

Department of Materials and Production

Budget 2021 -Targets and principles

Background

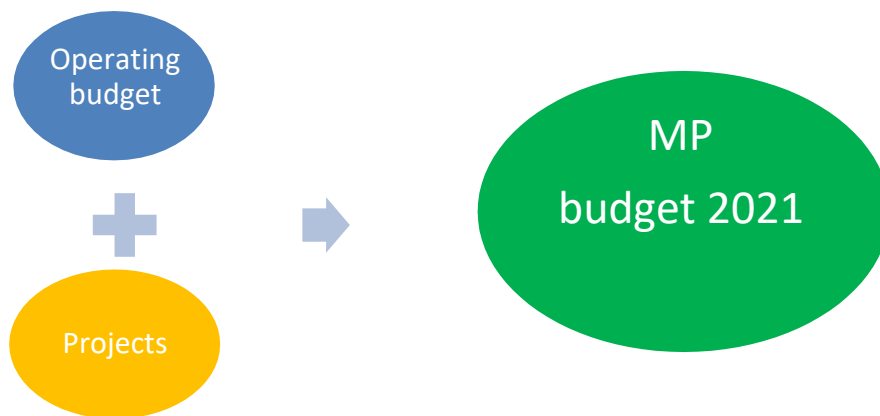
The 2021 Budget was accepted in November 2020. The budget is the 3rd joint budget to be conducted for the three merged parties in Department of Materials and Production (MP).

This document aims to review the economic targets and principles regarding the 2021 Budget.

Budget model

The 2021 Budget is based on the budget model AAU decided in 2019.

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 2021.

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
- Visualization of the connection between budget, revenue and expenditure

Organization and chart of accounts:

Revising the organizational cost centers is an ongoing process.

As of 1st of January 2021 the list of cost centers is as follows:

Organizational placement	Cost center
Joint services	
Department management (joint income and costs)	63801
Secretariat	63811
Study board	63812
Laboratory – Fibigerstræde	63813
Laboratory – Skjernvej	63814
Nanolab.	63815
Joint Lab. operations	63816
Section and research groups	
Physics and Materials	63850
Materials Science and Engineering	63851
Solid and Computational Mechanics	63852
Biomechanics	63853
Physics	63854
Production	63860
Robotics, Vision and Machine Intelligence	63841
Logistics and Supply Chain	63842
Behavioral operations and innovation management	63843
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	Kjeld Pedersen
63811	Jette Marie Christensen
63812	Jens Christian Rauhe
63813-63816	Johnny Jacobsen
63840-43	Astrid Lassen
63850-54	Jens Andreasen
63841-43+63860-63873	Astrid Lassen

Content and principles in sub-budgets 2021:

Each section have 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.

MP Budget 2021

In 1,000 dkr

	2020		2021		Difference	
	Re-budget		Budget			
Revenue	Department	Projects	Department	Projects	Department	Projects
1.1 Faculty income (indtægtsramme)	-137.924		-137.716		-208	
1.2. Other income	-1.972	-711	-1.892	-525	-80	-186
1.3 Projects		-45.815		-48.974		3.159
Total	-139.896	-46.526	-139.608	-49.499	-288	2.973
2.1. Overhead	-12.245		-13.422		1.177	
2.1 Co-financing		-6.185		-5.660		-525
Total	-12.245	-6.185	-13.422	-5.660	1.177	-525
2.3 Co-financing: Equipment (40%)	-2.480		-1.040		-1.440	
MATH administration	-2.529		-2.710		181	
Other Faculty income	-1.228		-866		-362	
Total	-6.237		-4.616		-1.621	
Total revenue	-158.378	-52.711	-157.645	-55.159	-733	2.448
Costs	Department	Projects	Department	Projects	Department	Projects
3.1.2 Operation costs (annuum etc.)	8.088	4.695	7.456	5.661	632	-966
Equipment (over 100,000 dkr.)	754	4.350	900	1.700	-146	2.650
Total	8.842	9.045	8.356	7.361	486	1.684
3.2.1 VIP-salaries	68.143		68.137		6	0
3.2.2 VIP-buy out	-28.213	27.827	- 30.006	30.765	1.793	-2.938
3.2.3 TAP-salaries	21.124	669	1.790	713	-666	-44
3.2.4 TAP-buy out	-3.081	2.987	- 2.737	2.977	-344	10
3.2.5 Salary subsidies	625	18	853		-228	18
3.2.6 Refusioner	-855		- 1.214		359	
Total	57.743	31.501	56.823	34.456	920	-2.955
4.1. Overhead		12.165		13.342		-1.177
4.1.3 Co-financing projects	6.265		5.740		525	
Total	6.265	12.165	5.740	13.342	525	-1.177
Rent (FIB 14+16+Skjernvej+CPH)	21.639		21.569		71	
FAK-contribution (19,0%)	25.560		27.160		-1.600	
FU-contrib (5,6%)	7.614		7.828		-214	
FS-contrib (22,2%)	30.186		31.317		-1.131	
Maintenance/other cost	130		153		-23	
Total	85.129		88.027		-2.898	
Total costs	157.979	52.711	158.946	55.159	-967	-2.448
Result	-400	0	1.300	0	-1.700	0

Revenue

Faculty revenue (indtægtsramme)

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 2021 for MP looks like this:

Faculty revenue 2020 - 2021

	Budget 2020	Budget 2021	Diff.
Budgetposter			
Uddannelsesindtægter:			
Heltidsuddannelse - STÅ indtægter	50.781.059	51.683.131	902.072
5% uddannelsesmidler	3.935.752	3.899.690	-36.062
20% uddannelsesmidler	15.911.358	15.598.761	-312.597
Deltidsuddannelse indtægt i alt (MMT)	4.423.263	3.456.009	-967.254
Udenlandske selvbetalere	1.696.255	1.340.550	-355.705
Uddannelsesindtægter i alt	76.747.687	75.978.141	-769.546
Basisforskningsindtægter:			
5% forskningsmidler	3.024.125	3.157.292	133.167
Grundbevilling	28.509.659	27.952.768	-556.891
Parameterfordeling uddannelse	16.596.598	17.565.008	968.410
Ekstern forskningsvirksomhed	4.595.470	4.384.362	-211.108
BFI-point til institutter	4.419.726	3.991.774	-427.952
Ph.d.-grader til institutter	1.784.083	2.204.669	420.586
VIP kroner - rekvitioner netto	1.747.300	2.482.295	734.995
Fællesaftaler med dekan	500.000		-500.000
Basisforskningsindtægter i alt	61.176.961	61.738.168	561.207
INDTÆGTER I ALT	137.924.648	137.716.309	-208.339
Fælles bidrag:			
FS-bidrag fra institutter	30.185.679	31.317.015	1.131.336
FU-bidrag fra institutter	7.614.406	7.827.806	213.400
FAK-bidrag fra institutter ENG	25.560.104	27.160.473	1.600.369
Fælles bidrag i alt	63.360.189	66.305.294	2.945.105
Forbrugsmulighed i alt	74.564.459	71.411.015	-3.153.444

MP has 3.2m kr. less revenue in 2021 compared to 2020. Costs regarding MP in Copenhagen in 2021 is 2.1m less than it was in 2020, which means MP have 1.1m kr. less income in 2021.

“Uddannelsesindtægter” is the main revenue contribution and is directly related to STÅ (student passing all the exams in the semester). In 2021 one STÅ at MP translates into a revenue of 67.700 kr.

“Basisforskningsindtægter” are calculated on basis of submitted activity conditions in the departments and others are decided by the dean:

Teaching hours autumn 2019 and spring 2020	External turnover 2020 (1.000 KR.)	Publication points (BFI) 2019	Number of Ph.d theses approved in 2019	Number of higher doctoral degrees in 2019
61.248	48.974	185	11	0

Compared to the year before:

Teaching hours autumn 2018 and spring 2019	External turnover 2019 (1.000 KR.)	Publication points (BFI) 2018	Number of Ph.d theses approved in 2018	Number of higher doctoral degrees in 2018
74.414	46.690	191	11	0

"AAU ledelsesmidler" (2x5% (education 5% and research 5%) and 20%) are negotiated with the Dean and especially 2x 5% ledelsesmidler is allocated for strategic issues. In regards to this the main focus for MP in 2021 is:

- Establish joint research programmes across research groups.

Our programme covers:

- Exoskeleton research
- Circular economy in connection with plastics
- Hospital/clinical research and education.

For further information: https://www.intranet.mp.aau.dk/digitalAssets/991/991439_mp_5pct_2021.pdf

Project revenue

In the 2021 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 2021 budget was accepted, these projects are also called bufferprojects.

As of January 2021 the following bufferprojects have been granted (DKK 1,000):

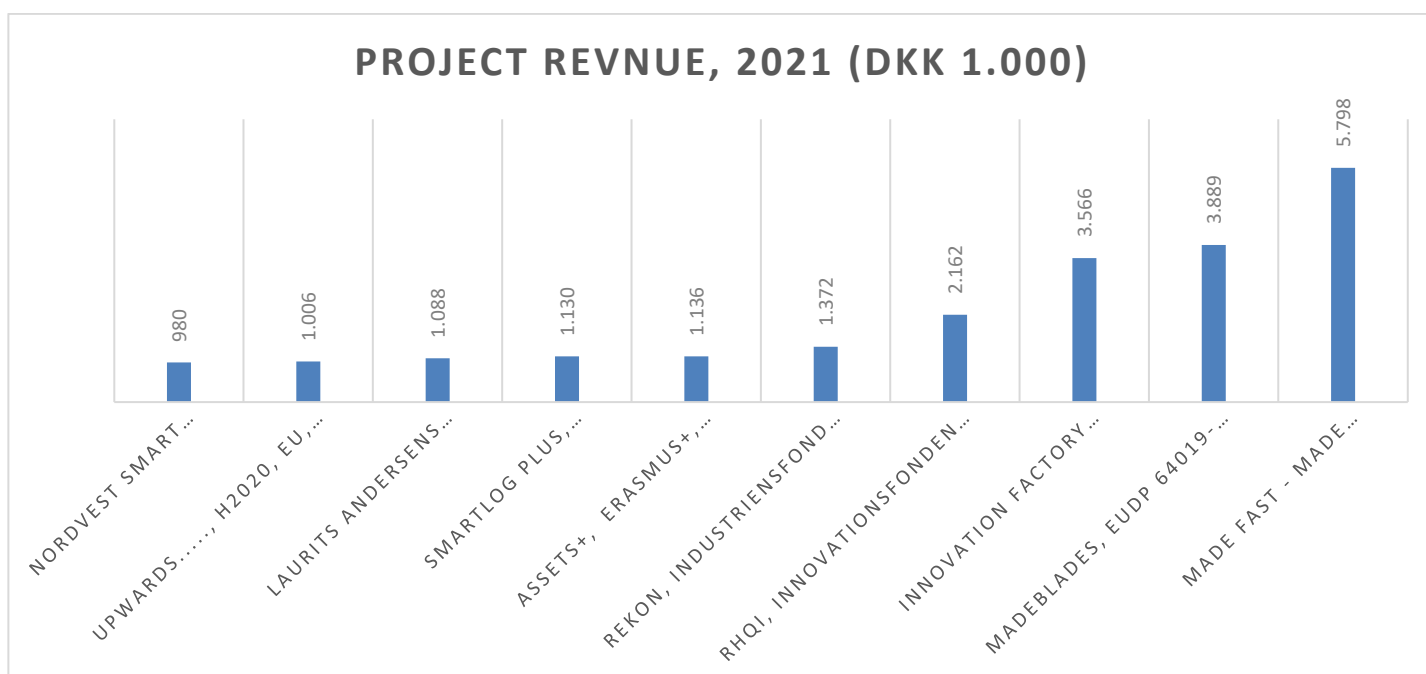
Buffernr.	Project name	Project manager	Revenue 2021
999702	Poul Due Fonden	Morten Kristiansen	1.333
999703	Lego 2	Casper Schou	188
999704	Cassia Pole - privatist PhD	Harry Boer	74
999705	Den Maritime Fond	Jesper DeClaville	300
999707	Textile/Satin	Iskra Dukovska-Popovska	114
999711	HamStrength	Anderson	-
999714	SDC ph.d.	Cheng Yang	395
999718	MP - Value2Sea	Kenn Steger-Jensen	1.065
999722	Affordable and Innovative Manufacturing...	Esben Lindgaard	2.556
999727	MADE FAST tillægsprojekt	Charles Møller	296
999902	EXSKALLERATE	Shaoping Bai	685
999904	Fyrtårn kvantematerialer	Lars Diekhöner	1.116
		TOTAL	8.120

As of January 2021 the following bufferprojects are yet in the assessment process (DKK 1,000):

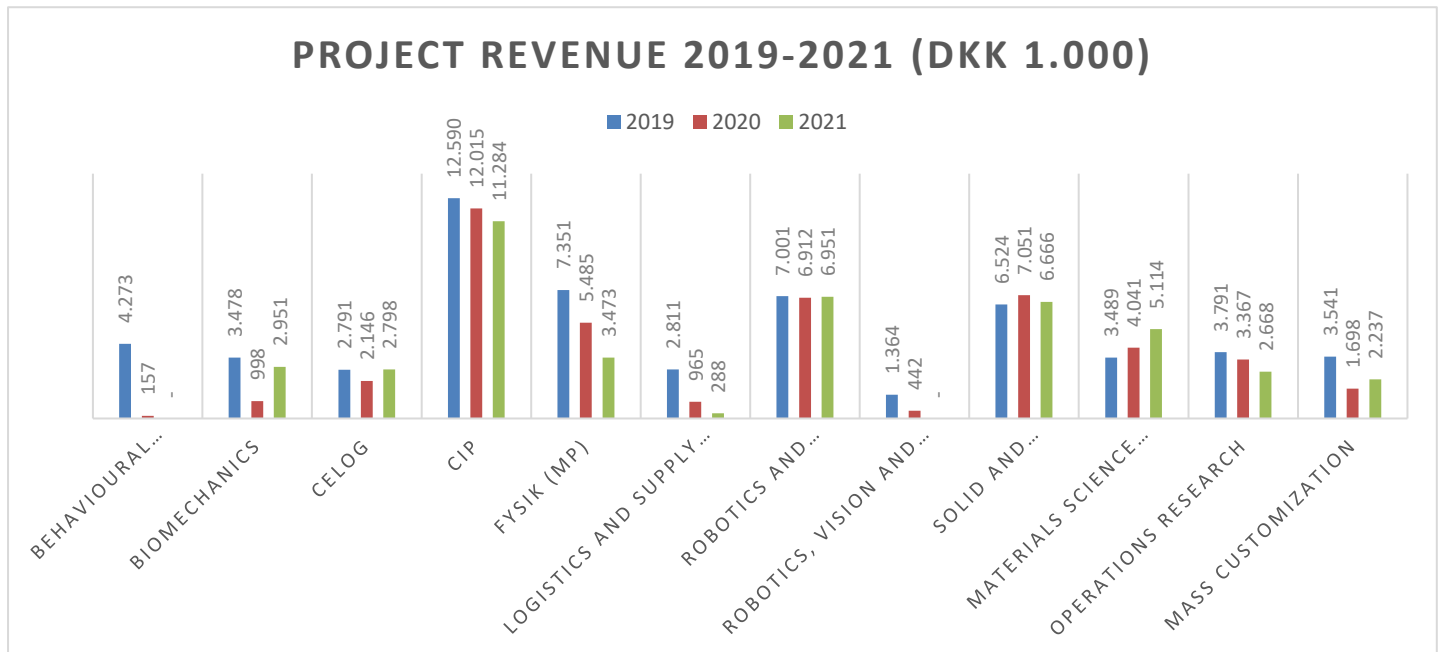
Buffernr.	Project name	Project manager	Revenue 2021
999709	CIP projekt	Unknown	602
999710	PRO-UP	Peter Fojan (Vladimir)	901
999712	SPARK	Michael Skipper	511
999715	Multiaksiel testapparatur...	Esben Lindgaard	500
999719	ESMOM/MARIOTT II	Peter Nielsen	1.790
999720	Coupled aerodynamic and high-fidelity...	Erik Lund	195
999721	Flip (forlængelse af INTERLASE)	Morten Kristiansen	689
999913	IV projekter	Johnny Jacobsen	525
		TOTAL	5.713

The grant-financed revenue of present projects in Budget 2021 is DKK 49.0m.

Below the 10 largest projects measured in revenue in 2021 is listed:



The figure below shows the grant-financed activity allocated across research groups in 2019 - 2021:



Summary - revenue

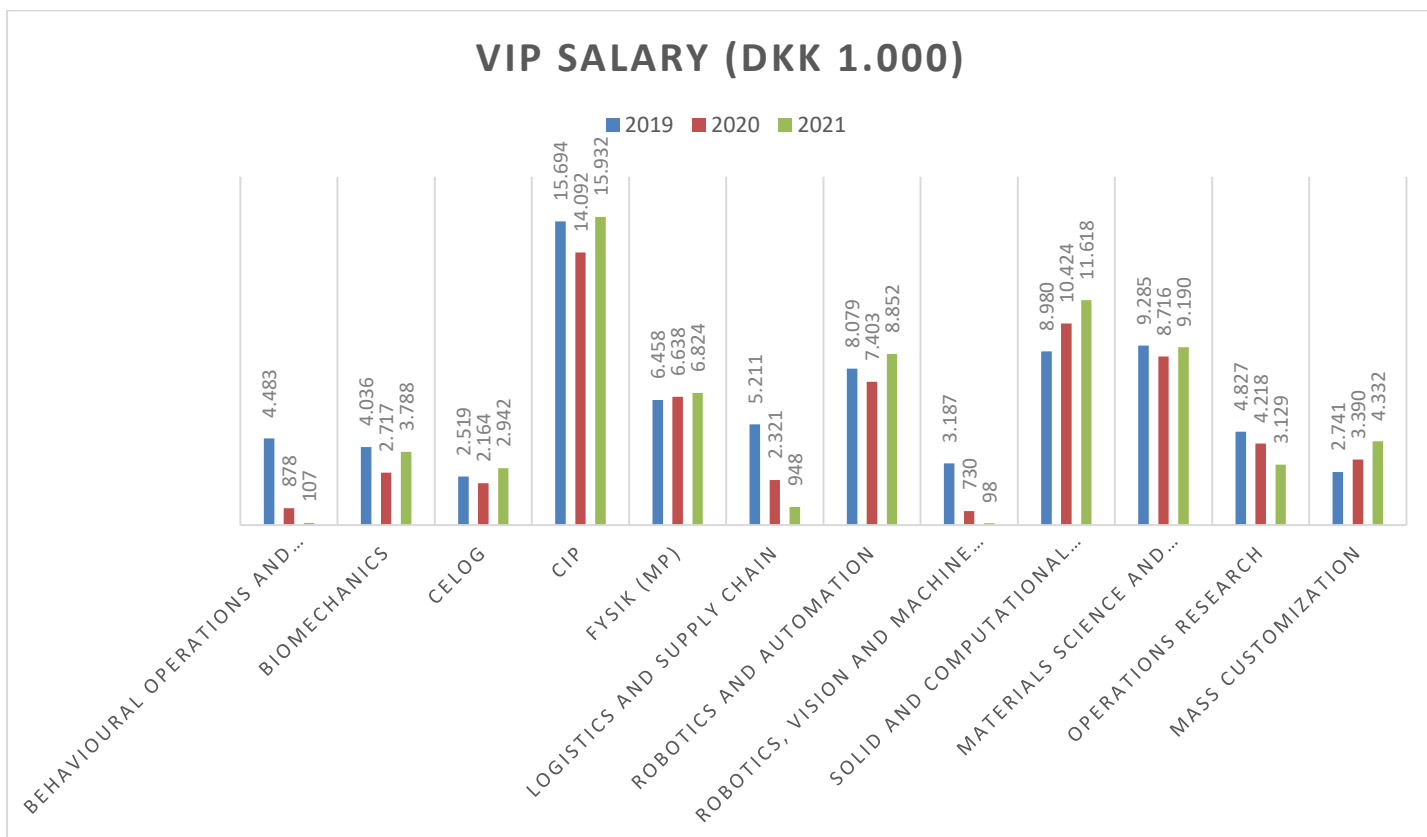
The total revenue in the 2021 Budget is DKK 212.8m, of which the total project revenue in 2021 will be DKK 55.2m. Compared to Budget 2020, this is a decrease in revenue of DKK 1.2m. It is very positive that the decrease isn't higher, since the loss of revenue due to the closing of MP in Copenhagen is DKK 2.4m. Overhead has increased DKK 1.2m and MP has an average OH percentage of 25% in projects. It's positive that co-financing decreases 0.5m. It's still high and reduces the net OH to 12%. The 2% reduction of rates in the National Budget is out in 2021, but it's still evident MP needs to maintain the activity level, grant-financed activities must increase in the coming years.

Costs

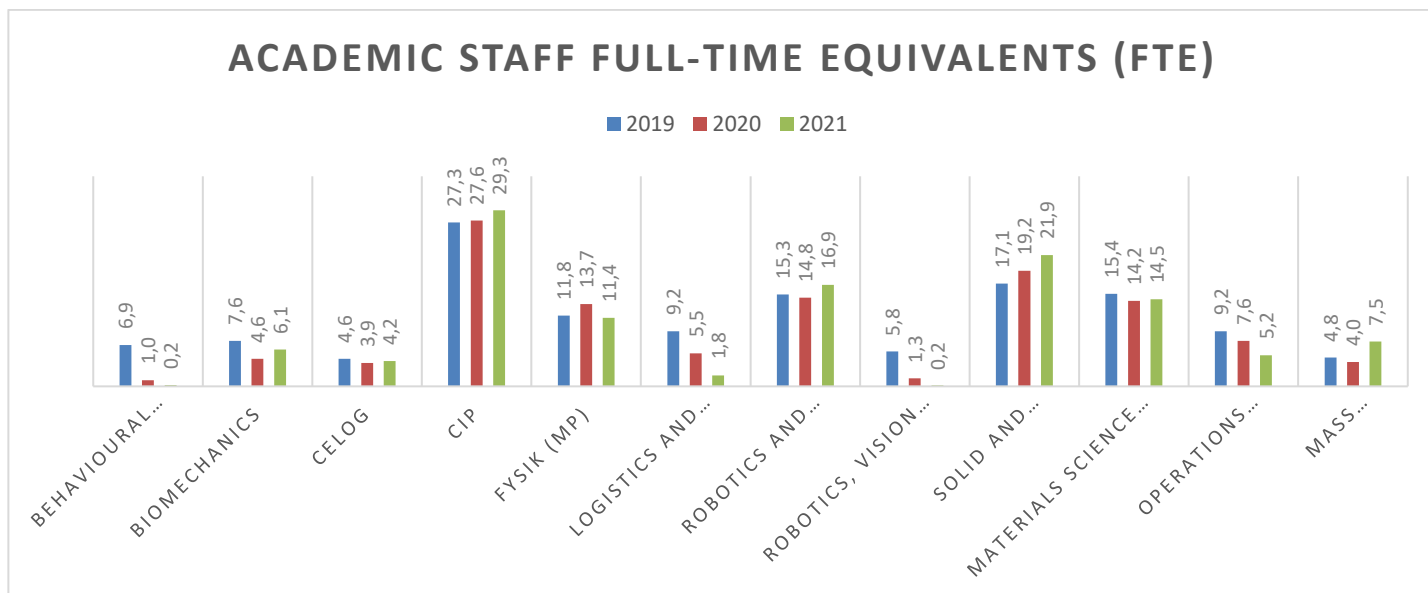
Salary

Academic staff

62% (58% in 2020) of the total expenses (AAU contribution deducted) of the Department are staff costs. The total salary costs of Department staff amount to DKK 90.8m (88.4 in 2020) (exclusive buy-out). The academic staff account for DKK 68.1m, TAP staff accounts for DKK 22.6m. A small number of staff in the research groups are "technically" employed as administrative staff, meaning that the amount does not only cover staff in LAB or the secretariat. Academic staff salaries are allocated across research groups as follows:



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



Academic staff salaries are DKK 68.1m, which is the same in 2020. Cph. Section is 0.9m and the same from last year. The number of FTE is increased by 8 in Budget 2021. 120 full time academic staff were employed in 2020, while the number in 2021 is 128. DKK 1.9m is available in the budget for part-time academic staff. Part-time lecturers will be employed in the research groups. 29 vacancies for academic staff appear in the budget. 24 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 2.3m (1.8m in 2020) in Budget 2021. Total TAP salaries amount to DKK 22.6m in 2021, as compared to DKK 21.1m in 2020. The number of TAP FTE in 2020 was 42; this has increased to 43 in 2021:

Cost center	FTE
Secretariat	27,00
LAB	14,19
Celog	1,21
Robotics	0,75

DKK 0.4m 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/>

Annuum is based on the number of the expected FTE (årsværk) in 2021. A budget is set aside for operating costs in the sections (analysis number 70260) corresponding to DKK 7,500 per full-time staff and DKK 7,500 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 2021 there is no annuum for emeritus/emerita. In 2021 the following amount has been allocated:

Research group	Total FTE/Årsværk	Total to research group	Total to section	Cost center	Total
Logistics and Supply Chain	2	14.000	14.000	63842	28.000
Materials Science and Engineering	14	109.000	109.000	63851	218.000
Solid and Computational Mechanics	22	164.000	164.000	63852	328.000
Biomechanics	6	46.000	46.000	63853	92.000
FYSIK (MP)	11	85.000	85.000	63854	170.000
Operations Research	5	39.000	39.000	63861	78.000
Robotics and automation	17	127.000	127.000	63862	254.000
Mass Customization	7	56.000	56.000	63863	112.000
Celog	4	32.000	32.000	63871	64.000
CIP	29	220.000	220.000	63872	440.000
Total	119	892.000	892.000		1.784.000

Total for sections:

Annuum pr. Section	Total	Cost center
Materials	kr. 404.000	63850
Production	kr. 488.000	63860
Total	kr. 892.000	

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 2021. 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 2021.

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 are paid by annum)
- Expenses for joint meetings, PhD 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:

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.

Strategic pool in Budget 2021

Unfortunately the total Budget 2021 has left no money for a strategic pool to finance new strategic initiatives. In Budget 2020, the pool was DKK 0.6m.

Summary costs

The total costs are DKK 214.1m. Compared to Budget 2020, this is an increase of DKK 3.4m. Staff salaries have increased by DKK 2.0m. Contribution to AAU has increased by DKK 2.9m.

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 2021:

The 2021 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 2021.

Budget follow-up 2021

During 2020, we have developed management information, which is used by the budget control managers. This work will continue in 2021. 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.

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.