Project Name	...
Online team meeting	https://fau.zoom.us/j/6803204673?pwd=WXNPdFZMNlln d2lETkptek41ay9wUT09
Production system (if any)	...
Test system (if any)	...
GitHub repository	https://github.com/amosproj/amos2023ss02-open-search-meta-data-hub
GitHub feature board	https://github.com/orgs/amosproj/projects/16
GitHub impediments backlog	https://github.com/orgs/amosproj/projects/20
Team T-shirt	https://forms.gle/rdXqbq1WSFjwHkSx8
Shirt Männer weiß (straight)	https://www.shirtinator.de/t-shirts/gestalten/t-shirt-bedrucken#/load/share/1ede23cb-6cd8-4c7e-add4-c36230174560
Shirt Damen weiß (fitted)	https://www.shirtinator.de/t-shirts/gestalten/t-shirt-bedrucken#/load/share/08540543-2925-4dbd-b6ce-0f6520efca57
Google Drive	https://drive.google.com/drive/folders/1q_4jGjhKRwsXwnjl5Y8Q8BE-SpLZvNBZ?usp=share_link
Discord	https://discord.gg/9sfDKWSE
Mailing List	oss-amos-proj2@lists.fau.de
AMOS General Info	AMOS SS 2023 - Organisation [Public]
Homework File	https://docs.google.com/document/d/1ELeRxm30hb7p6sNm3OtpFh6HGTuOhBOW_DTp98vCRQY/edit
Amos-Happy	https://happy-amos.appspot.com/Project?project=5925364299726848&course=6296268179505152
Miro Board for Retrospectives	https://miro.com/app/board/uXjVMPOCVy4=/?share_link_id=101469504904

Last Name	First Name	GitHub User Name	Email Address
Rotsching	Lukas	lukas-rotsching	lukas.rotsching@fau.de
Al-Sheikh	Tawfeek	tawfeeka	toofe.al-sheikh@fau.de
Wüllner	Corinna	i315315	corinna.wuellner@fau.de
Ninach	Omar	oninach	omar.ninach@fau.de
Miltner	Jan	JMiltner97	jan.miltner@fau.de
Elliger	Max Ole	motrell	ole.elliger@fau.de
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Meyer ter Vehn	Martin	martin-mtv	martin.meyerter.vehn@fau.de
Houssaen	Amir	Amir-Hussein-OTH	amir.hussein@fau.de

#	Meeting Day	Product Owner	Software Developer	Release Manager	Scrum Master	Comment
1	2023-04-19	Tawfeek Al-Sheikh, Lukas Rotsching	Everyone else	N/A	Corinna Wüllner	
2	2023-04-26	Tawfeek Al-Sheikh, Lukas Rotsching	Everyone else	Omar	Corinna Wüllner	
3	2023-05-03	Tawfeek Al-Sheikh, Lukas Rotsching	Everyone else	Jan	Corinna Wüllner	
4	2023-05-10	Tawfeek Al-Sheikh, Lukas Rotsching	Everyone else	Max Ole	Corinna Wüllner	
5	2023-05-17	Tawfeek Al-Sheikh, Lukas Rotsching	Everyone else	Leon	Corinna Wüllner	
6	2023-05-24	Tawfeek Al-Sheikh, Lukas Rotsching	Everyone else	Martin	Corinna Wüllner	
7	2023-05-31	Tawfeek Al-Sheikh, Lukas Rotsching	Everyone else	Amir	Corinna Wüllner	Mid-term due
8	2023-06-07	Tawfeek Al-Sheikh, Lukas Rotsching	Everyone else	Omar	Corinna Wüllner	
9	2023-06-14	Tawfeek Al-Sheikh, Lukas Rotsching	Everyone else	Jan	Corinna Wüllner	
10	2023-06-21	Tawfeek Al-Sheikh, Lukas Rotsching	Everyone else	Max Ole	Corinna Wüllner	
11	2023-06-28	Tawfeek Al-Sheikh, Lukas Rotsching	Everyone else	Leon	Corinna Wüllner	
12	2023-07-05	Tawfeek Al-Sheikh, Lukas Rotsching	Everyone else	Martin	Corinna Wüllner	
13	2023-07-12	Tawfeek Al-Sheikh, Lukas Rotsching	Everyone else	Amir	Corinna Wüllner	
14	2023-07-19	Tawfeek Al-Sheikh, Lukas Rotsching	Everyone else	Omar	Corinna Wüllner	Demo day!
15	2023-07-26	Tawfeek Al-Sheikh, Lukas Rotsching	Everyone else	Jan	Corinna Wüllner	Retrospective

Goals	Be respectful to each other. Be nice and try not to be too harsh to your teammembers
	Make the teammeetings fun for every participant
	Help each other
	Be productive and work efficient
Meeting norms	Everybody has to show up
	Don't waste your teammates time
	Everyone comes prepared to the meetings
	Everyone is motivated and contributes actively
Working norms	Decissions are made democratically
	We support each other
Coordination norms	Everyone is responsible for his/her assigned tasks and has to deliver. If problems arise, tell the team in time
	Every developer can pick tickets for each sprint. Try to respect others' wishes
	POs moderate the meeting, but everyone can always state his/her opinion
Communication norms	Respect everyone's opinion
	Respond to messages at least on the next day
	Everyone checks all message channels at least on time per day (except weekends)
Consideration norms	POs can always stop discussions when thet deem them irrelevant or too specific for the whole team meeting
	The scrum master intervenes whenever a discussion gets out of hand
Cont. improvement norms	Try to improve the quality by giving constructive feedback
	Respect that every developer has his/her own way of doing things
	Try to find the underlying reason if the sprint plan fails
Rewards	We occasionally have meetings just for fun (eat dinner, drink some beer e.g.)
Sanctions	We always try to solve problems immediatly as a team. If that does not work out we will sanction specific behavior or a member after a democratic discussion
Signed by	Rotsching
	Miltner
	Al-Sheikh
	Elliger
	Ninach

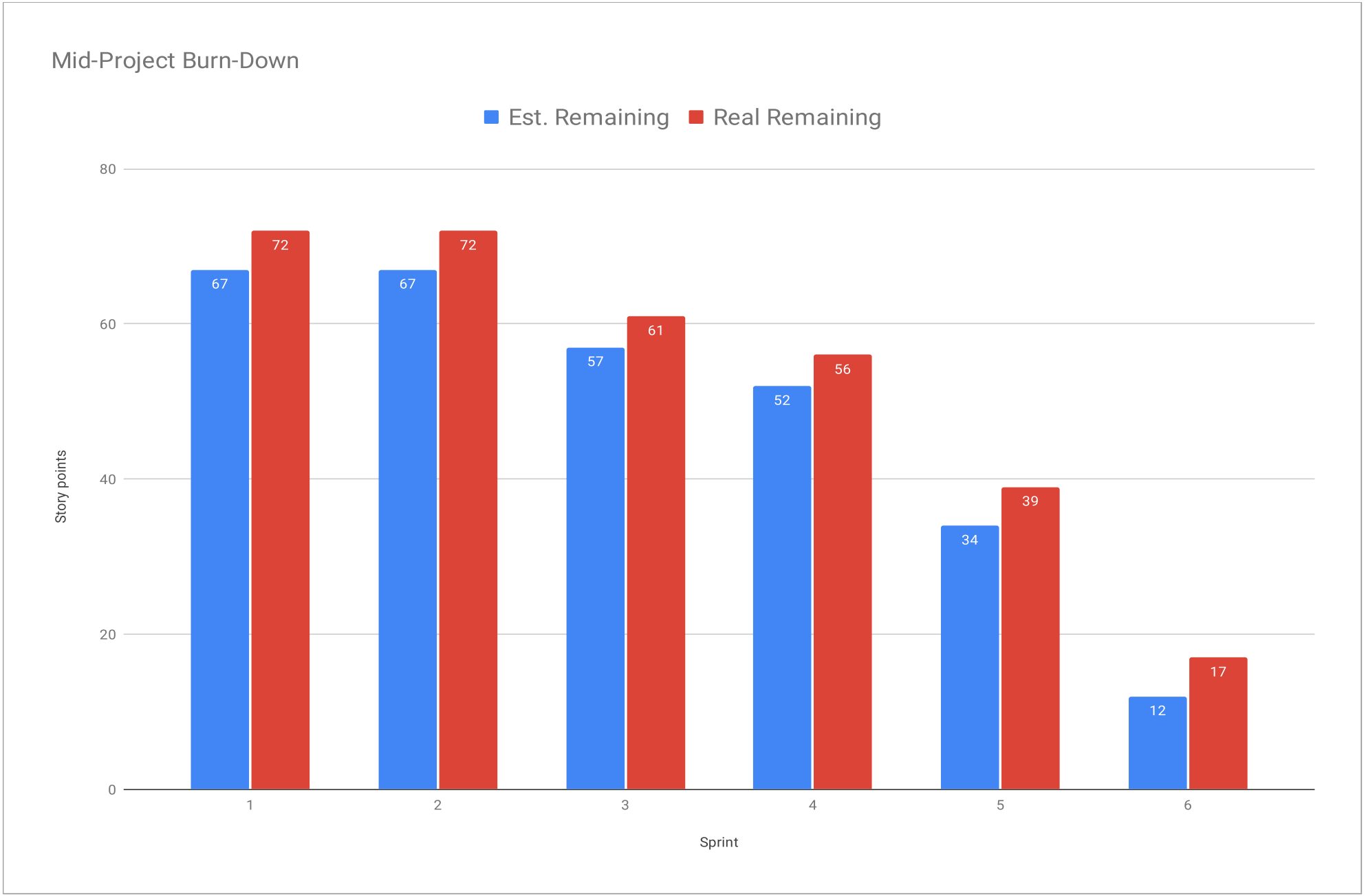
	Corinna Wüllner
	Klaus
	Martin
	Houssaen

Product Vision	Project Mission
GRAUDATA has a product called Metadata-Hub. This is a tool that can index huge amounts of unordered data and thus enables its users to search and analyse this data. Simpy put - it's a data mining tool. The Metadata-Hub comes with a dashboard that already has a search function. However, its capabilities are fairly limited and searching is only one function in this dashboard that is more of an admin console than a tool for regular users to interact with. GRAUDATA's customers want a sleek yet powerful, scalable and easy to use search and statistics tool. The OpenSearch Metadata-Hub provides exactly this. It is a fully self-contained tool that can import data from a Metadata-Hub core into an OpenSearch node. It comes with a sleek webinterface that enables the user to easily build complex search queries for OpenSearch and it shows statistics about the data, while not being overloaded with functionality unrelated to searching and statistics. This webinterface is usable by everyone that knows how to use a search engine.	The mission of the project is to setup the basic structure for the product and implement the core functionalities. These are: - run an OpenSearch node - run an OpenSearch-Dashboards container that connects to the OpenSearch node - automatically import data from a Metadata-Hub core into the OS node - provide a website with a search bar and elements to create more complex search queries (e.g. boxes to add extra filters to the search) - show statistics and graphs generated by the OpenSearch dashboard on the website that is intended for the user - wrap everything into docker containers and create a docker-compose file or bash script so users can start the whole system with one command Every customer has his own individual needs, especially when it comes to the statistics functionality. Thus, the whole product needs to be easily adaptable by the customer. We provide more of a template with some examples of what could be done and how, than a production-ready product. Good documentation, not only on how to use the product but especially on what could be changed, how and where, is therefore mandatory!

Term	Definition
MdH	GRAUDATA's Metadata-Hub. A data mining tool.
OS	OpenSearch. A powerful and scalable tool to build search and analytics engines.

Sprint	Theme	Goal	Feature Name	Est. Size	Est. Remaining	Real Size	Real Remaining
Release	Mid-term						
	Total			67	67	72	72
Sprints							
1	**Get to know the team**			0	67	0	72
2	**OpenSearch and GRAUDATA MdH**			10	67	11	72
3	**Architecture and Project Setup**			5	57	5	61
4	**Frontend and Docker**			18	52	17	56
5	**Simple Search and a nice website**			22	34	22	39
6	**Advanced Search and Documentation**			12	12	17	17
Features							
1	**Get to know the team**						
		Get to know the team members and try to guess what the project will be about, even though we didn't have a meeting with our industry partner so far. Refresh your python skills.					
2	**OpenSearch and GRAUDATA MdH**						
		Get as much information as possible about the technologies we need to work with.					
			Research: GRAUDATA Meta Data Hub	3		3	
			Research: Docker	2		3	
			Research: CI/CD pipeline	2		2	
			Research: OpenSearch and Apache Lucene	3		3	
3	**Architecture and Project Setup**						
		Design an architecture for the software and set up the basics.					
			Setup OpenSearch	3		0	
			Setup OpenSearch Dashboard	2		5	
4	**Frontend and Docker**						
		Create a website so users can interact with our system. Implement search functionality on this website. Put everything into docker containers for an easy setup.					
			Simple website	2		2	
			Research Dashboard Statistics	3		3	
			Simple Search	5		5	
			Python script for automated import of data from an MdH Core	5		5	
			Create an MdH-OpenSearch docker container	3		2	
5	**Simple Search and a nice website**						

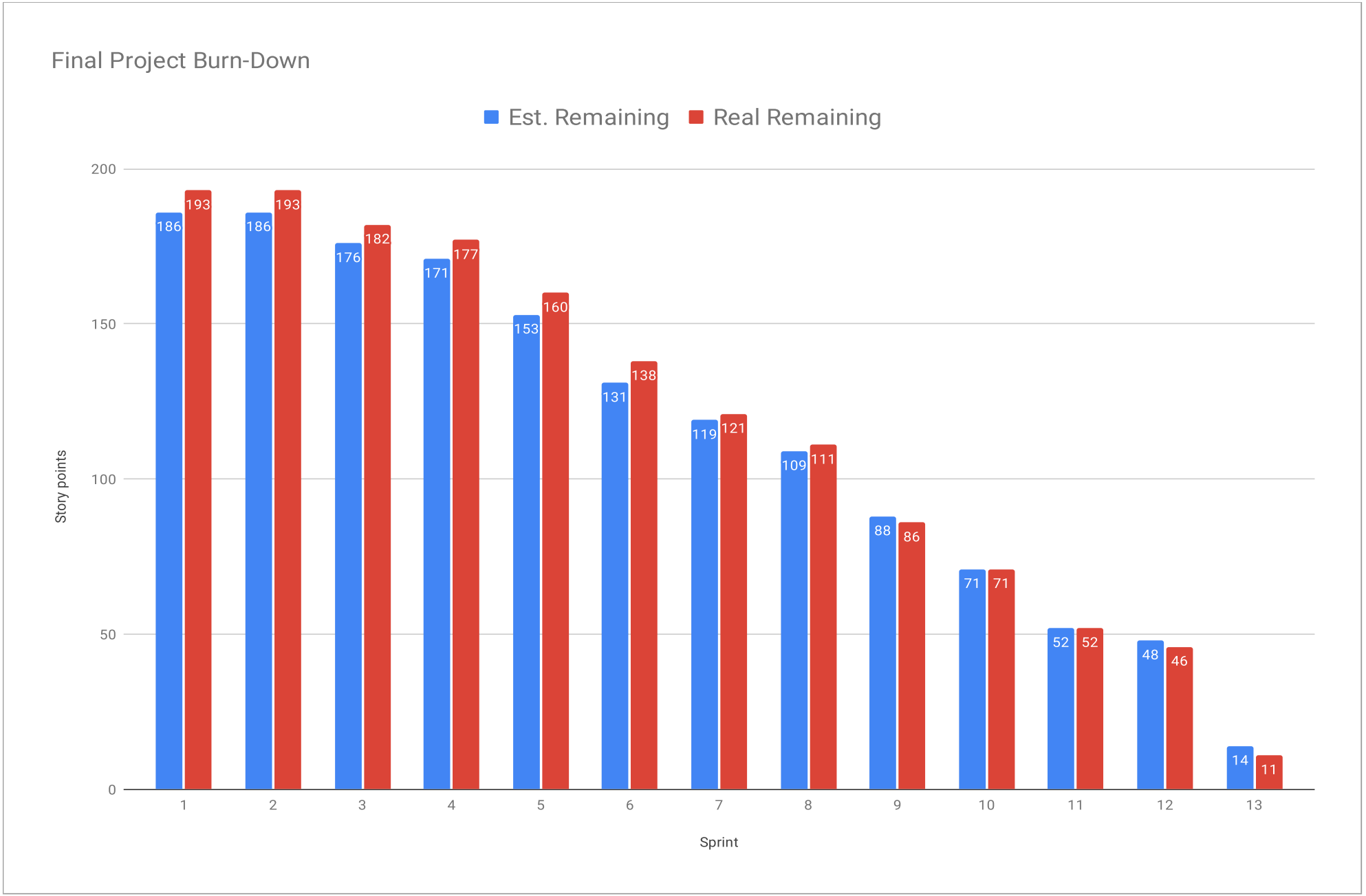
Sprint	Theme	Goal	Feature Name	Est. Size	Est. Remaining	Real Size	Real Remaining
		Use the power of a webframework so we don't have to do everything ourselves. Improve the backend.					
			Setup backend for the website	3		3	
			Efficient data transportation	5		5	
			Documentation	3		1	
			Statistics: Filetypes	3		5	
			Migrate the website to a webframework	2		3	
			Data types	3		3	
			Build process video	3		2	
6	**Advanced Search and Documentation**						
		Write user/build/deploy documentation Implement an advanced search that allows to create custom filters that can be combined freely.					
			Design and build/deploy Documentation	3		3	
			Setting up a CI/CD pipeline for automated testing	3		3	
			Advanced Search Frontend	3		3	
			Advanced Search Backend	3		8	


Mid-Project Burn-Down
Est. Remaining
Real Remaining
80
60
40
20
0
Story points
67
72
67
72
57
61
52
56
34
39
12
17
1
2
3
4
5
6
Sprint

Sprint	Theme	Goal	Feature Name	Est. Size	Est. Remaining	Real Size	Real Remaining
Release	Final-term						
	Total			186	186	193	193
Sprints							
1	**Get to know the team**			0	186	0	193
2	**OpenSearch and GRAUDATA MdH**			10	186	11	193
3	**Architecture and Project Setup**			5	176	5	182
4	**Frontend and Docker**			18	171	17	177
5	**Simple Search and a nice website**			22	153	22	160
6	**Advanced Search and Documentation**			12	131	17	138
7	**Refactoring**			10	119	10	121
8	**Data visualizations and Import pipline**			21	109	25	111
9	**Error handling and video-scripts**			17	88	15	86
10	**Config file and front end quality of life**			19	71	19	71
11	**Specific versions and Data visualizations**			4	52	6	52
12	**Config file and automated import pipeline**			34	48	35	46
13	**Final Release Preparations**			14	14	11	11
Features							
1	**Get to know the team**						
		Get to know the team members and try to guess what the project will be about, even though we didn't have a meeting with our industry partner so far. Refresh your python skills.					
2	**OpenSearch and GRAUDATA MdH**						
		Get as much information as possible about the technologies we need to work with.					
			Research: GRAUDATA Meta Data Hub	3		3	
			Research: Docker	2		3	
			Research: CI/CD pipeline	2		2	
			Research: OpenSearch and Apache Lucene	3		3	
3	**Architecture and Project Setup**						
		Design an architecture for the software and set up the basics.					
			Setup OpenSearch	3		0	
			Setup OpenSearch Dashboard	2		5	
4	**Frontend and Docker**						
		Create a website so users can interact with our system. Implement search functionality on this website. Put everything into docker containers for an easy setup.					
			Simple website	2		2	
			Research Dashboard Statistics	3		3	
			Simple Search	5		5	
			Python script for automated import of data from an MdH Core	5		5	

Sprint	Theme	Goal	Feature Name	Est. Size	Est. Remaining	Real Size	Real Remaining
			Create an MdH-OpenSearch docker container	3		2	
5	**Simple Search and a nice website**						
		Use the power of a webframework so we don't have to do everything ourselves. Improve the backend.					
			Setup backend for the website	3		3	
			Efficient data transportation	5		5	
			Documentation	3		1	
			Statistics: Filetypes	3		5	
			Migrate the website to a webframework	2		3	
			Data types	3		3	
			Build process video	3		2	
6	**Advanced Search and Documentation**						
		Write user/build/deploy documentation Implement an advanced search that allows to create custom filters that can be combined freely.					
			Design and build/deploy Documentation	3		3	
			Setting up a CI/CD pipeline for automated testing	3		3	
			Advanced Search Frontend	3		3	
			Advanced Search Backend	3		8	
7	**Refactoring**						
		Clean up the code and remove/reduce technical debt so we can start into the second phase with a clean and easy to work with code base. Tweaks to the UI					
			Show more info about search results	2		2	
			Refactor backend	5		5	
			Include statistics created by the OpenSearch Dashboard on your own site	3		3	
8	**Data visualizations and Import pipline**						
		The statistics from the Open Search Dashboard are automatically imported into the project website. The script for importing data into MdH-OS will take timestamps into account.					
			Refactor Front-End	5		8	
			Import pipeline	5		8	
			Automatic detection of data visualizations	5		3	
			Remove filter criteria from an advanced search	3		3	
			Advanced search (list tags)	3		3	
9	**Error handling and video-scripts**						
		In this sprint we laid the groundwork for the config file by using a GraphQL library to dynamically create the request to the MdH Further, we improved error handling in the backend and started to write scripts for short explanation videos.					
			GraphQL API	3		3	
			Better error handling	3		2	
			Video-Scripts	3		2	
			Search Tag Boosting	5		5	
			Design Overhaul	3		3	
10	**Config file and front end quality of life**						

Sprint	Theme	Goal	Feature Name	Est. Size	Est. Remaining	Real Size	Real Remaining
		Add a global config file that allows to tweek the product in one central place Quality of life improvements for the front end like 'only showing operators that match the type of the selected tag' and improved statistics visualization Improve the import pipeline by making it more error tolerant					
			Config file	3		3	
			Error resolving import pipeline	5		8	
			fuzzy find tags	3		3	
			Meaningful operators	5		5	
			Show whole Dashboards instead of single visualizations	3			
11	**Specific versions and Data visualizations**						
		Display whole 'OpenSearch-Dashboards' dashboards on the visualizations page so users can use 'OpenSearch-Dashboards' to create, resize and arrange visualizations. Set specific versions for all dependencies instead of 'latest' so the project will still build and run without problems 1 year into the future.					
			Set specific versions for all dependencies	1		1	
			Show whole Dashboards instead of single visualizations	3		5	
12	**Config file and automated import pipeline**						
		Finish leftover work from the last sprint (Add more settings that can be controlled via the config file. Automatically run the import pipeline periodically. Add a paging mechanism to the search result list) Record the code documentation video that Mike requested and prepare slides and a project summarizing video for the demo day					
			Configfile: add option to set imported tag names	3		3	
			Configfile: add option to change the MdH import limit	2		2	
			Configfile: import pipeline filters	3		3	
			Run import pipeline perodically	5		8	
			Show all search results and build a paging mechanism	8		8	
			Demo Day Video	5		5	
			Demo Day Slide	2		1	
			Demo Day Slide Deck	3		3	
			Video recordings	3		2	
13	**Final Release Preparations**						
		Fix various bugs in the frontend and make sure that the whole project is fully documented.					
			Frontend simple search (Show Details)	3		1	
			Operator names and grouping	1		1	
			Frontend advanced search (Show Details)	2		1	
			Frontend paging mechanism	2		2	
			Frontend advanced search (incorrect search state)	2		2	
			Update/Finish Bill of Materials	1		1	
			Finalize Documentation	3		3	


Final Project Burn-Down
Est. Remaining
Real Remaining
Story points
Sprint
200
150
100
50
0
1
2
3
4
5
6
7
8
9
10
11
12
13
186
193
186
193
176
182
171
177
153
160
131
138
119
121
109
111
88
86
71
71
52
52
48
46
14
11

#	Feature Definition of Done	Sprint Release Definition of Done	Project Release Definition of Done
	A feature is considered complete when all of its acceptance criteria have been met.	A sprint release is considered complete when there are no critical bugs left open.	A project release is considered complete when the documentation is complete.
	A feature is considered complete when it has been thoroughly tested.	A sprint release is considered complete when the entire software can be executed without any issues.	A project release is considered complete when the Bill of Materials is complete.
	A feature is considered complete when it can be seamlessly integrated into the main branch without causing any negative side effects.	A sprint release is considered complete when the Bill of Materials has been updated.	A project release is considered complete when the software runs without any noticeable bugs.
	A feature is considered complete when its core functionality has been thoroughly documented.	A sprint release is considered complete when the documentation has been updated.	A project release is considered complete when it is agreed that the core functionality has been provided.
	A feature is considered complete when the code has been peer reviewed by the dedicated team.		

Type	Link / reference

#	Context	Name	Version	License	Comment
	opensearch.org	OpenSearch	2.8.0	Apache License, Version 2.0 (ALv2)	
		GRAU DATA MdH Python SDK	2.3.0		
		GRAU DATA Meta Data Hub	2.3		
	https://hub.docker.com/_/python/	Python	3.11.4-bookworm	Python Software Foundation (PSF) license	Used as the base container for the Python application
	https://flask.palletsprojects.com/en/2.3.x/	Flask	2.2.2	BSD License (BSD-3-Clause)	Framework, used for creating a Webserver
	https://github.com/wtforms/flask-wtf	flask-wtf	1.1.1	BSD License (BSD-3-Clause)	Simple integration of Flask and WTForms
	wtforms	wtforms	3.0.1	BSD License (BSD-3-Clause)	A flexible forms validation and rendering library for Python
	https://opensearch-project.github.io/opensearch-py/	opensearch_py	2.2.0	Apache Software License (Apache-2.0)	Library, used to as an API to OpenSearch
	https://github.com/edsu/opensearch	opensearch	0.9.2	GNU General Public License v3.0	A python opensearch client
	https://github.com/theskumar/python-dotenv	python-dotenv	1.0.0	BSD License (BSD-3-Clause)	Library, used to create an environment
	https://pypi.org/project/python-dateutil/	python-dateutil	2.8.2	license with Apache 2.0	standard Python datetime module
	https://github.com/denisart/graphql-query	graphql-query	1.1.1	MIT License	Library, used for creating GraphQL queries
	https://github.com/pandas-dev/pandas	pandas	2.0.2	BSD License (BSD-3-Clause)	Flexible and powerful data analysis / manipulation library for Python
	https://github.com/helloflask/bootstrap-flask	bootstrap-flask	2.2.0	MIT License	Bootstrap 4 & 5 helper for your Flask projects.
	https://github.com/certifi/python-certifi	certifi	2023.5.7	MLP-2.0	collection of Root Certificates for validating the trustworthiness of SSL certificates while verifying the identity of TLS hosts.
	https://github.com/Ousret/charset_normalizer	charset-normalizer	3.1.0	MIT License	
	https://github.com/kjd/idna	idna	3.4	BSD License (BSD-3-Clause)	Internationalized Domain Names for Python
	https://github.com/psf/requests	requests	2.30.0	Apache Software License (Apache-2.0)	HTTP library
	https://github.com/benjaminp/six	six	1.16.0	MIT License	
	https://github.com/urllib3/urllib3	urllib3	1.26.15	MIT License	HTTP client library for Python
	https://github.com/python/cpython	configparser	5.3.0	PSF License Version 2	
	https://packages.debian.org/bookworm/cron	cron	3.0pl1		

Last Name	First Name	Value					
Rotsching	Lukas			#DIV/0!	#DIV/0!		
Al-Sheikh	Tawfeek						
Wüllner	Corinna						
Ninach	Omar						
Miltner	Jan			0	No size		
Elliger	Max Ole			1	Trivial size		
Klaus	Leon			2	Small size		
Meyer ter Vehn	Martin			3	Medium size		
Houssaen	Amir			5	Large size		
				8	Very large size		
				13	Too large (size)		