UNIVERSITY OF TWENTE.
FACULTY OF ENGINEERING TECHNOLOGY

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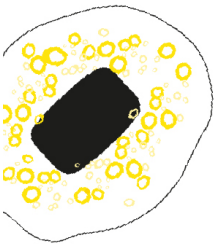
Understanding and optimising ET finances

University finances are currently not great, and significant cuts in government funding are in the pipeline. Our research and education staff have asked for a minimum financial background to empower them to contribute to better financial results. The reality is that the university finances are complex, and our research and education staff probably have limited time (and interest) to dive into the details. This document therefore provides a minimum of university finance background to become more financially "savvy", focusing on improving the financial results of our research projects where significant financial gain can be obtained. Our financial position can be improved (1) by making smart financial choices for the funding instruments we use, focusing more on funding instruments which allow for significant contribution margin (2) by optimising the budgets, in particular by including contributions from permanent staff, and (3) by budgeting well and sticking to our budgets. The document further shows how, with a back-of-the-envelope calculation, the financial performance of a project can be roughly estimated. University finances are volatile, and our financial results vary rapidly yearly. The guidelines in this document are, however, general and relevant to our university's financial health in both financially good and bad times.

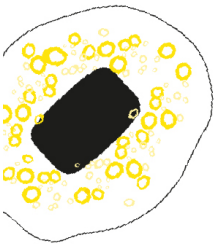


1. Introduction

The faculty of Engineering Technology (ET) faces financial challenges. For 2024 a negative result of 1.4 M€ [1] was realised. This is in line with the results of the University of Twente as a whole, which will also report additional million-dollar losses. At the same time, our government intends to cut the national university funding by hundreds of millions, of which part (tens of millions annually [2]) will have to be carried by the University of Twente. Financially, things are not looking great. Our university board's 2025 New Year's message is clear enough: we expect to become a university with fewer students and fewer personnel [3]. This message makes sense. Due to de-internationalisation (shrinking supply of international students) and demographic developments (shrinking supply of national students), our student numbers, and thereby our education incomes, are expected to go down. The largest portion of our cost is personnel-related. We simply have more personnel than we can afford.

Transitions to fewer personnel are not painless. The Faculty of Science and Technology is already reorganising, a situation that ET wants to avoid. Based on the following observations, we should be able to avoid such harsh measures by improving our finances otherwise:

1. **Losses are relatively small as compared to revenue**. For the UT, in 2023 a negative result of 10.8 M€ was written for the university against a revenue of 481.5 M€ (i.e. an annual result of -2.2%) [4]. Unfortunately, a lot of our costs are 'locked' in housing, depreciation and salaries, which are hard to bring down. Still, a cut of 2.2% is relatively minor. For example, the UT loss in 2023 was approximately equal to its travel and accommodation expenses (10.0 M€). Putting stricter controls on, *e.g.* international travel (which in fact has been imposed in 2024) could already yield significant savings. In general, stricter controls on *'spending money wisely'* could yield significant savings.
2. **Lack of financial hygiene in project execution.** The UT has put high hopes on increasing the contribution margin of our research projects. The contribution margin is roughly the difference between received research funds and project cost going out – where overhead and contributions from permanent personnel are disregarded in the cost: it constitutes the project's cash contribution to overhead and salaries of permanent personnel (this document will elaborate on the contribution margin in chapter 4, and see also Ref. [5]). Before applying for a research grant, the finance department needs to approve the budget, and a certain minimum contribution margin is required. Reality is that after projects are started, the contribution margins are used for non-budgeted items, which until now have often been tolerated. For improved finances, it is essential to stick to our set project budgets.
3. **A misfiring 'roll up our sleeves' attitude**. This heading of the U-today article reporting on the 2025 New Year's message [3] illustrates the mindset in which financial problems are often approached: *Working harder to get out of trouble*. Indeed, the UT financial budgets for the coming years project an increase in 2nd and 3rd money stream incomes, which easily translates to 'working harder'. However, our workload is already considered too high. Worse, working harder



doesn't necessarily pay out. For education, our income is related to our student numbers, which are projected to go down. For research, our government funding through the *'Rijksbijdrage onderzoek'* (115.3 M€ in 2023) is only weakly related to research output through premiums for PhD and EngD degrees awarded (several M€ in 2023 for the UT in total). Most of our research is performed by temporary researchers, funded through 2nd and 3rd money streams. These funding streams usually pay for the salary of our temporary researchers, materials, travel costs, etc. However, the connected overheads (guiding hours, lab space, machines, support services) are rarely covered in full, if at all. Thus, our research comes at a cost. With finite government funding, there is a consequential limit to the number of (loss-making) research projects we can afford.

In view of the above observations, we can financially improve by spending our money and time more wisely. This document will focus on improving the financial performance of our research activities, because relatively minor changes in our research acquisition strategies and project execution could have a significant positive effect *and* are largely within our control. Practical guidelines will be given on how individual staff can contribute. The key will be to realise larger contribution margins on our research projects. This would immediately reduce the need to establish savings by shrinking personnel numbers.
Besides improving the financial results of our research, the UT strives to improve the efficiency of our educational activities. However, this does not straightforwardly lead to improved finances if we leave our personnel numbers intact. Freed-up staff capacity could potentially improve finances by setting up extra *paid* education activities (e.g. life-long learning) and by acquiring contribution margin through attracting research funding. Educational activities are beyond the scope of this document.

The document first gives a basic background of university finances ("The UT budget"): where does our money come from and go, and how can we influence these numbers to our advantage? Based on this background, guidelines will be given ("Financial challenge and guidelines"). Chapter 4 elaborates on the contribution margin. While the precise financial calculations are best left to our financial department, the chapter shows how a contribution margin can roughly be estimated, without going too much into financial details. Annex A puts financial numbers in historic perspective, analysing the financial UT results over the past 10 years.

2. The UT budget

Costs

Fig. 1 shows the university budget of 2023 [4]. A deficit of 10.8 M€ was obtained (‘***Verschil 10,8 M€ uit reserve’***), which is 2.2% of the total annual university revenue of 481.5 M€. The costs are shown in dark red. Personnel costs are by far the largest item. With rising personnel numbers and salaries, these costs almost doubled over the last decade (see Annex A, - *e.g.* Fig. A1b).

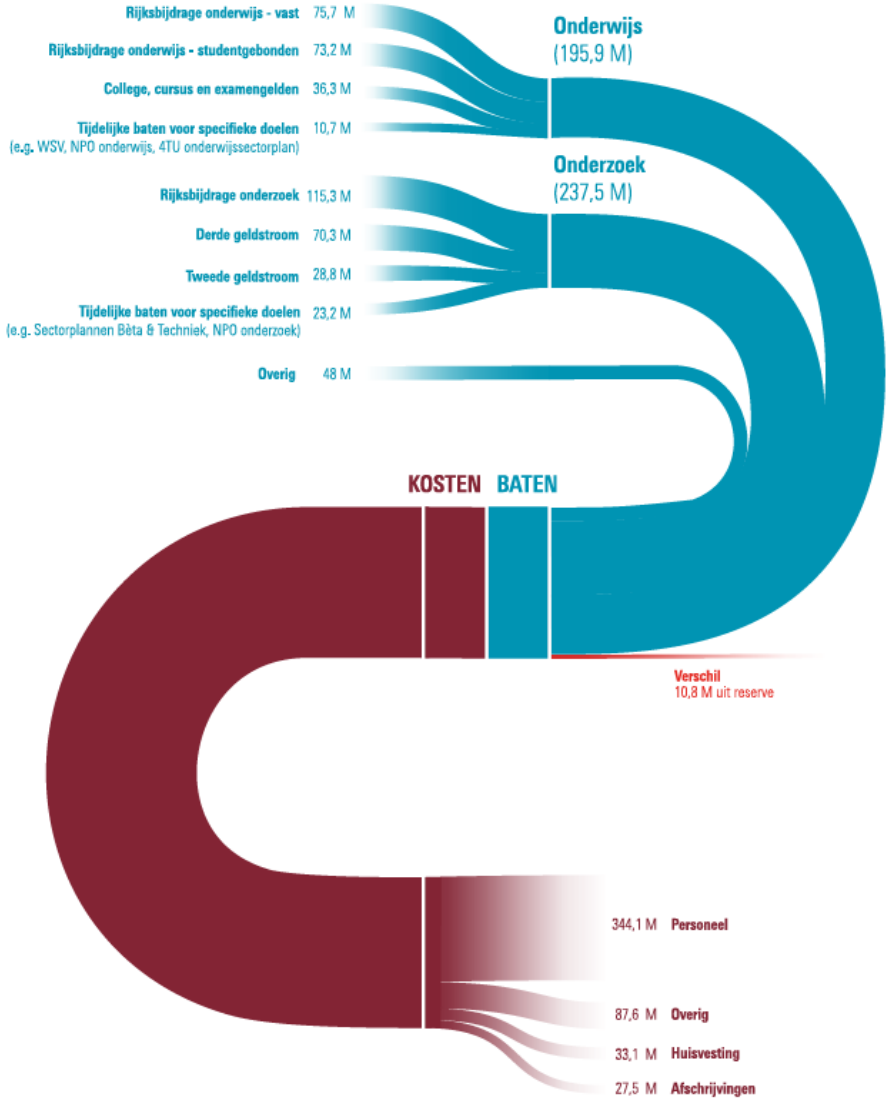


Fig. 1: University budget of the university of Twente, taken from the annual plan 2023 [4]

Income Education

The *‘Rijksbijdrage onderwijs’* (government contribution to education) consists of a fixed part, and a variable, student-related part which is based on the number of EEA students in 1st Bachelor’s or Master’s *within the nominal study duration* and the number of bachelor's/master's degrees awarded (to EEA students). For the UT, the fixed and variable parts are approximately equal. More students would translate to a larger

variable part through a larger government contribution. Other education incomes are tuition fees (also related to the number of students) and temporary incomes through national programs (‘K*waliteitsafspraken’, ‘Wet StudieVoorschot – WSV’, ‘Nationaal Programma Onderwijs - NPO’, ‘4TU Sectorplan Onderwijs’*).

Income Research

The ‘*Rijksbijdrage onderzoek’* (government contribution to research) is fixed, in the sense that a fixed national sum, which grows with inflation, is established annually by the government. This fixed sum is distributed over the different universities. Part of the distribution is output-related (through the number of bachelors, masters, EngD and PhD degrees awarded). However, as opposed to the student-related *education* part, the national sum for research is a given, which means that if all the universities increase their output, the income per output goes down.

Additional income is generated through the so-called 2nd and 3rd money streams, where funding is obtained from the national funding agencies NWO and ZonMW (2nd money stream) and from industry, European projects and other national agencies, growth funds, *etc* (3rd money stream), see Fig. 4b. These funds are usually related to our research projects. Our research is overwhelmingly funded from 2nd and 3rd money streams. They indicate the extent of our research portfolio. The ‘*Rijksbijdrage onderzoek’* we receive is marginally connected to the extent of our 2nd and 3rd money streams (through the number of PhD and EngD degrees awarded in the related projects).

Recent development of UT incomes

Fig 2. shows developments of university incomes in education and research from 2021 to 2023. It shows (see also Fig. 1):

1. **Education**: Temporary incomes and student-related incomes have been reasonably stable. Fixed ‘*Rijksbijdrage’* and tuition fees have increased.
2. **Research**: Stable fixed *‘Rijksbijdrage’* and 2nd money stream income. Increasing 3rd money stream and temporary incomes

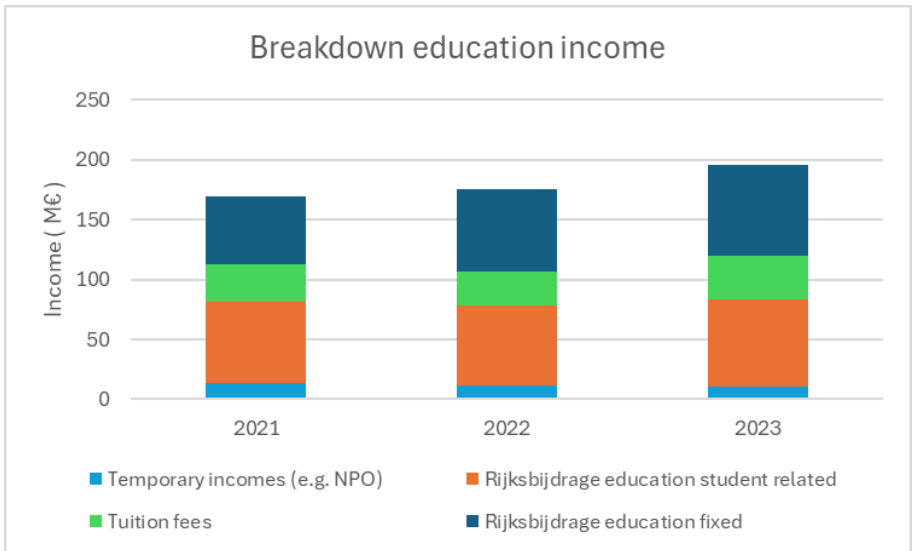


Fig. 2a

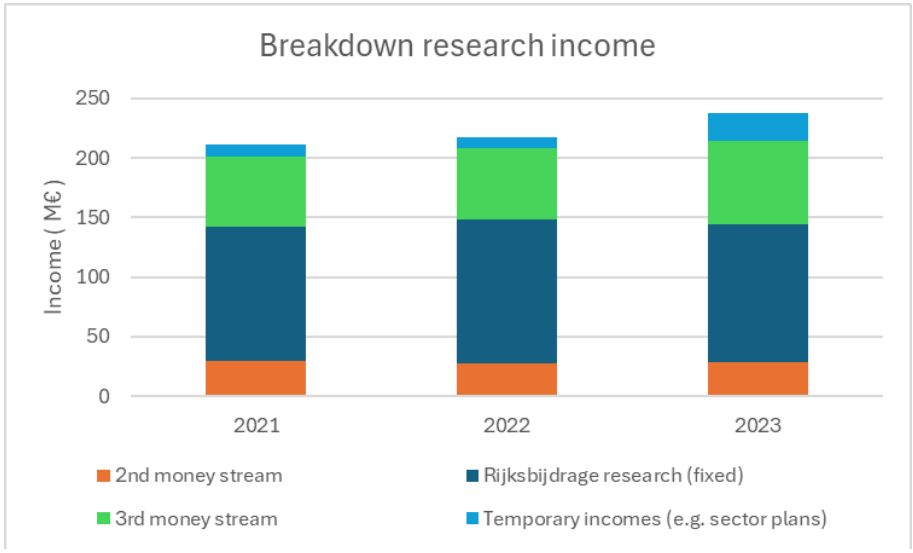


Fig. 2b

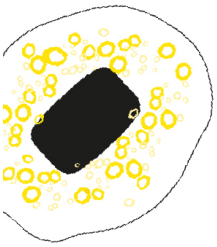
*Fig. 2: **a** Breakdown of education income of the UT **b** breakdown of the research income of the UT. Source annual reports UT.*

3. Financial challenge and guidelines

The University of Twente faces financial challenges. Fig.3 shows the financial results from 2013 to 2023. For years, the financial results have been positive, but after 2019, there is a steep decline. Currently, the university reports negative numbers, losing millions of Euros every year. The Dutch government intends to cut the national university funding by another hundreds of M€. For the UT, this would translate to a funding cut of several tens of millions [2].

Fig. 3: Financial result of the UT, taken from the annual reports

To improve our financial situation without large-scale restructuring, we need to cut costs and increase our income with our current workforce. Since most of our costs are salary-related, cutting costs can only be done to a limited extent without losing personnel. In view of the high workload, increasing income by doing more is not desirable. We need to increase our income with the same (or less) effort. What we can do to improve can roughly be put into the categories of financial hygiene in project execution, strategic



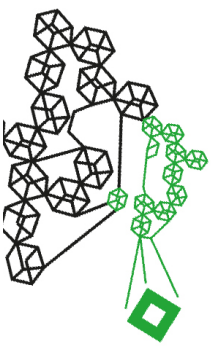
acquisition of research funding, and not underselling. Improving project finances boils down to increasing contribution margin. Chapter 4 shows how this margin can be estimated. A further elaboration can be found in Ref. [5].

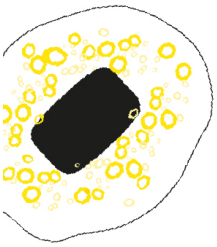
Financial Hygiene

Stick to budget	Write hours	Contribution margin is not profit	Start quickly
Project budgets are made and accorded before a project starts. Budget well, so that overspent on materials or travel will not occur. Changes during the project should be, as much as possible, budget neutral. Using subsidy for non- budgeted items should be avoided [6].	Non-written hours are not funded. Note that not taking (or not writing) holidays also comes with a cost. Reimbursement cost at the end of an appointment, could accumulate to up to 5% of the salary, to be carried by the chair.	Don't spend contribution margin on non-budgeted items. It is required for the financial health of our faculty.	Budgets are frozen when the project is granted. Hiring temporary personnel years after granting cause a loss through inflation between the awarding and starting date. Worse, project funding may run out before the project is finished.

Apply Strategically

Do better: not more	Selective on funding instruments	Limit in-kind contributions	Funding for permanent staff	Future focus
Work pressure is already too high and burn-outs certainly don't help. Only apply for grants within your competence and interest area and with future perspective.	Select funding instruments that allow for significant contribution margin. There can be strategic reasons to apply for grants that do not allow for this, but these reasons are never financial. The fraction of our projects with significant contribution margin must increase	In-kind UT contributions may be necessary to get a project financially going. In-kind researcher hours are not for free. In-kind contributors have overhead too and cannot be used for other tasks at the same time.	All project funding for permanent staff translates one-to-one in contribution margin. Including permanent staff hours in project budgets is an effective way to improve finances	Focus on research themes with future potential. This will facilitate funding acquisition in the future.





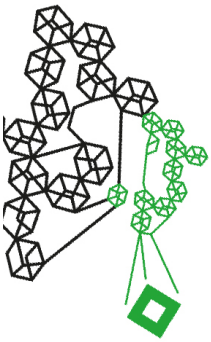
Get paid for effort	
Knowledge is expensive	**External consultancy and education**
We have the tendency to cut university margins, because it makes it easier to get a project started. Underselling research complicates future fund raising, is a recipe for not being taken seriously by co-funders and may be against European competition laws.	Try to be paid for external consultancy and education efforts. Rates are available at the finance department (usually IKS tariffs hold, see Annex A).

4. Estimating contribution margin

Before applying for research funding, the finance department makes a projection of the costs and benefits of a project, setting up a VOCA ('*voorcalculatie*'). A project application is only accorded if minimum contribution margin follows from the project budget (VOCA), indicated in table 1.

Table 1: Minimum contribution margins for different funding mechanisms as of January 2025.

Funding instrument	Contribution margin required
2nd money stream (NWO, ZonMW)	0%
EU Marie Curie	0%
EU projects	25%
Other 3rd money steam (e.g. PPS, growth fund)	20 %



If the projected contribution margin does not meet the minimum, the project needs to be accorded by the department board (the complete procedure is elaborated at the ET research support website [7]).

Calculating the contribution margin can be confusing: different tariffs are used for different funding instruments. Sometimes, one needs to know the precise salary of project members. Indexation needs to be applied. VAT sometimes needs to be in- or excluded etc. Therefore, the finance team must prepare the VOCA. However, when considering applying for funding, a basic estimation of cost and benefit is useful in foreseeing whether the requirements in Table 1 will be reached or if a realistic cost estimation can be given to a potential co-funder.

Estimating contribution margin.

We need to subtract costs from benefits. We need the following numbers:

A. The ***salary-related cost for temporary personnel*** to be hired to do the project (typically PhD, EngD, Postdoctoral researcher). Salary-related costs for temporary personnel include salary, pension, and insurance but excludes overhead (desk, computer, machines, lab space, finance & HR department efforts, *etc.*). To estimate the contribution margin, we only need the salary-related cost. There are no hard numbers. Project funding is fixed at the start of the project, and salaries

change (increase) during the project. For post-doctoral researchers, salaries vary depending on their experience. Salary-related costs for the university can be estimated from the NWO tariffs, which are publicly available [8]. Fig. 4 shows an example of the salary tables (*Universiteit van Nederland* tariffs should be used). NWO tariffs include an estimated indexation for future salary increase (4.63 %). From Fig. 4, it can be read that the salary-related cost for a PhD from 1 July 2024 is € 304639 over four years. Which is approximately equal to the tariff of three years post-doc (€ 295562). The UT works (for national projects) with 1600 working hours in a year: the numbers translate to hourly tariffs of € 47.60 and € 61.60, respectively. Alternatively, we can open a recent NWO budget form of, for example, the NWO-OTP call, see [9] and Fig. 5. Filling out the positions and months yields the NWO rates. Currently, the NWO rates are slightly higher than the salary-related cost estimated by the UT, leading to a positive contribution margin for temporary personnel in NWO projects. Notably, for EngDs (indicated as "PDEng" in the budget sheets) the contribution margin is currently more than 30 k€.

B. ***Material, travel, and other cost***. These costs should not be underestimated, because we can only declare such costs up to the budgeted amount. Different funding mechanisms have different rules and allowable ranges for such costs.
C. Funding for ***Material, travel, and other cost*****.** Usually, these budget items are usually reimbursed on a declaration basis, so they will never be more than the corresponding costs under B. If more is spent than can be reimbursed, this will count negatively against the contribution margin. Some funding instruments award *bench fees* for temporary personnel, intended to encourage the scientific career of the NWO-funded project staff member (e.g. to be spent on courses). Usually, these bench fees are spent and therefore are not recognised by our finance department as contributing to the contribution margin.
D. Income for ***salaries of temporary personnel***. The rates vary enormously between different funding instruments. For NWO projects, the rates are given under A. For Horizon Europe projects, the rates equal the actual salary-related cost of the university + 25% (which can be roughly estimated by multiplying NWO tariffs by 1.25). In some national projects, IKS tariffs can be used, which include all overhead. UT staff can consult these rates on the service portal [10]. Currently, an IKS hourly rate of € 94 has been established for a PhD. Note the large difference with the NWO rate (under A). Our hourly overhead is close to € 50, which is more than the salary-related PhD cost of approximately € 47.60 per hour. Only very rarely we manage to charge full IKS tariffs. The precise overhead at the UT (that is: IKS rate minus salary-related cost) varies from year to year. At the UT we use the same hourly overhead for every function: *i.e.* professors have the same overhead as PhD students.
E. Income from ***tariffs charged for permanent staff***. In many funding instruments, it is possible to write hours of permanent staff (for example, this holds for Horizon Europe programs). Again, the rates to be used are different for different funding instruments. NWO, if writing hours of permanent staff is allowed, quotes the tariffs to be used in the budget sheets of their call for proposals, see figure 5. Horizon Europe projects use the salary-related costs + 25%, typically 60 to 70% of the IKS tariff. The rate for guidance hours by our permanent staff thus depends on the salary of the specific UT staff member involved.
F. ***In-kind contributions*** do not play a role in the calculation of the contribution margin.

Finally, the contribution margin is calculated by subtracting cost form income. Turnover minus salary of appointed project staff (A) minus material, travel and other cost (B):

Contribution margin = (C+D+E-A-B)

Obviously, it makes financial sense to include hours of permanent personnel on projects. They count for 100% to the contribution margin (note that table 1 shows the margin in percentages of the total cash-in of the project).

LUMPSUM Bedragen voor projecten vanaf **1-jul-2024** **(Uitgaande van salarisbedragen CAO-N**
IN EURO **en per 1 juli 2024 verhoogd met 4,5% o.**

vakantietoeslag	8,00%
eindejaarsuitkering	8,30%
Vergoedingsopslag	27,80%
opslag	9,20% *(incl. 2,0% transitievergoeding)*
indexering	4,63%

PROMOVENDI	1-jul-2024	incl. opslag	incl. indexering	einduitkering	cumulatief bedrag/jaar	betaalschema voorschot	betaalschema einduitkering	afrekening indien aanta 1	afrekening indien aanta 2
1e jaar	2.894	55.332	55.332	4.611	59.943	55.332	4.611	4.611	9.222
2e jaar	3.372	64.472	67.457	11.243	134.032	67.457	11.243	66.117	72.291
3e jaar	3.529	67.473	73.866	18.467	215.122	73.866	18.467	140.790	147.547
4e jaar	3.698	70.705	80.988	26.996	304.639	80.988	26.996	222.582	230.042
5e jaar	3.698	70.705	84.737	35.307	397.687	84.737	35.307	312.393	320.147
6e jaar	3.698	70.705	88.661	44.330	495.371	88.661	44.330	405.827	413.968
7e jaar	3.698	70.705	92.766	54.113	597.920	92.766	54.113	503.917	512.463
8e jaar	3.698	70.705	97.061	64.707	705.575	97.061	64.707	606.891	615.863

11.0 Sen.wet.medewerker	1-jul-2024	incl. opslag	incl. indexering	einduitkering	cumulatief bedrag/jaar	betaalschema voorschot	betaalschema einduitkering	afrekening indien aanta 1	afrekening indien aanta 2
1e jaar	4.527	86.555	86.555	7.213	93.768	86.555	7.213	7.213	14.426
2e jaar	4.527	86.555	90.562	15.094	192.211	90.562	15.094	101.972	110.175
3e jaar	4.527	86.555	94.756	23.689	295.562	94.756	23.689	200.824	209.436
4e jaar	4.527	86.555	99.143	33.048	404.064	99.143	33.048	304.604	313.646
5e jaar	4.527	86.555	103.733	43.222	517.971	103.733	43.222	413.556	423.049
6e jaar	4.527	86.555	108.536	54.268	637.553	108.536	54.268	527.936	537.901
7e jaar	4.527	86.555	113.561	66.244	763.090	113.561	66.244	648.014	658.476

Fig. 4: Cut-out of NWO salary tables from 1 July 2024.

Personnel costs				
Personnel academic institutes				
Category	FTE	Months	Costs	Amount
UNL - Postdoc	1,00	24		€ 192.211
UNL - PhD	1,00	48		€ 304.639
UNL - Non-scientific personnel (WO)	1,00	12		€ 100.438
UNL - Non-scientific personnel (HBO)	1,00	12		€ 83.929
UNL - Non-scientific personnel (MBO)	1,00	12		€ 69.845
UNL - PDEng	1,00	24		€ 134.032

Fig. 5: Tariffs from NWO-OTP budget sheet 2025

Example I: Contribution margin through OTP

An OTP project has one PhD (48 months), one EngD (24 months) and a technician (12 months), level HBO. Travel and material costs are 50k€ within the allowable range for the OTP program. Fig. 6 gives the NWO personnel rates from the OTP budget sheet.

The income: Material (€ 50000) + 2x bench fee (€ 10000) + personnel (€ 522600) = € 582600. Cost: expenses on temporary personnel (€ 304639 + € 134032) + 2x bench fee (€ 10000) + material (€ 50000) = € 448671. The estimated contribution margin is decent: € 83929. In percentages, we divide this number by the cash-in of the project, which yields 14%. In this case, this is an underestimation: the number calculated by our finance department will be higher, because the UT estimates for the salary-related cost of EngD and PhD positions are (currently) somewhat lower than the NWO renumeration. Note that the contribution margin of such a single small project is already considerable. This is mainly due to the technician included in the project.

Personnel costs					
Personnel academic institutes					
Category		**FTE**	**Months**	**Costs**	**Amount**
UNL - PhD		1,00	48		€ 304.639
UNL - PDEng		1,00	24		€ 134.032
UNL - Non-scientific personnel (HBO)		1,00	12		€ 83.929
					€ 522.600
Benchfee (for PhD, Postdoc and PDEng)					
Category	**FTE**	**Months**	**# Benchfee**	**€/benchfee**	**Amount**
UNL - PhD	1,00	48	1	€ 5.000	€ 5.000
UNL - PDEng	1,00	24	1	€ 5.000	€ 5.000
				€ 5.000	
				€ 5.000	
				€ 5.000	
				€ 5.000	

Fig. 6: budget sheet of a fictional OTP project (example I).

Example II: Three year's IKS tariff

We contribute to a three-year project which has a duration of 3 years. We intend to hire a PhD and will use a technician (scale 7) with a permanent position, who will spend one year on the project. We assume that in this particular call we are allowed to charge IKS tariffs.

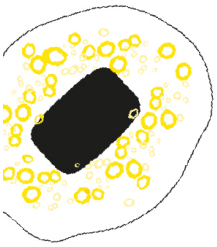
IKS tariffs for the technician and PhD are € 91 and € 94, respectively [10]. Three years of PhD plus 1 year of technician yields an income of 3 x 1600 x € 94 + 1 x 1600 x € 91 = € 596800. The cost for the PhD will be for four years (we cannot hire a PhD for three years). Estimating from NWO tariffs: € 304639. Contribution margin: € 292161: 49%. Note that IKS conditions are very beneficial financially, but cannot be charged often. However, calls set out by growth funds sometimes use them as well as certain RVO programs.

5. Discussion

The faculty of Engineering Technology can make significant financial progress in its research activities with the existing workforce.

- By making smart financial choices for the funding instruments we use, focusing more on funding instruments which allow for significant contribution margin.
- By optimising the budgets. In particular, by including the hours of permanent staff.
- By budgeting well and sticking to our budgets.

Because these guidelines only concern *financial* results, they should be handled carefully. Our actions shouldn't obstruct the faculty's mission to "*address societal challenges by generating fundamental knowledge in engineering technology: to harness its full*



potential in applying it to complex problems and in educating the engineers and scientists of the future". For example, we should not simply stop our more fundamental engineering activities, which are usually relatively poorly funded. The key is to find a good balance in our activities, maximising our scientific and educational impact, within the existing financial boundaries.

Second, we cannot expect all our research and education activities to deliver the same (beneficial) financial results because 'earning potential' varies for different education and research fields and also changes over time. Steering on financial results only works counterproductively in the long term, creating unhealthy competition between different groups and threatening our faculty's team spirit. Care should be taken to find a good balance between the expectations of different groups.

The guidelines in this document can be followed by individual staff members. There is no reason to wait for steering at the department or board level to make more financially strategic choices. There should also not be anything surprising. Ultimately, improving our faculty finances boils down to handling university money as if it were our own.

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[5] OPTIMIZING RESEARCH GRANTS CONTRIBUTION MARGIN, 04 JULY 2024 https://www.utwente.nl/en/service-portal/resources/faculties/et/intranet/research-grants-contribution-margin-ut.pdf
[6] NRC, 15 February 2024, "Het subsidiepotje moet leeg: wetenschappers TU Delft zochten jarenlang grenzen op om subsidies te 'maximaliseren'."
[7] https://www.utwente.nl/en/service-portal/resources/faculties/et/intranet/guideline-process-projects-2nd-and-3rd-money-stream.pdf
[8] https://www.nwo.nl/salaristabellen#salaristabellen-universiteiten-van-nederland
[9] https://www.nwo.nl/en/calls/open-technology-programme-2025
[10] https://www.utwente.nl/en/service-portal/services/fin/resources/files-fs/intranet/iks-tarieven-2024.pdf

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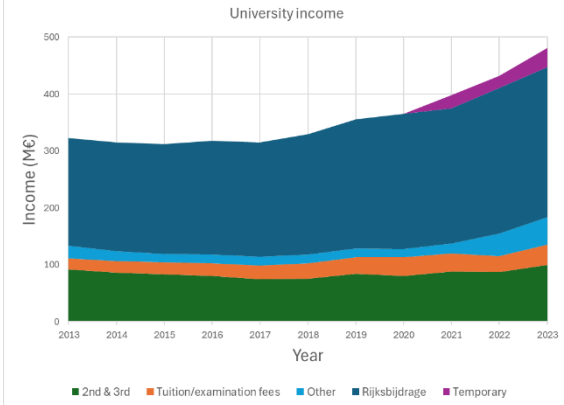
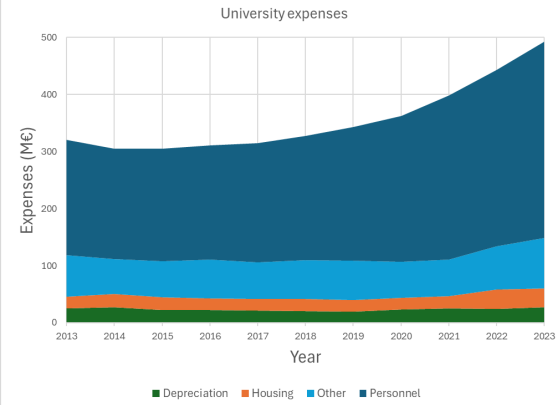
Annex A: Historic perspective



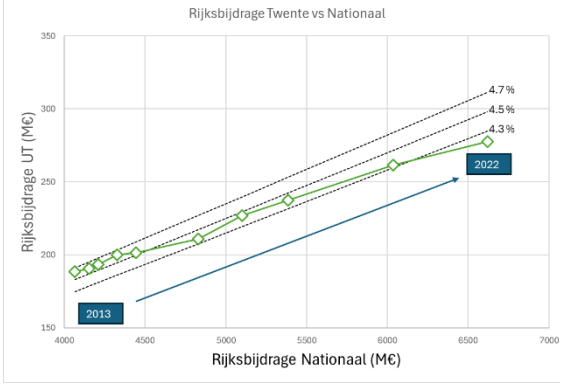
The 'Rijksbijdrage' *is the most prominent source of income, and it increases with time. Temporary incomes are also government related (e.g. 'National Plan Onderwijs' and Sector plans).*
The 2nd and 3rd money stream *contributions are constant over the years.*
'Other' funds*: increase is mainly due to one-offs: building sale, VAT refunds*

a



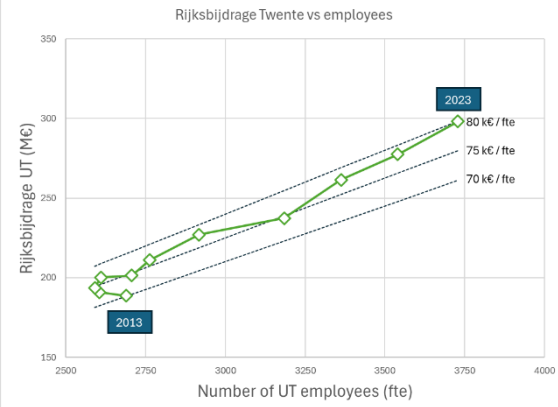
Personnel costs *are most prominent, increasing rapidly with time.*
"Other" *shows a recent increase, mainly due to (Corona related) quadrupling travel cost from 2021 to 2023*
Rising housing costs *are mainly due to rising cost for energy and water.*

b



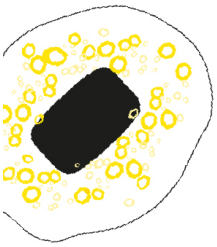
The UT fraction of the 'Rijksbijdrage' *decreases from 4.6 to 4.2 % over the past decade (National 'Rijksbijdrage' as reported by the ministry of OCW)*

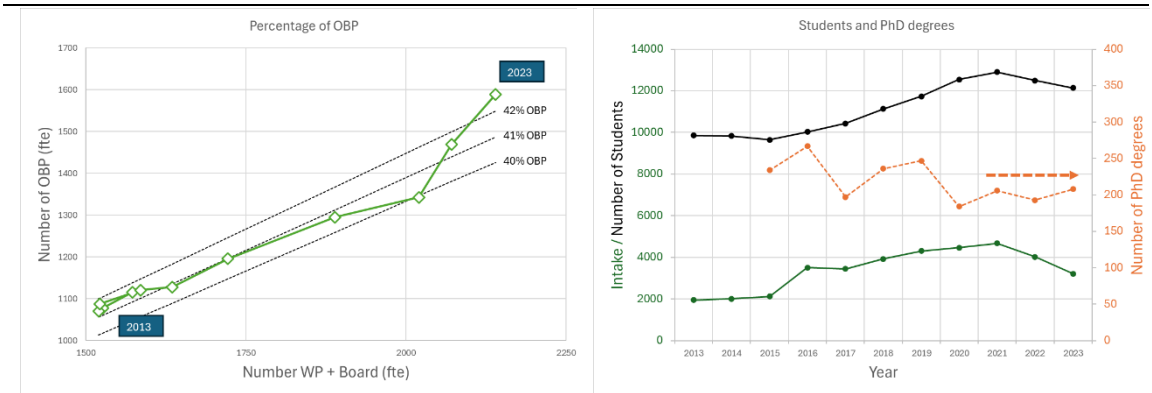
c



The UT grew in personnel: *from 2600 to 3750 fte in the past 10 years*
The 'Rijksbijdrage' per fte *grew from 70 to 80 k€*

d





OBP: *40 to 42%*

e

Student numbers, Student Intake: *down since 2021*

Awarded PhD degrees: *overall decrease*

f

Fig. A1: Data taken from the annual reports of the university of Twente, unless indicated otherwise.

Data were collected from the UT annual reports over the last decade and are shown in Fig. A1. The following has been found:

1. In a span of 10 years, the UT income and expenses went up by 50%
2. The number of employees went up by 40%
3. The number of students went up by 20%, with a peak in 2021 (up by 30%)
4. The UT share in the national university funding went down from 4.6 to 4.2%
5. The OBP/WP ratio remained roughly constant, rising somewhat since 2021
6. Roughly stable 2nd and 3rd money streams indicate a lower number of 2nd and 3rd money stream research projects (in view of increased researcher salaries - e.g. PhD). Since practically all our research is funded from 2nd and 3rd money streams, this is consistent with a decreasing number of PhD degrees awarded from about 250 to 200 per year (Fig. A1f). Not shown: EngD degrees awarded. These are highly variable with a maximum of 25 in 2018.