BASIC CONCEPTS IN PROJECT MANAGEMENT

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PROFILE

A PMP-certified Senior IT Consultant with an MBA earned through an executive scholarship run program in the USA, combining strong project governance with strategic business insight. Former founder of two companies, with proven experience turning concepts into scalable, operational solutions across technology and consulting environments. Frequently operates as a Technical Lead for critical project milestones, bridging business objectives and technical execution to ensure high-quality delivery in complex initiatives.

Summary

Project management, as defined by the PMBOK Guide's 7th and 8th editions, encompasses a principles-based system of value delivery in which project managers apply tailored performance domains — including stakeholder engagement, planning, teamwork, and uncertainty management — to guide teams in producing outcomes that benefit organisations and society.

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Concept

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Concept

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05 **STAKEHOLDERS ENGAGEMENT**
Concept

STUTTGART 21

For context, we will use Stuttgart 21 mega project as a reference point for our learning during this presentation. In the midst of experts, there always something new to learn. Let's go.

RECAP

1. What It Is Stuttgart 21 is a major railway and urban development project replacing Stuttgart's surface railway lines with tunnels. At its core is a renewed underground Stuttgart Hauptbahnhof, along with some 57 kilometres of new railways, including approximately 30 kilometres of tunnels and 25 kilometres of high-speed lines. Wikipedia

2. Project Origins Deutsche Bahn first presented the project, which has been highly controversial from the outset and accompanied by many protests, in 1994. heise online Construction officially began on 2 February 2010.

3. Current Project Leadership Newly-installed German Rail (DB) CEO Evelyn Palla Rail Journal is now at the helm of Deutsche Bahn, which leads the project. DB Infrastructure Board Member Berthold Huber Railway-News serves as the operational project sponsor and public voice of the project.

RECAP

4. Current Budget — Massively Overrun The total project cost of Stuttgart 21 has increased to €10.953 billion, with the Supervisory Board of DB AG resolving to establish an additional provision of €500 million to cover further risks and forecast uncertainties. Deutschebahn This compares to an original estimate of just €2.6 billion — a cost overrun of more than **400%**.

5. Who Bears the Cost The total estimated costs are currently a good €11 billion plus a buffer of €500 million. The original cost ceiling stipulated in the 2009 contract was only around €4.5 billion. The difference resulting from years of construction delays, rising construction costs, and complex geological challenges must now be borne by Deutsche Bahn as the client. Aviation.Direct

6. Massive Schedule Delay First presented in 1994 and live since February 2010, the project is now about seven years behind schedule. Railway PRO The original completion target was 2019.

RECAP

7. Latest Opening Date — Indefinitely Postponed The planned phased opening starting in December 2026 has been cancelled. DB CEO Evelyn Palla informed DB's supervisory board that the 2026 date was no longer achievable. A new opening date has not yet been disclosed. Rail Journal

8. The Digital Bottleneck Stuttgart is the first railway node in Germany where the control and signalling technology is to be completely digitised — trains will be able to run automatically. However, there are difficulties with the approval of the software, supplied by the Japanese conglomerate Hitachi. heise online

9. Scale of Construction Approximately 117 kilometres of new high-speed railway tracks are being built, four new railway stations, 55 new bridges, and 21 tunnels with a total length of 63 kilometres — in a difficult area involving mountainous terrain and underground construction in a city with existing infrastructure. IPMA

01

Leadership & Team Enablement

The ability to guide, inspire, and influence team members and stakeholders to achieve project goals, moving beyond mere technical administration. It involves creating a shared vision and fostering an environment of trust

The process of empowering, supporting, and equipping team members to take ownership of their work, grow their skills, and overcome obstacles.


“A leader is one who knows the way, goes the way, and shows the way ”
– John C. Maxwell

Leadership & Team Enablement – The PMI Way

Principle 1 — Be a Diligent, Respectful and Caring Steward Leaders act responsibly, ethically, and with care for their teams, organisations, and society.

Principle 3 — Effectively Engage with Stakeholders Leaders proactively engage, listen, and build relationships — not just manage upward.

Principle 4 — Focus on Value Leaders keep the team aligned to outcomes and value delivery, not just task completion.

Principle 5 — Recognize, Evaluate and Respond to System Interactions Leaders think holistically and help their teams navigate complexity and interdependencies.

Principle 6 — Demonstrate Leadership Behaviours PMI explicitly states that *effective leadership is not about authority — it is about influence, motivation, and enabling others*. Key behaviours include:

"Focusing on what matters most
Using a leadership style suited to the situation
Inspiring and motivating team members
Being honest and transparent
Empowering team members to make decisions "

Principle 7 — Tailor Based on Context Leaders adapt their approach — predictive, agile, or hybrid — based on the team's needs and project environment.

Principle 8 — Build Quality into Processes and Deliverables Leaders create an environment where quality is everyone's responsibility.

Principle 10 — Embrace Adaptability and Resiliency Leaders model a mindset of flexibility and help teams navigate uncertainty and change.

Principle 11 — Enable Change to Achieve the Envisioned Future State Leaders champion and facilitate change — creating the conditions for transformation.

Leadership & Team Enablement – The PMI Way

Team Enablement — What PMI Emphasises
PMI frames team enablement as the leader's primary responsibility. This means:

1. **Removing Obstacles** Especially in agile environments (Scrum, SAFe), the leader's role is to clear blockers so the team can deliver without friction.
2. **Empowering Decision-Making** PMI emphasises pushing decisions to the lowest appropriate level — trusting the team rather than centralising control.
3. **Developing Team Members** Leaders invest in the growth of individuals — through coaching, mentoring, feedback, and stretch assignments.
4. **Building Psychological Safety** Amy Edmondson's concept, adopted by PMI — teams perform best when members feel safe to contribute ideas, raise concerns, and admit mistakes without fear of punishment.
5. **Recognising and Rewarding Contribution** PMI acknowledges the role of acknowledgement and motivation in sustaining high performance.
6. **Managing Conflict Constructively** PMI recognises that conflict is natural and, when managed well, leads to better outcomes. Leaders facilitate healthy debate and resolution.

PMI's View on Emotional Intelligence (EI) in Leadership

PMI increasingly references EI as foundational to effective leadership:
Self-awareness — understanding your own emotions and their impact
Self-regulation — managing reactions and staying composed under pressure
Empathy — understanding team members' perspectives and emotional states
Social skills — building relationships, influencing, and communicating effectively
Motivation — leading people with purpose, not just process

Stuttgart 21 Through the PMI Lens

PMI Principle	Stuttgart 21 Reality
Servant Leadership	DB's project team expanded stakeholder communication heavily — open construction site days drew 330,000 visitors, showing a commitment to public transparency
Systems Thinking	
Tailor Based on Context	
Focus on Value	
Stakeholder Engagement	

Source: ITS-PROJECT.DE

02

Systems Thinking

Anticipating how parts of a system interact and influence each other

STAGE 1: Recongnize

See the whole system, not just the parts.

- What are the elements that make up this system ?
- Who and what are connected to this project, directly or indirectly?

STAGE 2: Evaluate

Understand how the parts interact and influence each other

- How does a change in one element affect others?
- Where are the feedback loops – positive or negative?
- Which interdependencies carry the highest risk?

STAGE 3. Respond

Act on the system, not just the symptom

- Are we solving the root cause or just the surface symptom?
- How do we intervene without destabilising other parts of the system?
- Does our response improve the long-term resilience of the whole system?

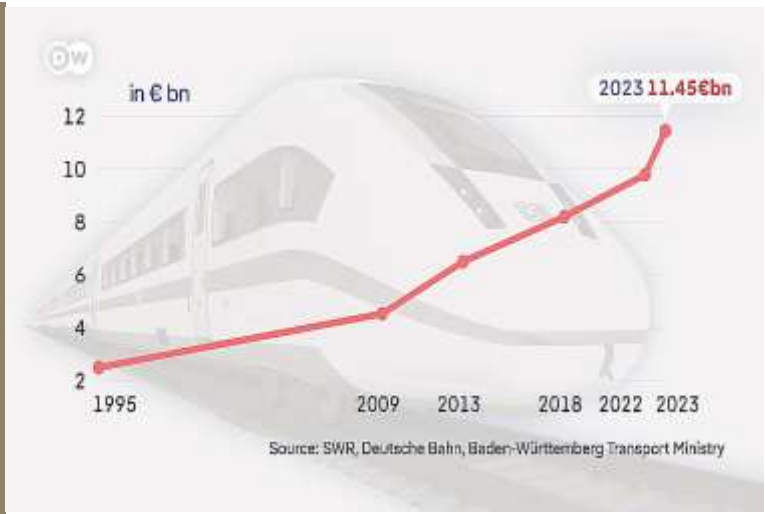
Source: Wikipedia (Anhydrit Rock)

BUDGET AS A SYSTEM VARIABLE

Rising construction costs, eurozone inflation, supply chain disruptions, and contractual ceilings all interacted — no one subsystem caused the €11 billion bill; the *system as a whole* did

GEOLOGY AS A SYSTEM VARIABLE

Unexpected underground water veins, anhydrite rock swelling, and unstable soil added enormous complexity — variables that a whole-system risk assessment should have weighted more heavily in 1994



Source: Deutsche Welle

STAKEHOLDERS

The 2010 protests were not spontaneous — they were the eruption of years of disconnected decision-making across political, civic, and corporate systems that were never properly integrated

Source: Deutsche Bahn

URBAN ECOSYSTEM AS A SYSTEM VARIABLE

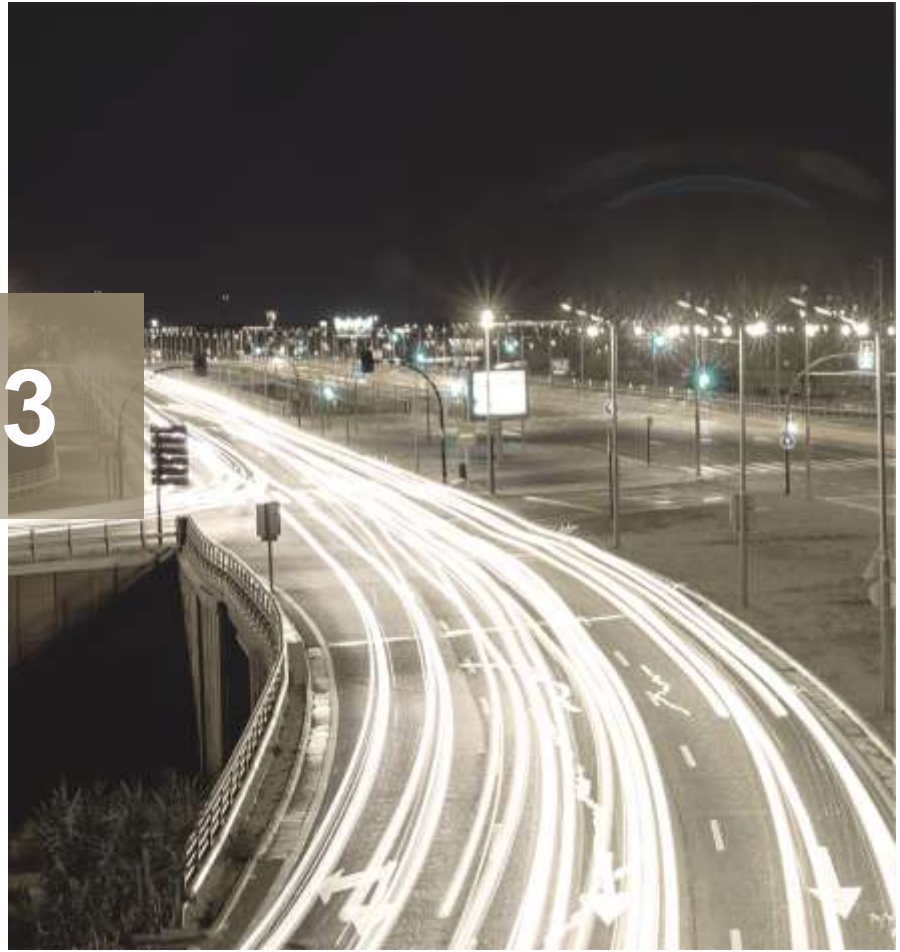
Digging 63 km of tunnels under a living, breathing city — with hospitals, historic buildings, and existing S-Bahn lines above — requires constant awareness of how construction in one zone affects the entire urban system

Source: ITS-PROJECT.DE

Stuttgart 21 Through the PMI Lens

PMI Principle	Stuttgart 21 Reality
Servant Leadership	
Systems Thinking	PMI positions it as the discipline that separates **reactive project managers** from truly **strategic project leaders**. Systems Thinking is not a tool or a template — it is a **leadership mindset**. When DB CEO Evelyn Palla cancelled the December 2026 opening date, she was applying Stage 3 Systems Thinking — rather than announcing another optimistic deadline that would collapse again, she responded to the systemic reality that software approval, construction completion, and testing could not be compressed without creating new failures downstream. The response addressed the system, not just the schedule.
Tailor Based on Context	
Focus on Value	
Stakeholder Engagement	

Source: ITS-PROJECT.DE



03

Value Creation

The process through which project activities deliver benefits, outcomes, and satisfaction to stakeholders, aligning with the organization's strategic goals

VALUE CREATION

8/11 Million People Benefiting Daily

Over **75% of Baden-Württemberg's population** gains faster, more connected, and more reliable rail access .

Economic Growth — Jobs, Business & Property

Regional employment projected to rise by **up to 10%**, property values already up **15%** in connected areas, making the area more attractive to international business investment and talent.

A European Transport Corridor

Stuttgart transforms from a regional terminus into a **gateway node on the Paris–Vienna high-speed corridor** — connecting Strasbourg, Munich, Vienna, Bratislava, and Budapest.

100 Hectares of Prime Urban Land Freed

Moving the railway underground releases the equivalent of **140 football pitches of city-centre land** for urban redevelopment — housing, green spaces, and commercial districts.

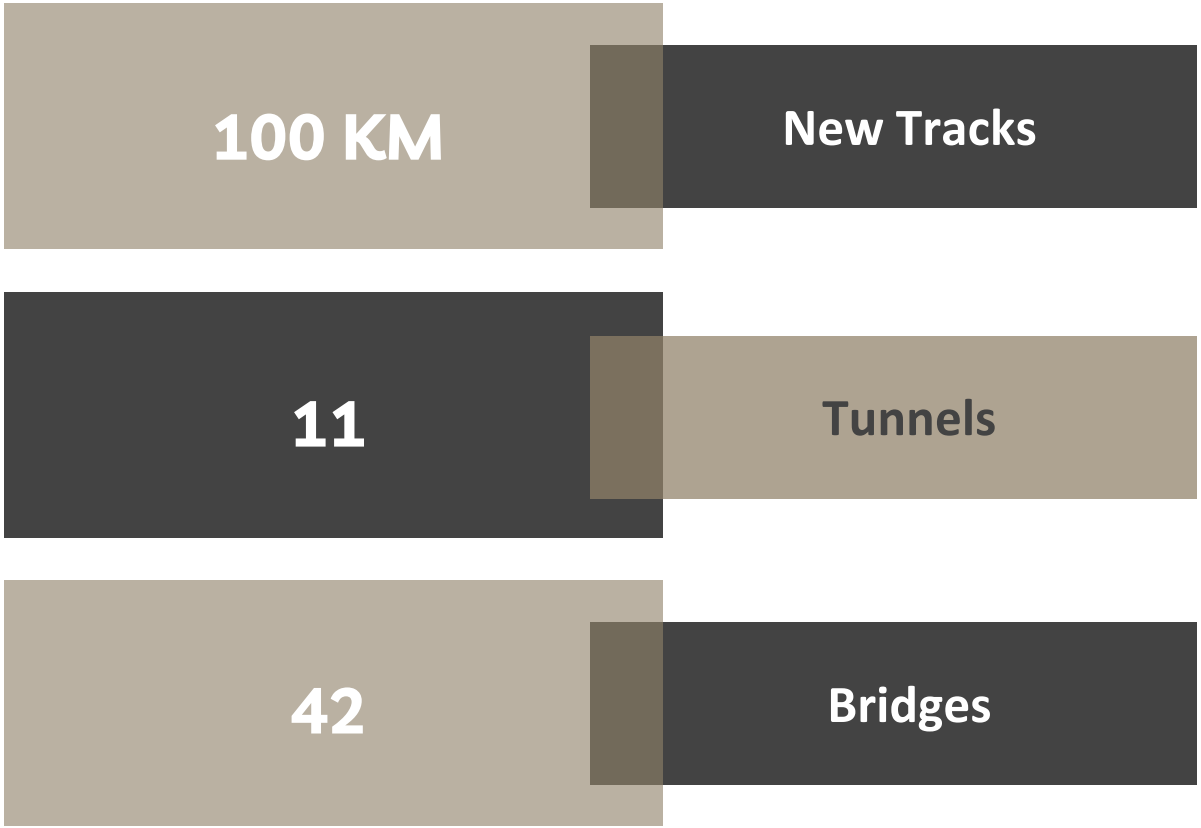
A New Airport & Trade Fair Hub

The new Airport/Messe station will serve as a regional and long-distance rail hub for Stuttgart's southern suburbs and the surrounding Filder region. 8 minutes to Stuttgart city center and 1.5 h to Munich.

Germany's First Fully Digital Railway Node

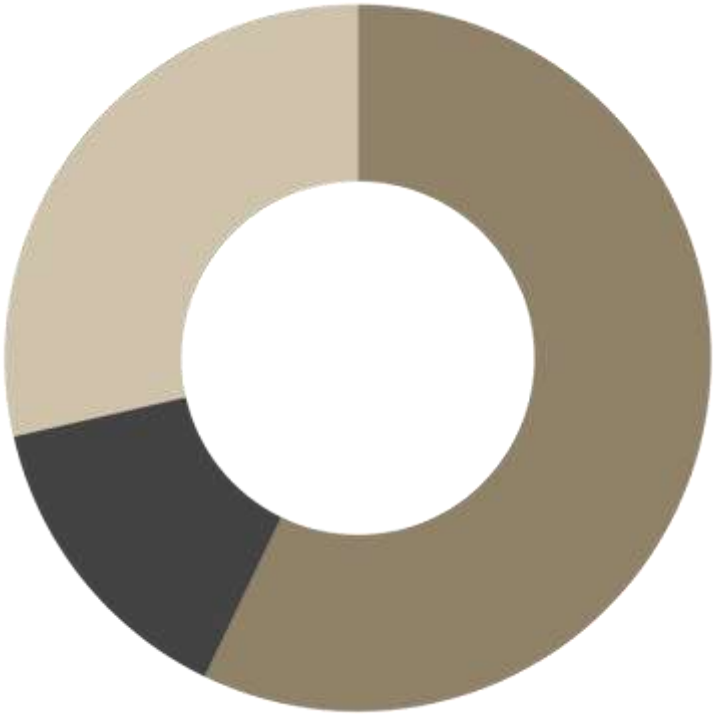
Stuttgart 21 will set the **national and European benchmark** for digitalised, automated rail infrastructure — pioneering the future of smart mobility and positioning Germany at the forefront of sustainable transport innovation.

KEY FACTS



Source: Current Budget €11,45 Bn – 2023 (Source DW, Deutsche Bahn, BW Ministry of Transport)

BUDGET



Deutsch Bahn + National Federal Government	~65%
BW Federal State	~26%
Others	~9%

Source: Current Budget €11,45 Bn – 2023 (Source DW, Deutsche Bahn, BW Ministry of Transport)

Stuttgart 21 Through the PMI Lens

PMI Principle	Stuttgart 21 Reality
Servant Leadership	
Systems Thinking	
Tailor Based on Context	
Focus on Value	Despite the delays and cost overruns, DB has consistently anchored the project to its core value: transforming rail connectivity across Southwest Germany and the Paris–Vienna corridor
Stakeholder Engagement	

Source: ITS-PROJECT.DE

04

Tailoring

The deliberate adaptation of the project management approach, processes, methods, and frameworks to fit the specific context, complexity, constraints, and needs of a project and its environment.

Tailoring – The PMI Way

1. 🏢 **What is the Organisational Context?**

Stuttgart 21 application:
Deutsche Bahn operates within a highly regulated, government-supervised corporate structure. Tailoring here means respecting strict federal governance, EU procurement rules, and public accountability requirements — while still enabling adaptive decision-making at the operational level.

2. 📋 **What Does the Project Need?**

Stuttgart 21 application:
With 57 km of tunnels, seven years of delays, a first-of-its-kind digital node, and €11 billion on the line — Stuttgart 21 demands a highly tailored hybrid approach: predictive methods for the physical construction and procurement, agile methods for the software development and digital systems integration with Hitachi.

3. 👥 **Who is the Team?**

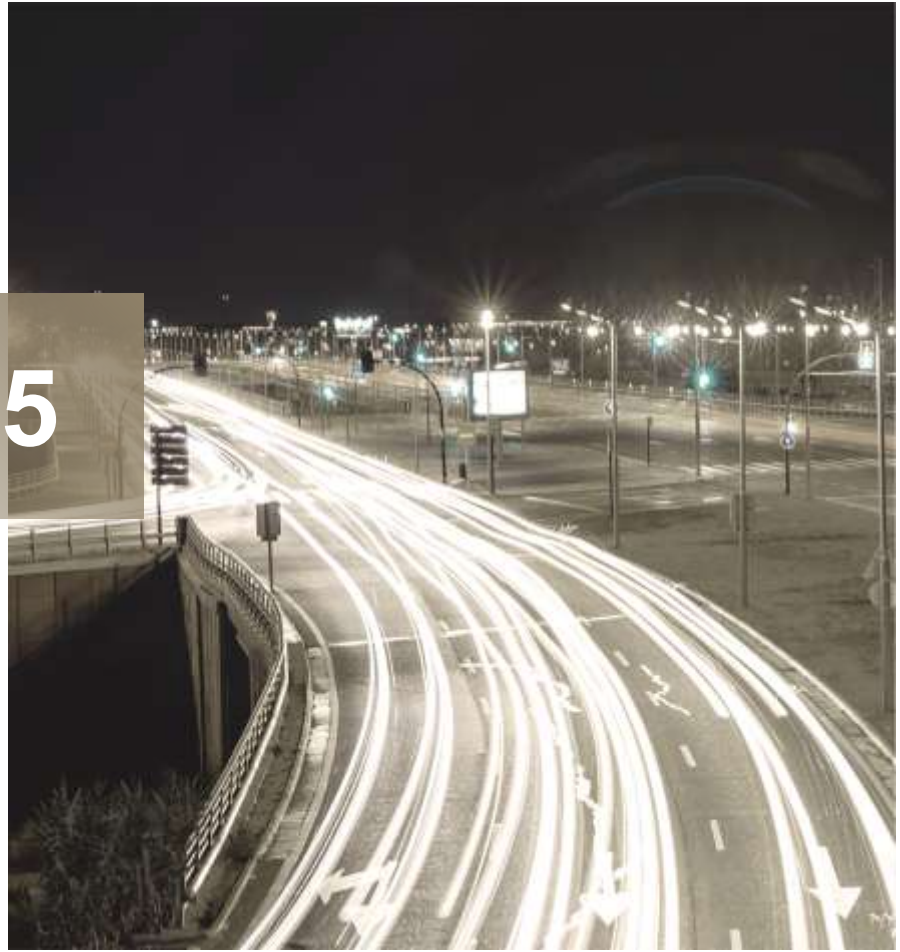
Stuttgart 21 application:
The project involves DB engineers, Hitachi software teams in Japan, German federal regulators, local construction contractors, and EU transport authorities — all in one system. Tailoring means applying different leadership and communication approaches to each stakeholder cluster while keeping them aligned to one vision.

4. 🌍 **What is the External Environment?**

Stuttgart 21 application:
Geological surprises, eurozone inflation, post-COVID supply chain disruption, Hitachi software approval by German federal authorities, and EU TEN-T compliance all represent external environmental variables that demanded continuous tailoring of approach, risk response, and stakeholder communication throughout the project.

Stuttgart 21 Through the PMI Lens

PMI Principle	Stuttgart 21 Reality
Servant Leadership	
Systems Thinking	
Tailor Based on Context	The Digital Node Stuttgart (DKS) is a first-of-its-kind pilot in Germany, requiring a truly unique project approach that standard methods could not fully anticipate
Focus on Value	
Stakeholder Engagement	



05

Stakeholders Engagement

The continuous, proactive process of identifying, analysing, planning, and interacting with everyone who has an interest in, influence over, or is impacted by the project — in order to build alignment, manage expectations, and ultimately deliver value.

STAKEHOLDERS

Category	Stuttgart 21 Example
Internal	DB project team, DB Supervisory Board, DB CEO
Sponsor	Federal Government of Germany, State of Baden-Württemberg
Customer/End User	Rail passengers, commuters, freight operators
Opposition	The 100,000-strong protest movement of 2010
Suppliers & Partners	Hitachi, construction contractors, packaging suppliers
Political	Federal ministers, state parliament, Stuttgart city council
Community	Stuttgart residents, businesses, environmental groups

POWER INTEREST GRID

High Power

EBA, Federal Government, DB Board, EU TEN-T authority

MANAGE CLOSELY

(High Power, High Interest)

KEEP SATISFIED

(High Power, Low Interest)

Federal Ministry of Transport, state government

International press, academic researchers, industry observers

(Low Power, Low Interest)

MONITOR

(Low Power, High Interest)

SATURN

Stuttgart residents, commuter groups, environmental NGOs

High Interest

Stuttgart 21 Through the PMI Lens

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Tailor Based on Context	The Digital Node Stuttgart (DKS) is a first-of-its-kind pilot in Germany, requiring a truly unique project approach that standard methods could not fully anticipate
Focus on Value	Despite the delays and cost overruns, DB has consistently anchored the project to its core value: transforming rail connectivity across Southwest Germany and the Paris–Vienna corridor
Stakeholder Engagement	Mass protests (100,000 people in 2010 alone) exposed a critical early failure in community engagement — **a classic PMI lesson learned in not engaging stakeholders early enough**

FINAL REFLECTION

Stuttgart 21 stands as one of the most powerful real-world demonstrations that technical excellence alone cannot deliver a megaproject — it is the disciplined application of PMI's human-centred principles, from **Systems Thinking and Tailoring to Stakeholder Engagement and Value-focused Leadership,** that ultimately determines whether a project transforms vision into lasting impact

Q&A SESSION

Please share your experience with us.