e.g., using a brown and white path for the ignition).

By building these diagrams in Confluence, your technical documentation lives alongside your project notes. All text in your diagrams is indexed and searchable via Confluence global search, and you can track every change using draw.io's Revision History, and Confluence page Version history.

- Blogpost: **Building wiring diagrams in draw.io: A Simson Schwalbe case study**
- YouTube Video: **The secret to wiring diagrams in draw.io**
- Instagram Reel: **1964 tech meets 2026 precision**

# Optimizing your repair shop workflow with a swimlane diagram

Managing an auto repair shop involves many moving parts. A swimlane diagram helps isolate each part of the process from when the car is dropped off to when it's delivered back to the customer. Capturing and streamlining this operation helps everything run like a freshly tuned engine.

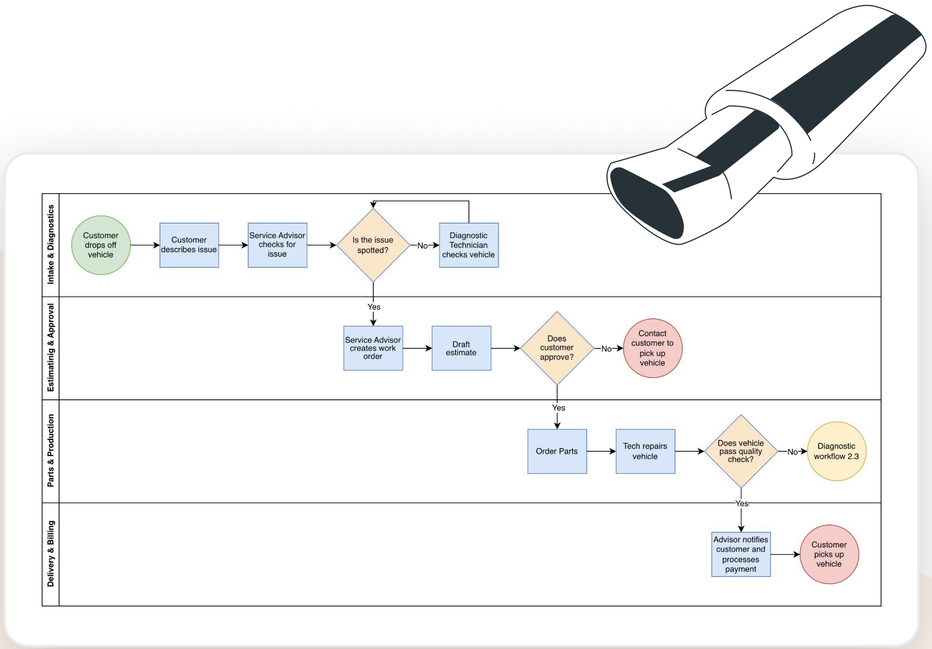
To build your swimlane diagram:

**Isolate processes:** Lay out swimlanes for Intake, Estimating, Production, and Billing.

**Define symbols:** Use green circles for the start and red for the end. Standard actions are blue rectangles, while critical decision points are tan diamonds.

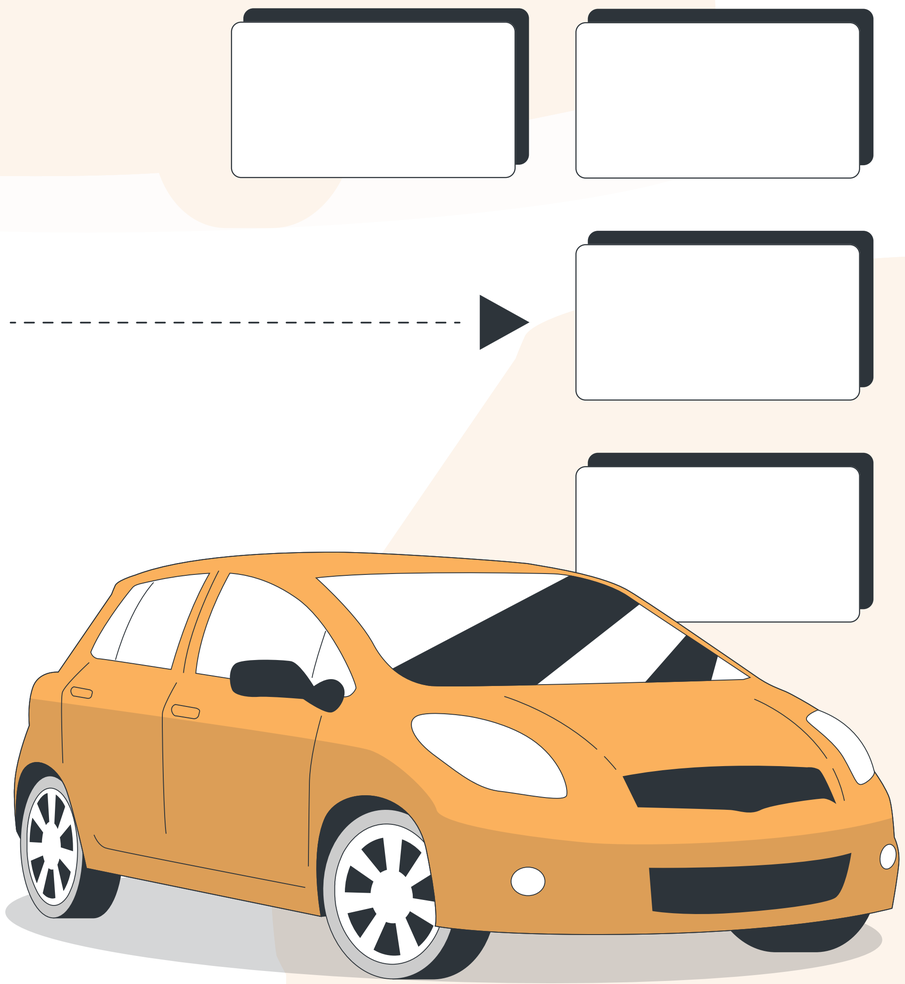
**Identify "forks in the road":** Use diamonds for moments like "Is the issue spotted?" or, "Does the vehicle pass quality check?"

**Connect the flow:** Use connectors as a "conveyor belt" representing the handoff between departments. Double-click a connector to add "Yes" or "No" labels.




This tracking system replaces disorganized spreadsheets with a visual single source of truth. Managers can add custom links to shapes to indicate repositories for parts and other internal documentation. This gives everyone instant access to all info needed in the service bay.

- YouTube Video: **Swimlane diagrams for auto shops: Step-by-step**
- Instagram Reel: **Keeping track of car repair progress**



# Driving innovation with draw.io for Confluence and Jira Cloud

Whether you are documenting 150 years of history, building out your next wiring diagram, or mapping a modern ASPICE-compliant process, draw.io provides the features for success. By keeping your visualizations within the Atlassian ecosystem, automotive teams, manufacturers, engineers, and marketers all benefit from enhanced security, audit traceability, and a unified source of truth.

draw.io enables you and your teams to build precise diagrams bespoke to your use case. Add custom shape libraries to draw.io containing images of existing car models, or mock-ups of new models to be built. Add custom links to any shape to direct users to related documentation in your Confluence instance. Lastly, colored and dashed connectors help your wiring logic stay grounded, while Animated Connectors emphasize the paths from initial question to final decision.

From marketers to manufacturers, draw.io is the one tool for every automotive team.

To find out more and stay up to date, **visit our linkr.ee** and follow us on social media.

**Happy diagramming!**