

Appendix

Table S1: Extended excerpt of coding scheme – Value-related motives

Table S2: Extended excerpt of coding scheme – People-related motives

Table S3: Extended excerpt of coding scheme – Technology-related motives

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Table S5: Overview of considered secondary data

Fig. S1: Overview of the identified incentives

Table S1: Extended excerpt of coding scheme – Value-related motives

Exemplary Interview Statement	1 st order concept	2 nd order theme	Dim.
Interviewee #20: “That's the value proposition of Catena-X and it's also super relevant for us as a supplier, because we can market applications there. With an accepted platform [and] network, of course we hope for many customers, hope for a lot of adoption. But of course, we also want to connect our platform to it.”	Monetization potential	Top-line benefits	Value
Interviewee #17: “The fact that we are a member of Catena-X has also given us a different level of visibility in the industry. [...] We are now part of such a large network, I believe that we are the first point of contact when it comes to dismantling and car recycling.”	Visibility		
Interviewee #26: “Yes, so the motivation is that customers continue to use our software at all. They continue to use our software because it is easier to implement.”	Customer retention		
Interviewee #16: “But all this trading of secondary materials. The topic will have to be completely redefined. It doesn't exist yet. There is currently no liquid market for secondary materials, at least only to a limited extent. [...] However, Catena-X provides crucial input here.”	Establishment of new markets		
Interviewee #23: “This close partnership with the people from the companies with whom we actually have a customer-supplier relationship is also very attractive for us and has indirect benefits for us. Of course, [through Catena-X] you also get in touch with key people in the customer companies that you might not have been able to reach so easily before.”	Customer access		
Interviewee #9: “When the big players push something like [Catena-X], then you know that as a supplier you'll have to join at some point, [...], and the gentle pressure will come at some point. And we said on our own initiative that we actually wanted to get in front of the wave and simply find out what Catena-X holds for us.”	Cascading OEM demand		
Interviewee #10: “And then we have the data-driven business models that we are hoping for through Catena-X. Completely new opportunities and completely new business models are emerging, where we may also be able to offer new services in the future.”	New (data-driven) business models		
Interviewee #21: “Catena-X gives us a unique selling proposition over competitors, who are not willing to adopt this or other industrial data spaces.”	Competitive advantage		
Interviewee #9: “A second aspect of Catena-X is the digitalization of the automotive industry. So, it's not just about exchanging data, but [...] can I deliver it at all? And do I even have the data available digitally or is it just lurking around on some PDF files or something? So that's [...] the trigger.”	Push for inter-firm digitalization		
Interviewee #12: “We start with the CO2 use case, which is actually the most important one for us, also because of the upcoming legislation. We use Catena-X for this.”	Attractive use cases		
Interviewee #7: “And also, of course, to reduce IT complexity, because as things stand today, there are so many different IT systems that we have to supply as a first Tier. Of course, we benefit from Catena if there is a good data interface that we can then use in multiple ways, which is actually our main motivation.”	IT complexity reduction	Bottom-line benefits	
Interviewee #16: “Catena-X is nothing else than a huge digital twin. And XYZ benefits through increased efficiency [due to] significantly less effort to maintain master data [...]”	Efficiency gains		
Interviewee #14: “Ukraine is of course the best example of this. The cable trees that are affected, overflight bans, embargoes, etc. That's a rat's tail of measures and effects. And as an automotive industry, you have to absorb that, you have to plan for it, source differently if necessary, which also has consequences. You can't just find a supplier from one day to the next. [...] And that is the context in which we are operating when making the decision about Catena-X.”	Supply chain resiliency		
Interviewee #23: “So, our developer team, which is active in Catena-X for these technological things, i.e., for the core services, is exactly what has developed and operates the [XYZ]. [...] we use the know-how from the [XYZ], from the years in which we have developed it and the experience we have gained with it for the open-source development of Catena.”	Re-use of capabilities		

Table S2: Extended excerpt of coding scheme – People-related motives

Exemplary Interview Statement	1 st order concept	2 nd order theme	Dim.
Interviewee #28: “As an associated member, we are actually looking to see how things are developing. [...] Yes, but I would actually describe us in the role of interested observers, especially with the will to contribute something in the future.”	Curiosity	Knowledge	People
Interviewee #21: “You can also read about it, as it is also published. But helping to shape it is easier to understand than reading about it.”	Hands-on experience		
Interviewee #19: “And that was another very personal motivation for us to take part [in Catena-X], so that we could learn from others outside-in and not just think that we are the hub of the world.”	Outside-in perspective		
Interviewee #19: “And that's why the first point that was really exciting for us was to learn how a data space works? W what is an asset administration shell? How does an EDC connector work, how do we create a data catalog? Gaining this experience was the most important thing for us.”	Familiarization with data spaces		

Table S3: Extended excerpt of coding scheme – Technology-related motives

Exemplary Interview Statement	1 st order concept	2 nd order theme	Dim.
Interviewee #13: “I said that [XYZ] is on its way to becoming a digital company. [...] And that means you have to completely rebuild your architectures internally, not just the process architectures, but also the IT architectures for us. For us, it was just a marginal point, to what extent do we have to pay attention to Catena-X when making future decisions on the architectures.”	Re-design of internal IT architecture	Architecture	Tech.
Interviewee #18: “It is obvious that we at [XYZ] also see Catena-X as a blueprint and can then transfer the key findings and developments to other industries. In other words, added value that is not industry-specific, but can be applied independently of industry.”	Blueprint for other industries	Standard-ization	
Interviewee #13: “With Catena-X, we have the opportunity to define standards via the consortium more easily than ever before. And that is definitely the case. Another indirect monetary reason or motivating factor why [XYZ] is doing this.”	Shaping of industry-wide standards		

Table S4: Extended excerpt of coding scheme – Organization-related motives

Exemplary Interview Statement	1 st order concept	2 nd order theme	Dim.
Interviewee #22: “And the other aspect is that we believe that this type of ecosystem will change value creation in the industry and in IT to some extent in the long term. That may not happen next year. But we are convinced that it will happen.”	Strong belief in data ecosystems	Culture	Org.
Interviewee #10: “And one more addition, I had already mentioned these legal requirements. These are of course tough requirements. They come from the legislator, and we have to comply with them. And of course, the big question is always how do you manage that afterwards? How can you calculate these footprints, how can you exchange data across the entire supply chain? And I am not yet aware of any alternatives [to Catena-X] as to how we can do this now.”	Legal compliance	Legal	
Interviewee #7: “Another main topic is how the data is processed. What are the rules for exchanging data? Yes, that was very, very important for us and that's why we also came up with the topic of incentive mechanisms, because the rules on how data is exchanged was one of the main points for us, so that a network is created that is not one-sided, but that really benefits everyone.”	Power Symmetries	Power Structure	

Table S5: Overview of the considered secondary data

Sum	#	Document Type	Document Title
55	1.1	Standard	Catena-X Standards (related to use case)
23	1.2	Standard	Catena-X Standards (not related to use cases)
19	2.1	Normative Document	Catena-X_Consulting Qualification Process
	2.2	Normative Document	Catena-X_Contribution Regulation
	2.3	Normative Document	Catena-X_Articles of Association
	2.4	Normative Document	Catena-X_IP Regulations
	2.5	Normative Document	Catena-X_Overview Association Bodies
	2.6	Normative Document	Catena-X_10 Golden Rules
	2.7	Normative Document	Catena-X_Use Case Framework PCF
	2.8	Normative Document	Catena-X_Use Case Framework Quality
	2.9	Normative Document	Catena-X_Use Case Framework Traceability
	2.10	Normative Document	Catena-X_Clearance List
	2.11	Normative Document	Catena-X_Operating Model
	2.12	Normative Document	Catena-X_Lead User Integration – Scope & Requirements
	2.13	Normative Document	Catena-X_Onboarding Guide – Information for Application & Service Providers
	2.14	Normative Document	Catena-X_Data Governance Guide – Basic Governance Principles [...]
	2.15	Normative Document	Catena-X_Company Onboarding Tracker
	2.16	Normative Document	Catena-X_Onboarding One Pager
	2.17	Normative Document	Catena-X_Onboarding Guide – Data Integration Patterns & Tools
	2.18	Normative Document	Catena-X_Onboarding Guide – Initial Information for Large Enterprises
	2.19	Normative Document	IDTA_Asset Administration Shell
4	3.1	Presentation	Catena-X - Overview
	3.2	Presentation	Catena-X_Manufacturing-as-a-Service
	3.3	Presentation	Use Case: Sustainability
	3.4	Presentation	Catena-X_KITs
3	4.1	Testimonial	Catena-X_Lead User Integration – Testimonial Senodis
	4.2	Testimonial	Catena-X_Lead User Integration – Testimonial WITTE Automotive
	4.3	Testimonial	Catena-X_Robert Habeck supports Catena-X
5	5.1	Whitepaper	Whitepaper_Data Space Governance
	5.2	Whitepaper	Whitepaper_Enablement Services
	5.3	Whitepaper	Whitepaper_KITs
	5.4	Whitepaper	Whitepaper_Life Cycle Management
	5.5	Whitepaper	Whitepaper_Regulatory Framework
	5.6	Whitepaper	Whitepaper_Tractus-X
	5.7	Whitepaper	Whitepaper_Operating Model
4	6.1	Rec. of Live Event	Catena-X_Go-Live Event – Roadmap Statements
	6.2	Rec. of Live Event	Catena-X_Virtuelles Fachforum Catena-X Kits
	6.3	Rec. of Live Event	Catena-X_Virtuelles Fachforum Rückverfolgbarkeit
	6.4	Rec. of Live Event	Catena-X_Virtuelles Fachforum Nachhaltigkeit & CO ₂ -Management
21	7.1	Explanatory Video	Catena-X_An Overview of the Data Space
	7.2	Explanatory Video	Catena-X_An Overview of Data Sovereignty
	7.3	Explanatory Video	Catena-X_An Overview
	7.4	Explanatory Video	Catena-X_Vision & Mission
	7.5	Explanatory Video	Catena-X_Understand our Portal & Marketplace
	7.6	Explanatory Video	Catena-X_An Overview of BPDM
	7.7	Explanatory Video	Catena-X_Tackling Traceability and Circularity with the Battery Pass
	7.8	Explanatory Video	Catena-X_An Overview of Circular Economy
	7.9	Explanatory Video	Catena-X_Battery Pass Use Case Preview

Sum	#	Document Type	Document Title
	7.10	Explanatory Video	Catena-X_An Overview of Quality
	7.11	Explanatory Video	Catena-X_Quality Managment Preview
	7.12	Explanatory Video	Catena-X_Tackling Quality Issues
	7.13	Explanatory Video	Catena-X_An Overview of PCF
	7.14	Explanatory Video	Catena-X_Creating Transparency with a PCF for a wishbone
	7.15	Explanatory Video	Catena-X_Creating Transparency with a PCF for doorhandles
	7.16	Explanatory Video	Catena-X_Decarbonization Use Case Preview
	7.17	Explanatory Video	Catena-X_An Overview of Traceability
	7.18	Explanatory Video	Catena-X_Enhancing the Traceability of an EV Battery
	7.19	Explanatory Video	Catena-X_Traceability Use Case Preview
	7.20	Explanatory Video	Catena-X_Traceability
	7.21	Explanatory Video	Catena-X_An Overview of KITs
42	8.1	News	News articles about Catena-X published on the Catena-X website
	9.1	Other	All content pages on the Catena-X website

Fig. S1: Overview of the identified incentives

