

Department of Materials and Production

Budget 2022 -Targets and principles

Background

The 2022 Budget was accepted in November 2021. The budget is the 4th joint budget to be conducted for the three merged parties in Department of Materials and Production (MP). This document aims to review the economic targets and principles regarding the 2022 Budget.

Budget model

The 2022 Budget is based on the new budget model AAU decided in 2021. From 2022 AAU has decided multi-year budgeting, which means that we each year will budget three years ahead.

In short, the Budget consists of:



In collaboration with the secretariat, the project managers have prepared the budgets of individual projects; together with the expectations for future projects (buffers), these constitute the project budget. The management group and the secretariat have prepared the operating budget. In combination, these constitute the MP Budget 2022.

Targets

Budgeting for MP must support the following purposes:

- An open dialogue in the organization regarding conditions, incentives and priorities
- Strategic discussions and decisions concerning priorities
- Continuous economic follow-up and monitoring
- Economic responsibility in organizational units
- Visualization of the connection between budget, revenue and expenditure

Organization and chart of accounts

Revising the organizational cost centers is an ongoing process. The former Copenhagen section is out of the Budget 2022.

As of 1st of January 2022 the list of cost pools is as follows (new from 2022 marked with red):

Organizational placement	Cost center
Joint services	
Department management (joint income and costs)	63801
Secretariat	63802
Study board	63822
Laboratory	63886
Section and research groups	
Physics and Materials	63850
Materials Science and Engineering	63851
Solid and Computational Mechanics	63852
Biomechanics	63853
Physics	63854
Production	63860
Operations Research	63861
Robotics & Automation	63862
Mass Customization	63863
Celog	63871
CIP Aalborg	63872
MMT	63873

Budget control managers

The head of department has the overall responsibility for the budget. The budget control managers are:

Cost centers	Budget control manager
63801	Jens Christian Moesgaard Rauhe
63802	Jette Marie Christensen
63822	Thomas Brunø
63886	Johnny Jacobsen
63850-54	Jens Andreasen
63860-73	Astrid Heidemann Lassen

Content and principles in sub-budgets 2022-24

Each section has individual cost centers. Hence salary, annuum and strategic funds is allocated directly to each cost center. All income is allocated to the Department.

The principle concerning projects is that costs are allocated to the research group of the project manager. This means that the budgets of the sections will not include revenue; they are pure cost budgets.

Materials and Production - Budget 2022-24

In 1.000 DKK	2022		2023		2024	
	Department	Projects	Department	Projects	Department	Projects
1.1. Faculty income	-128.900	0	-130.151	0	-128.446	0
1.2. Other income	-4.286	-500	-4.737	0	-4.746	0
1.3. Projects	0	-54.406	0	-62.500	0	-75.676
External revenue, total	-133.186	-54.906	-134.888	-62.500	-133.192	-75.676
2.1. Overhead from projects	-10.418	0	-11.478	0	-14.852	0
2.1. Other projects income	-2.533	0	-2.432	0	-2.817	0
2.1 Co-financing	0	-5.202	0	-4.837	0	-4.874
Internal projects income, total	-12.951	-5.202	-13.909	-4.837	-17.669	-4.874
2.3 Co-financing Faculty: Equipment	-1.500	0	-1.500	0	-1.500	0
2.3. Other Faculty income	-11.643	0	-11.116	0	-11.308	0
Bidrag Fak/Inst, total	-13.143	0	-12.616	0	-12.808	0
Internal income	-93	0	-93	0	-93	0
Internal revenue, total	-26.187	-5.202	-26.618	-4.837	-30.570	-4.874
Total revenue	-159.373	-60.109	-161.506	-67.337	-163.762	-80.550
3.1.2 Operation costs (annuum etc.)	7.083	7.910	8.121	10.714	7.938	13.560
Equipment (art 35)	2.500	2.500	2.500	2.500	2.500	2.500
Operation costs, total	9.583	10.410	10.621	13.214	10.438	16.060
3.2.1 VIP-salaries	70.559	0	76.945	0	82.784	0
3.2.2 VIP-buy out	-32.266	33.160	-36.006	36.423	-42.655	42.655
3.2.3 TAP-salaries	23.899	333	24.303	407	24.625	500
3.2.4 TAP-buy out	-3.335	3.335	-3.465	3.465	-3.745	3.745
3.2.5 Salary subsidies	476	0	484	0	490	0
3.2.6 Refunds	-930	0	-920	0	-895	0
Staff costs, total	58.403	36.828	61.341	40.294	60.605	46.900
Other costs	8	0	0	0	0	0
External costs, total	67.994	47.238	71.962	53.508	71.043	62.960
4.1.1 Overhead to Department	0	10.418	0	11.478	0	14.852
4.1.2 Other projects expenses	80	2.453	80	2.352	80	2.738
4.1.3 Co-financing	5.202	0	4.837	0	4.874	0
External projects costs, total	5.282	12.871	4.917	13.829	4.954	17.590
Rent (FIB14+16, SKV, PON103, MYR)	20.954	0	22.741	0	23.450	0
FS-contribution	24.739	0	24.855	0	25.547	0
FU- contribution	14.682	0	14.663	0	14.967	0
Other costs	25.619	0	22.281	0	23.714	0
Faculty contribution, total	65.039	0	61.799	0	64.228	0
Internal trade	103	0	87	0	87	0
Internal trade, total	103	0	87	0	87	0
Internal costs, total	91.379	12.871	89.544	13.829	92.718	17.590
Total costs	159.373	60.109	161.506	67.337	163.762	80.550
Result	0	0	0	0	0	0

Revenue

Faculty revenue

By far the largest part of the Department's revenue derives from the Faculty.

Based on the applicable budget model at the Faculty the overall revenue framework in 2022 for MP looks like this:

Budgetposter (hele kr.)	2021	2022	2023	2024
Uddannelsesindtægter:				
Heltidsuddannelse - STÅ indtægter	51.683.131	51.877.839	51.958.220	50.865.095
Grundbevilling	19.498.451	16.312.760	18.327.377	17.921.237
Aktiverede på heltidsuddannelser i alt		41.040	41.460	41.820
Deltidsuddannelse indtægt i alt (MMT)	3.456.009	3.433.680	4.145.422	4.149.789
Udenlandske selvbetalere	1.340.550	1.242.819	1.345.909	1.398.231
Uddannelsesindtægter i alt	75.978.141	72.908.139	75.818.389	74.376.172
Basisforskningsindtægter:				
5% forskningsmidler	3.157.292			
Grundbevilling	27.952.768	28.333.270	28.755.183	28.235.021
Parameterfordeling uddannelse	17.565.008	18.038.474	18.483.734	17.467.130
Ekstern forskningsvirksomhed	4.384.362	3.963.917	3.835.232	4.292.116
BFI-point til institutter	3.991.774	3.584.601	3.347.673	3.180.550
Ph.d.-grader til institutter	2.204.669	2.979.381	1.508.800	2.434.944
VIP kroner - rekvisitioner, netto	2.482.295	3.081.857	3.073.107	3.073.107
Basisforskningsindtægter i alt	61.738.168	59.981.500	59.003.728	58.682.867
Øvrige indtægter:				
Øvrige formål til institut		3.177.861	3.139.071	3.205.716
INDTÆGTER I ALT	137.716.309	136.067.500	137.961.187	136.264.755
Fælles bidrag:				
FF-bidrag fra institutter	31.317.015	24.738.617	24.855.297	25.547.045
FU-bidrag fra institutter	7.827.806	14.681.608	14.663.307	14.966.938
FAK-bidrag fra institutter	27.160.473	20.080.019	17.160.314	18.738.513
Fælles bidrag i alt	66.305.294	59.500.245	56.678.918	59.252.496
Forbrugsmulighed i alt	71.411.015	76.567.255	81.282.269	77.012.259

In 2022 MP has 5,2m. kr. more revenue compared to 2021. "Uddannelsesindtægter" is the main revenue contribution and is directly related to STÅ (student passing all the exams in the semester). In 2022 one STÅ at MP translates into a revenue of 68.400 kr. "Basisforskningsindtægter" are calculated on basis of submitted activity conditions in the departments and others are decided by the dean.

Teaching, supervision of students (VIP hours in educations)

MP teaches and supervises students in both MP educations and to other AAU educations. The number of hours in the last 3 student years:

STUDIEÅR	Mat./Sci													Total
	BOIM, Cph.	Biomech.	Celog	CIP	FYSIK	Logistics Cph.	Mass Custom	and Eng.	Operations Research	Robotics	Robotics, Cph.	Solid		
E18/F19	6.540	2.208	3.360	14.632	5.115	5.366	4.278	10.207	1.929	6.033	3.218	6.494	69.381	
E19/F20	3.075	1.885	3.048	12.047	5.382	2.726	4.304	8.884	2.276	5.514	755	6.051	55.946	
E20/F21	476	1.859	2.807	11.308	4.263	1.202	4.099	7.835	1.669	4.875	379	6.376	47.148	
I alt	10.092	5.952	9.215	37.987	14.759	9.294	12.681	26.926	5.874	16.423	4.352	18.921	172.475	

As it appears the total numbers are dropping rapidly. A main factor in this is that MP has closed all its educations in Copenhagen. Out of 22,000 less hours in 2 years, 13,000 of those come from Copenhagen. This means almost 9,000 hours are in Aalborg and is big concern for MP and the main reason is that departments are using their own staff.

Project revenue

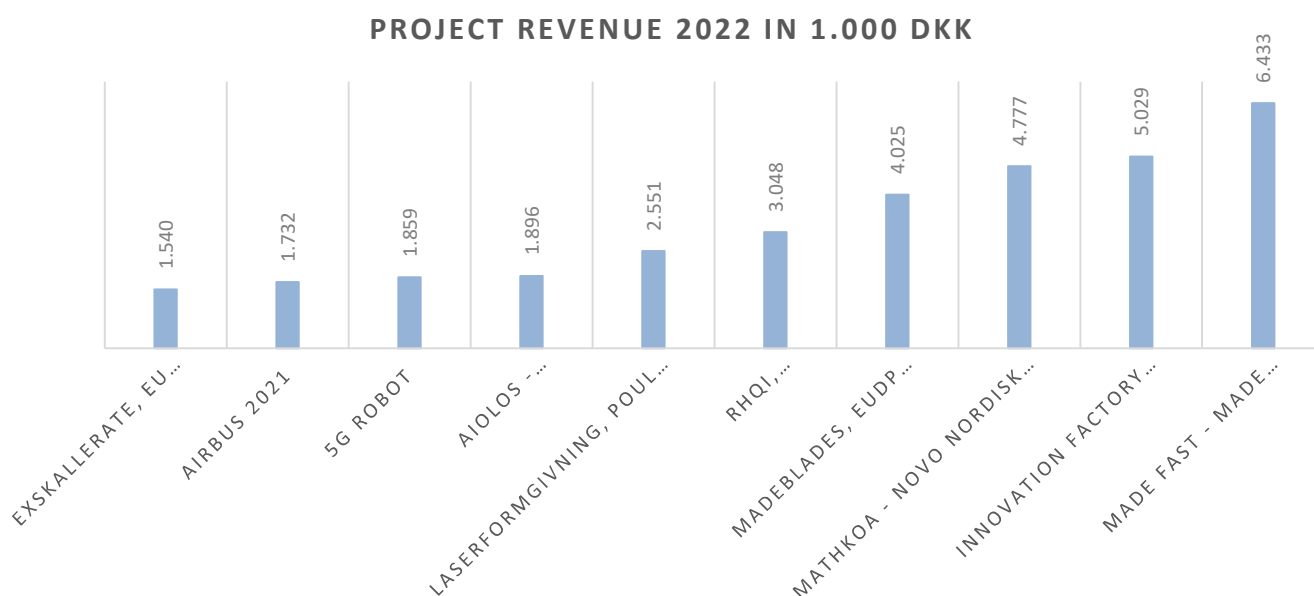
In the 2022 budget project revenue or grant-financed activity, as this is also called, consists of the current project-portfolio and projects applied for but not yet granted/rejected when the 2022 budget was accepted, these projects are also called buffer projects.

In the 2022 budget the following buffer projects have been included (DKK 1,000):

Bufferno.	Project name	Project manager	Revenue 2022 (DKK 1.000)
999700	Airbus 2021	Peter Nielsen	1.732
999701	AI4DEF	Peter Nielsen	442
999702	Inno-dice	Astrid Heidemann Lassen	385
999703	CFIT	Brian Vejrum Wæhrens	784
999704	IM 4_F0-P-01_RevMat_FORCE	Brian Vejrum Wæhrens	342
999705	SMILE	Frank Gertsen	614
999707	Tango	Dimitris Chrysostomou	500
999708	SEWBOT	Morten Kristiansen	772
999709	5G Robot	Ole Madsen	1.859
999710	NOVUM	Jesper de Claville Christiansen	210
999711	Recycling of textiles	Peter Fojan	756
999712	pSTEAK (tidl. PRO-UP)	Vladimir Popok	1.401
999713	IFN2	Astrid Heidemann Lassen	847
999715	OTO	Kjeld Nielsen	107
999730	IV project	Johnny Jacobsen	500
		TOTAL	11.250

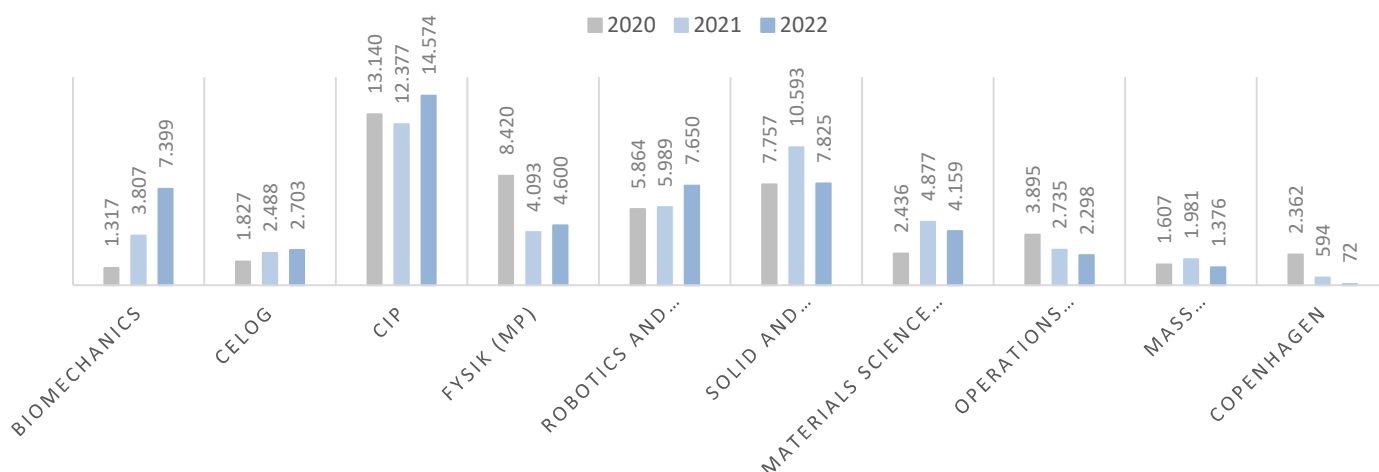
The grant-financed revenue of present projects in Budget 2022 is DKK 54.4m.

Below the 10 largest projects measured in revenue in 2022 is listed:



The figure below shows the grant-financed activity allocated across research groups in 2020-2022:

PROJECT REVENUE IN 1.000 KR. 2020-2022



Summary - revenue

The total revenue in the 2022 Budget is DKK 219.5m, of which the total project revenue in 2022 will be DKK 60.1m. MP expects a large increase in project revenue in the coming years, and it is a significant part of MP’s new strategy. The goal must be seen in the light of the growing grant-financed activities in the last few years, which is expected to be expanded in the next few years.

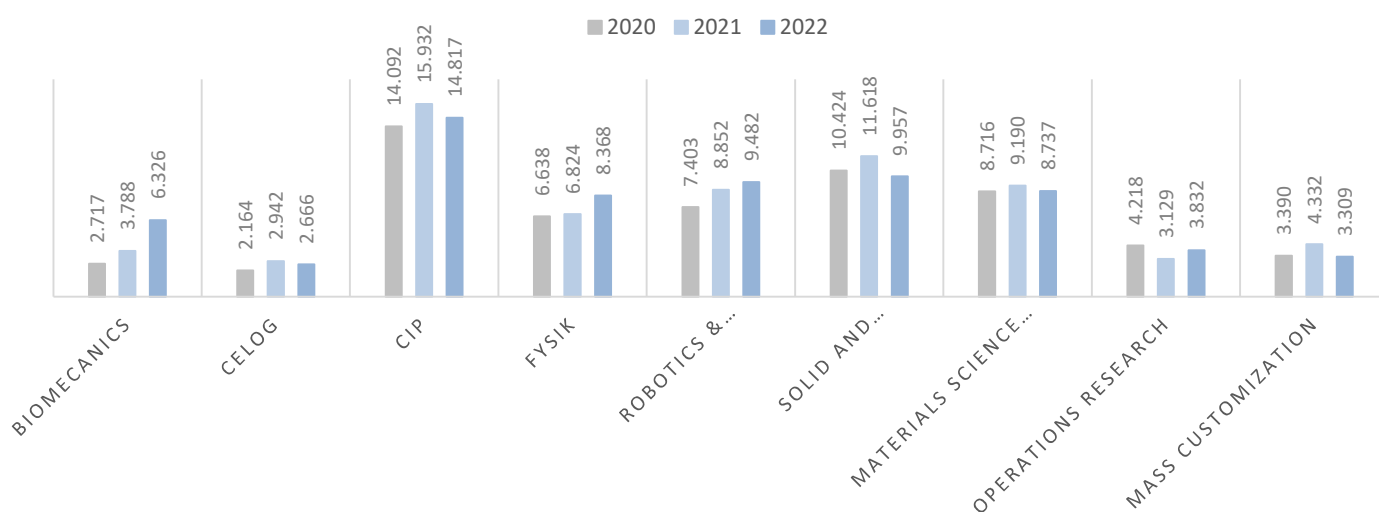
Costs

Salary

Academic staff

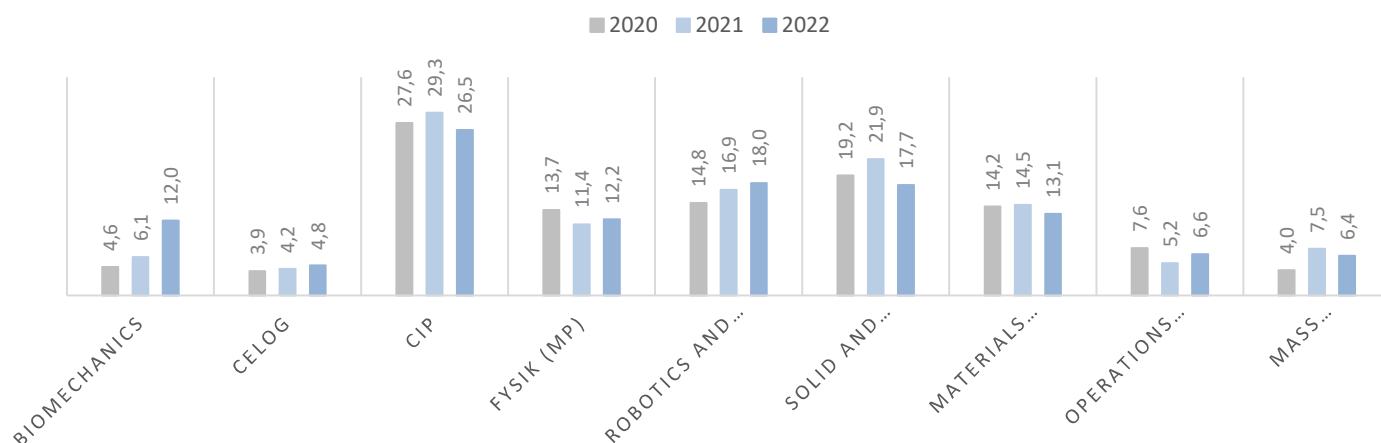
64% (62% in 2021) of the total expenses (AAU contribution deducted) of the Department are staff costs. The total salary costs of Department staff amount to DKK 94.9m (90,8m in 2021) (exclusive buy-out). The academic staff account for DKK 70.6m, TAP staff accounts for DKK 24.4m. A small number of staff in the research groups are “technically” employed as administrative staff, meaning that the amount below does not cover staff in LAB or the secretariat (3.1 m in 2022). Academic staff salaries are allocated across research groups as follows:

VIP SALARY IN 1.000 KR.



Academic staff full-time equivalents (FTE) are divided as follows on research groups:

ACADEMIC STAFF FULL-TIME EQUIVALENTS (FTE)



Academic staff salaries are DKK 70.6m, which is an increase of DKK 2.5m. from the 2021 Budget. The number of FTE is decreased by 2 in Budget 2022. 119 full time academic staff were employed in 2021, while the number in 2022 is 117. DKK 0.9m is available in the budget for part-time academic staff. Part-time lecturers will be employed in the research groups. 35 vacancies for academic staff appear in the budget. 29 of these are fully or partly financed by projects. The production section have 2 assistant professor and 1 associate professor positions. Physics and Materials have 2 part time professors.

A pool of DKK 0.3m has been set aside for pay negotiations (2% payroll funds no longer exists in ENG).

Technical/administrative staff (TAP)

TAP salaries comprise LAB and secretariat staff. Moreover, some research group staff are employed as academic administrative staff; these are included with DKK 1.1m (2.3m in 2021) in Budget 2022. Total TAP salaries amount to DKK 24.4m in 2022, as compared to DKK 22.6m in 2021. The number of TAP FTE in 2021 was 43; this has increased to 45 in 2022:

Cost center	FTE
Secretariat	28
LAB	15
Celog	1
Robotics	1

DKK 0.35m is allocated for student assistance. A pool of DKK 0.2m has been set aside for pay negotiations (0.13 for the secretariat and 0.07 for LAB).

Other costs

Annual grant (Annuum)

The annual grant must cover costs for the “operations” of VIP staff. Typically, it covers costs related to conference participation and travel and personal IT equipment (telephones, PC etc.) and minor purchases of other new equipment.

Please check the MP guidelines for purchases:

<https://www.intranet.mp.aau.dk/Guidelines/economy/guidelines-purchases/>

and MP guidelines for travels: <https://www.intranet.mp.aau.dk/Guidelines/economy/guidelines-travels/>

Annum is based on the number of the expected FTE (årsværk) in 2022. A budget is set aside for operating costs in the sections (analysis number 70260) corresponding to DKK 5.000 per full-time staff and DKK 15,000 for research groups. The head of section decide how much is allocated to the research groups and section. The coordinator in the research group manages the amount allocated. In 2022 the following amount has been allocated:

Research group	Cost center	Total FTE	Total to research group	Total to section	Total
Materials Science and Engineering	63851	14	kr. 204.000	kr. 68.000	kr. 272.000
Solid and Computational Mechanics	63852	18	kr. 273.000	kr. 91.000	kr. 364.000
Biomechanics	63853	12	kr. 177.000	kr. 59.000	kr. 236.000
FYSIK (MP)	63854	13	kr. 199.000	kr. 66.000	kr. 265.000
Operations Research	63861	7	kr. 99.000	kr. 33.000	kr. 132.000
Robotics and automation	63862	18	kr. 270.000	kr. 90.000	kr. 360.000
Mass Customization	63863	6	kr. 84.000	kr. 28.000	kr. 112.000
Celog	63871	5	kr. 72.000	kr. 24.000	kr. 96.000
CIP	63872	27	kr. 403.000	kr. 134.000	kr. 537.000
		119	kr. 1.781.000	kr. 593.000	kr. 2.374.000

Annum pr. section	Total	Cost center
Materials	kr. 284.000	63850
Production	kr. 309.000	63860
Total	kr. 593.000	

The secretariat creates analysis numbers to manage the expenditure of individual members of staff. Therefore, it is important that VIP and TAP members of staff make sure to include this number in all purchases and travel reimbursements etc. The sections pay the costs related to meetings and seminars, bread, and fruit schemes etc.

If you don't know your number, you can find it in one of the links below:

<http://regnforsv.aau.dk/kontoplan/kontoplan?Plan=Analysenummer&CurrentGroup=667&Level=3>

<http://regnforsv.aau.dk/kontoplan/kontoplan?Plan=Analysenummer&CurrentGroup=668&Level=3>

All "informal accounts" in which individual members of staff or groups have saved up "drawing rights" in the budget (PhD accounts, group accounts, 2% amounts (not payroll funds etc.)) were abolished in 2017. This principle also applies in 2022. An amount has been set aside for the "teacher of the year". Savings from "teacher of the year" must be spent within the following three years.

The secretariat will send a report of actual spending in May, September and November (and more often if requested) to the coordinator in each research group, who will distribute it as needed.

Development funds for the sections

The management group have decided not to allocate development funds for the sections in 2022.

Moving cost in 2022

The department moves from Fib. 16 to PON 103 in February. Students is moved out of PON 103 to Frederik Bajersvej 7F. The total cost for this in 2022 is DKK 300,000.

Department operating costs

The Department pay the following operating costs:

- Ordinary furniture and fixtures, i.e. office desks, bookshelves and chairs (More “specialized” purchases (sofas etc.) must be paid by annum or other grants).
- Telephone subscriptions, postage and freightage
- Travel in connection with teaching at a different address.
- IT licenses (joint – individual licenses can be paid by annum)
- Expenses for joint meetings, Ph.d. receptions/lunch, graduation event etc.
- Summer party (max. DKK 350 excl. VAT per person)
- Christmas party (max. DKK 350 excl. VAT per person)
- Christmas presents (max. DKK 400 excl. VAT per person)
- Company visits in connection with student projects
- Operating costs of department cars
- Teaching equipment (as agreed with the head of the department)

Budget for LAB purchases in the sections for student activities

A framework amount is set aside for the purchase of LAB materials for student activities in the sections.

In total, the following is allocated: INDSÆT LAB sub lab 30.000

Cost pool	Analysis number	Name	Amount
63851-63854	69002	LAB procurement - Physics and Materials	135.000
63854	69002	LAB procurement - Badehusvej	15.000
63860	69002	LAB procurement - Production	50.000

The amount is managed by the head of section in collaboration with the groups and LAB. The head of section may ask the head of department to delegate the responsibility for (some of) the pool to other members of staff (observe the delegation declaration). In a concrete situation, the above entry procedure must be followed. Spent LAB and computer time is not included in this and will not be registered.

“Special” LAB purchases Budget

Cost center	Analysis no.	Analysis text	Budget
63886	69055	Smart Production Lab (Ole Madsen)	30.000
63886	69056	Mechanical Testing Lab (Johnny Jacobsen)	30.000
63886	6905	Robotics Lab (Simon Bøgh)	30.000
63886	69058	Cluster Labs (Vladimir Popok)	30.000
63886	69059	Biophysics Labs (AFM) (Peter Fojan)	30.000
63886	69060	LaserLabs (Esben Skovsen)	30.000
63886	69061	STM Labs (Lars Diekhöner)	30.000
63886	69085	MakerSpace Lab (Casper Schou)	30.000
63886	69086	Materials Labs (Mikael Larsen)	30.000
63886	69087	Laser Welding/cutting Lab (Morten Kristiansen)	30.000

The management has allocated the amount above for each of the 10 LABs in 2022. Please make sure you put the correct cost center and analysis no.

Strategic pool in Budget 2022

Budget 2022 has DKK 600,000 in the budget for “guest professors”. Adjunct Professors are entitled to an annual travel to AAU.

Summary costs

The total costs are DKK 219.5m. Compared to Budget 2021, this is an increase of DKK 5.4m. Staff salaries have increased by DKK 4.0m.

Budget responsibility

In order to support the freedom of action and budget responsibility among the budget control managers, they have the competence to act within the allocated framework. However, following discussion in the management group, the head of department may change the budget framework during the course of the year. New appointments require the approval of the head of department. Pay negotiations are the responsibility of the head of department. The budget control manager is responsible for recommending a salary budget to the management group. Following this, the management group will decide how to allocate the resources.

Budget process in 2022

The 2022 Budget was prepared to adapt to the revenue from the Faculty. The preconditions in the budget will change, of course, and new tasks will be added. Therefore, as a main rule, money will accompany new tasks in the shape of an increase of the budget framework. The Budget will be adjusted continuously in the “floating budget” in 2022.

Budget follow-up 2022

During 2021, we have developed management information, which is used by the budget control managers. This work will continue in 2022. Both the budget control managers and the secretariat are involved in this and responsible for securing the right content in the management information.

Economy follow-up is being provided according to the following principles:

- The secretariat prepares monthly economic reports concerning budget and expenditure in the organizational units. This is made for the AAU Board of Directors.
- The secretariat prepares monthly economic reports concerning project financial management and reassigned time for project managers. These may be requested, when/if needed.
- The secretariat invites the management group and the budget control managers to follow-up meetings concerning the economy after completion of the University's period follow-ups, which are divided into trimesters. The period follow-ups are completed in April, August and December. The secretariat will then invite the above to a follow-up meeting in the following month.

Together with the monthly economic reports, the budget follow-up meetings will ensure up-to-date financial management, enabling the management group to make decisions on an updated basis.