Produkt/sprint backlogg
Projekt: Digital-Product-Passports-DPPs-federated-system

Story ID	Story	Task ID	Task	Tidsuppskattning (story)	Använd tid (story)	Tidsuppskattning (task)	Använd tid (task)	Beroenden	Risk	Prioritet
1	**Titel**: Create passport to company database **Avsedd användning**: Make it possible to insert the information needed to create passports into company databases. **Önskade egenskaper**: Should only need the user to insert data in postman. **Testfall**: Insert passport to the database and validate.	1.1	**Att göra**: Make a way to insert data with GraphQL **Risk**: 5	35 h	12 h	15 h	TBD	(7.1)	5	High
		1.2	**Att göra**: Automatically reformat array data from GraphQL to stacked arrays **Risk**: 6			8 h		1.1		
		1.3	**Att göra**: Set up the structure for passport events. (Repairs/changes to the product during its lifespan) Stacked array **Risk**: 6			12 h	12 h	1.1		
2	**Titel**: Upload DPP on IPFS **Avsedd användning**: Upload and reformat the data from company databases to IPFS. **Önskade egenskaper**: **Testfall**: Run the program to upload to IPFS and download from a separate terminal	2.1	**Att göra**: Create a function that uploads to IPFS. **Risk**: 5	72 h	61 h	10 h	8 h		4	High
		2.2	**Att göra:** Create function that retrieves data from database. **Risk:** 4			6 h	8 h	(7.1)		
		2.3	**Att göra:** Create function that split the passport data from the database for different access			4 h	30 h	2.1 2.2 2.6		

			levels and upload the higher access level to IPFS. **Risk:** 2							
		2.4	**Att göra**: Write function that take the new IPFS address and updates company database with it **Risk**: 4			4 h	11 h	2.3		
		2.5	**Att göra**: Implement encryption on files published to IPFS **Risk**: 8			48 h	4 h			
3	**Titel**: Create mutable datapoint on IPNS **Avsedd användning**: Give possibilities to query companies on IPNS to get their products, and the possibility to have events federated and not only on company databases **Önskade egenskaper**: Support the possibility of adding remanufacturing events to passports. **Testfall**: Test creating a company entity on IPNS and then change it, validate that it is still on the same address.	3.1	**Att göra**: Write a function that uploads a file to IPNS **Risk**: 5	34 h	36	10 h	21 h	3.2	5	Low
		3.2	**Att göra**: Write function to create a key pair (public/private) and update company database with these keys. **Risk**: 6			12 h	6 h			
		3.3	**Att göra:** Create a structure for passport events on IPNS. **Risk**: 5			6 h	9 h	3.1 1.3		
		3.4	**Att göra:** Create a structure for uploading company information (what products a company makes) to IPNS. **Risk:** 5			6 h		3.1 5.5		
4	**Titel**: Generate QR-code **Avsedd användning**: The ability to generate a QR code for a specific DPP containing both offline and online data **Önskade egenskaper**: Give offline data formated for Json, and online data either as an address or query to specific database/IPFS **Testfall**: Generate a QR code for dummy passport. Scan it with a phone and see if the data is correctly displayed.	4.1	Att göra: Create a function that retrieves current passport information from company database and creates a string in json format. Risk: 2	22 h	5 h	8 h			3	Medium
		4.2	**Att göra**: Create a function that retrieves the IPFS/IPNS address for event control. **Risk**: 5			10 h	3 h	5.1 5.3		
		4.3	**Att göra**: Create a function that generates a QRcode			4 h	2 h	4.1 4.2		

#	Titel	Sub	Att göra							
			Risk: 1							
5	**Titel**: Query API **Avsedd användning**: Make the API needed to query data from company databases and IPFS. **Önskade egenskaper**: Should be built in such a way that the group that have the frontend project can use the API. **Testfall**: Test that the API works by creating dummy events and queries.	5.1	**Att göra**: Write a function to retrieve data from IPFS. **Risk**: 5	48 h	49 h	10 h	-		5	High
		5.2	**Att göra:** Create function that decrypt data before passing thourgh API (get decrypt key from API request) **Risk:** 8			16 h	-			
		5.3	**Att göra**: Write a function to retrieve data from company database **Risk**: 2			3 h	-			
		5.4	**Att göra:** Write a function to write/update company database with event **Risk:** 2			3 h	-	1.3		
		5.5	**Att göra**: Write a function to retrieve data from IPNS **Risk**: 6			8 h	19 h			
		5.6	**Att göra:** JWT **Risk**: 6			15 h	30 h			
6	**Titel**: Linking CID with Neo4j **Avsedd användning**: Give the possibility to search the passports bidirectionally **Önskade egenskaper**: Should use Neo4j federated **Testfall**: Attempt to travel up through the chain of products via Neo4j	6.1	**Att göra**: Create a query structure that lets you search for specific passports **Risk**: 5	33 h	TBD	10 h		6.2	5	Low
		6.2	**Att göra** Create a data structure that creates links between passports **Risk**: 6			15 h				
		6.3	**Att göra**: Link togheter NEO4J with the CID **Risk**: 5			8 h		8.1		
7	**Titel**: Set up databases **Avsedd användning**: Give the different companies their own database to keep their data under their own control **Önskade egenskaper**: Support access control	7.1	**Att göra**: Create three ''company databases'' on MongoDB. **Risk**: 2	11 h	2 h	3 h	1h		2	High
		7.2	**Att göra**: Set up 4 different rolls for access rights (One for Owning company, admin,			8 h	1h			

#										
	Testfall: Test to read and write data with different access levels.		remanufacture (car mechanic) and user. **Risk**: 2							
8	**Titel**: Directory for CID **Avsedd användning**: Create a searchable directory used to linking products together. To be used in conjunction with neo4j (story 6). **Önskade egenskaper**: Immutability, decentralization and efficiency for the retrieval of CIDs. We also know that each CID needs to be unique – even though this is not a requirement for the directory, it is helpful for the testing of the directory. **Testfall**: Search through the directory of (made-up?) CIDs. Error handling tests could be something like searching for a non-existent CID or searching for something following a different format. In addition to what is noted above, content integrity tests are important: try retrieving content and verify its integrity.	8.1	**Att göra**: Create a federated directory for CID from IPFS that is searchable. **Risk**: 8	48 h	TBD	48 h	-		8	Low
*	**Titel**: Unplanned work **Avsedd användning**: Work that were initially thought not necessary, like … **Önskade egenskaper**: **Testfall**:	*.1	**Att göra**: Merge splitPassport & Inser to database		82 h		10 h			
		1.1*	**Att göra**: Write a program to insert to database in GO				44 h			
		2.6	**Att göra**: Reformat data from database to json				15 h	2.2		
		2.7	**Att göra**: Create LinkMadeFrom, retrieves data from IPFS and updates database with it.				5 h	1.1 2.2 2.1		
		*.2	**Att göra**: Lägga till automatisk pinning av CID				8 h			

Story ID	Story	Task ID	Task	Tidsuppskattning (story)	Använd tid (story)	Tidsuppskattning (task)	Använd tid (task)	Beroenden	Risk	Prioritet
9	**Titel**: CA for distributing keys **Avsedd användning**: Make use of a CA that will be able to distribute the encryption keys and public/private keys for IPNS. **Önskade egenskaper**: Make the distribution of keys secure. **Testfall:** Use the distributed keys and attempt updates and reads from a DPP.	9.1	**Att göra:** Find a key standard that works with IPNS and is available for the other group	40 h	21 h	4 h	21 h		6	High
		9.2	**Att göra:** Retrieve the private key from the other group's CA through their endpoints and decrypt it.			36 h	-	9.1		
10	**Titel**: Remanufacturing events **Avsedd användning**: Be able to create events and store them in an IPNS directory and update passport with new/changed components. **Önskade egenskaper**: Only a remanufacturer should be able to update the event logs, and easy linking to update passport information. **Testfall**: Create multiple events. The events should be visible directly on IPNS and on the passport.	10.1	**Att göra**: Add functionality to be able to store updated information on IPFS/IPNS	18 h	38 h	6 h	6 h	9.2	3	High
		10.2	**Att göra:** Change the current passport structure to make easy changes possible by the use of linking components and information.			12 h	32 h			

#	Description	ID	Att göra							
11	**Titel**: Forward traceability for the product chain **Avsedd användning**: We should be able to lookup products that are further up in the product chain and made from the current product. **Önskade egenskaper**: Should be able to get the CID for those products and know which company is using the other company's product. **Testfall:** You should be able to trace forward one step further up in the schema.	11.1	**Att göra** Add functionality to track products that are made of the current product.	18 h	36 h	12 h	21 h		3	High
		11.2	**Att göra**: Create strip down passport to be used in forward traceability. The same information is included in the QR code.			6 h	15 h			
12	**Titel**: Create an API that runs on a virtual machine or another service. **Avsedd användning**: Make it possible for smaller companies to be able to store passports without them hosting their own service. **Önskade egenskaper**: Should not be offline and be always contactable except for maintenance or downtime. **Testfall:** Connecting to API and publish IPFS record.	12.1	**Att göra:** Create a virtual machine to run the API so it is always running and accessible.	66 h	38 h	16 h	17 h		5	High
		12.2	**Att göra:** Open the API to be able to receive calls from the net.			10 h	7h			
		12.3	**Att göra:** Implement IPFS daemon on the same machine as API runs on.			40 h	14 h			

#	Title	Sub	Att göra						Dep	#	Priority
13	**Title:** Refactoring code **Avsedd användning**: Remove deprecated code, add comments, and possibly look into efficiency. **Önskade egenskaper**: Make it easier to understand the code/system in its entirety. **Testfall:** Run the tests like usual – if the program runs like intended, the refactored code is OK.	13.1	**Att göra:** Remove deprecated code and change file structure.	101 h	31 h	48 h	20 h			4	Low
		13.2	**Att göra**: Add comments			48 h	10 h				
		13.3	**Att göra:** Remove test prints and test data.			5 h	1 h				
14	**Title**: Upgrade the company program to handle dynamic data and fetch the encryption key. **Avsedd användning**: Implement the possibility to add attributes to a passport that are not initially set by a schema. **Önskade egenskaper:** Make the "Company program" fully functional with the intended functionality. **Testfall:** Try to fetch an encryption key and try to add attributes to a DPP and make sure that it changes according to the structure defined.	14.1	**Att göra:** Implement the possibility to add attributes to a passport that are not initially set by a schema.	82 h		48 h	8 h			7	Medium
		14.2	**Att göra:** Change encryption to use the CA implemented by the frontend group.			10 h	-				
		14.3	**Att göra:** Change the structure of sensitive data for a DPP.			24 h	8 h				
15	**Title:** Create a pinning service **Avsedd användning**: Strengthen the availability of data by replication. **Önskade egenskaper:** Automatic replication of data across a set of Nodes.	15.1	**Att göra:** Create a pinning service that pins created IPFS records to given nodes using the pinning API.	72 h	-	48 h	-	12.1 12.2		8	Low
		15.2	**Att göra:** Create multiple nodes and link them with the			24 h	-	15.1			

	Testfall: Upload passports and let the pinning service pin to other nodes, then shut down the origin node and try to get the uploaded passport.		pinning API.							
16	**Title:** Unplaned **Avsedd användning**: Tasks missed during planing	16.1	**Att göra:** Implement functionality to upload and retrieve mutable data such as remanEvents	72 h	80 h	48 h	22 h	10	8	Low
		16.2	**Att göra:** Implement functionality to upload,change and retrieve mutable data such as made by.				18 h			
		16.3	**Att göra:** Created API documentation			24 h	13 h	15.1		
		16.4	**Att göra:** Generate Qrcode in the API				3h			
		16.5	**Att göra:** Interaction with CA				19 h			
		16.6	**Att göra:** Create the key generation and retrieve private key.				5 h			

Deprecated

Still some work left

Done