

19.01.2012

Student Dormitory „Rübenhügel“

Presented by

Oliver Roth (859812)

Florian Bettels (857838)

Frank Südbeck (853303)



Agenda

- ◉ Idea & Motivation
- ◉ FOF Housing GmbH
- ◉ Market Analysis
- ◉ „Rübenhügel“
- ◉ Investment & Depreciation
- ◉ Labour & Running Costs
- ◉ Investment & Financing
- ◉ Computation of Cash Flows
- ◉ Conclusion

Idea & Motivation

- University of Applied Sciences Aachen's Campus Jülich located in Jülich (33.000 inhabitants)
- Big part of the study programs of the “Campus Jülich” offered in English to attract international students
- **Demand for student apartments exceeds offer**
 - especially international students have vast problems
 - students have to move to surrounding cities
- **Our solution: *We establish a student dormitory where we turn our attention especially on the needs of international students!!!***

FOF Student Housing GmbH

- Legal Form: Company with Limited Liability (GmbH)
- Owners:
B. Sc. Florian Bettels
B. Eng. Oliver Roth
Dipl.-Ing. Frank Südbeck
- Location: Jülich (North Rhine-Westphalia, Germany)
- Invested Capital:

Source of Capital	Expenses
B. Eng. Florian Bettels	130.000 €
B. Eng. Oliver Roth	135.000 €
Dipl.-Ing. Frank Südbeck	160.000 €

Market Analysis – Clients

- Fast growth of the Campus Jülich in the last few years and predicted for the future. Actual Situation:

Semester	Students in Jülich	Share of international Students
SS 11	2627	731
WS 11/12	3218	851

→ enormous demand of apartments

- students are forced to look for housings in the neighbouring cities Linnich and Düren (bad connection (“Ruhrtal-Bahn”))
- foreign students living in Jülich feel left alone and isolated
→ need for integration into the “German way of living”
- For foreign students it is quite difficult to find a place to live before they move to Germany, because of communication problems and lack of advertisement in English.

Market Analysis – Competitors

- **Two student dormitories:**

- „Jülich (1979): - 114 students & Ph.D. candidates -



- 16 pers. have to share kitchen & sanitary installations - monthly

- „Solar-CampusJülich (1998):



- 135 students
- rooms: 15 m²
- communities of 3-6 pers.
- monthly rent: 195 €

Market Analysis – Competitors

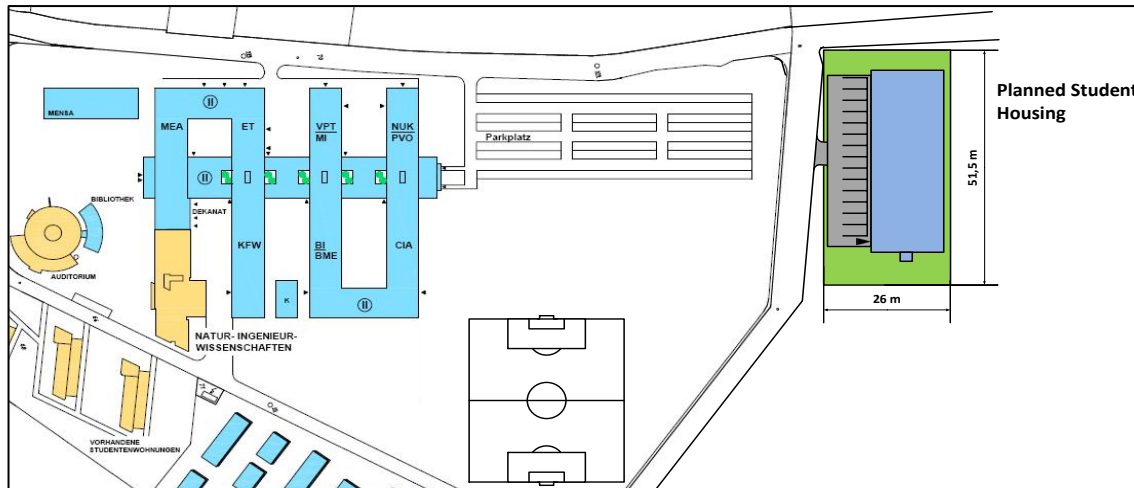
- There are also quite a lot of **private landlords** who offer rooms of **strongly varying quality and prices**.
 - complete amount of rooms not exactly known
 - **monthly rent between 200 and 400 €**
 - do not guarantee as good freetime activities as the dormitories
 - **PROBLEM:** most of the landlords are older people who do not speak English and some refuse to rent a flat to students from other countries

„Rübenhügel“ – Idea

- Providing modern, fully equipped single apartments
 - Privacy and calmness for the students
 - high collegiate efficiency
- Location of the dormitory close to the university
- Offers a lot of free time activities:
 - Football and volleyball fields
 - Library nearby
 - Party room
- Maintenance supervisor and cleaning staff
- External administration & advertisement office is responsible for the multilingual recruitment of students

„Rübenhügel“ – Location

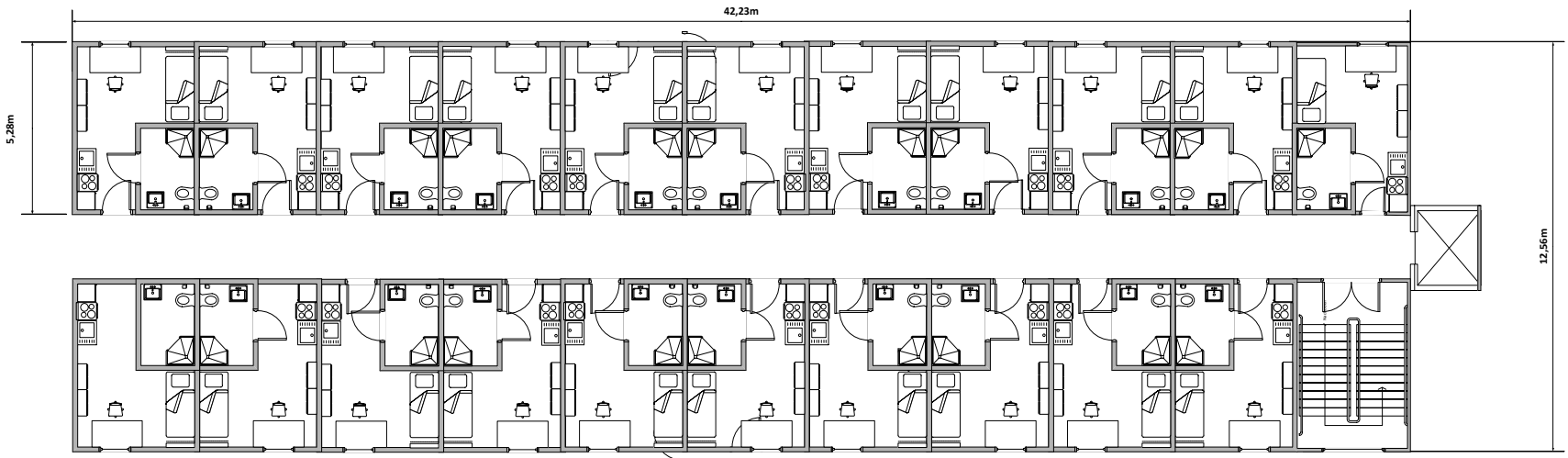
- At the road to Welldorf
- Next to University of Applied Sciences
 - Advantages:
 - Short ways to lecture halls, mensa, library



- Activities: beach volleyball field (Solar Campus) & Soccer field
- parking spaces (University)

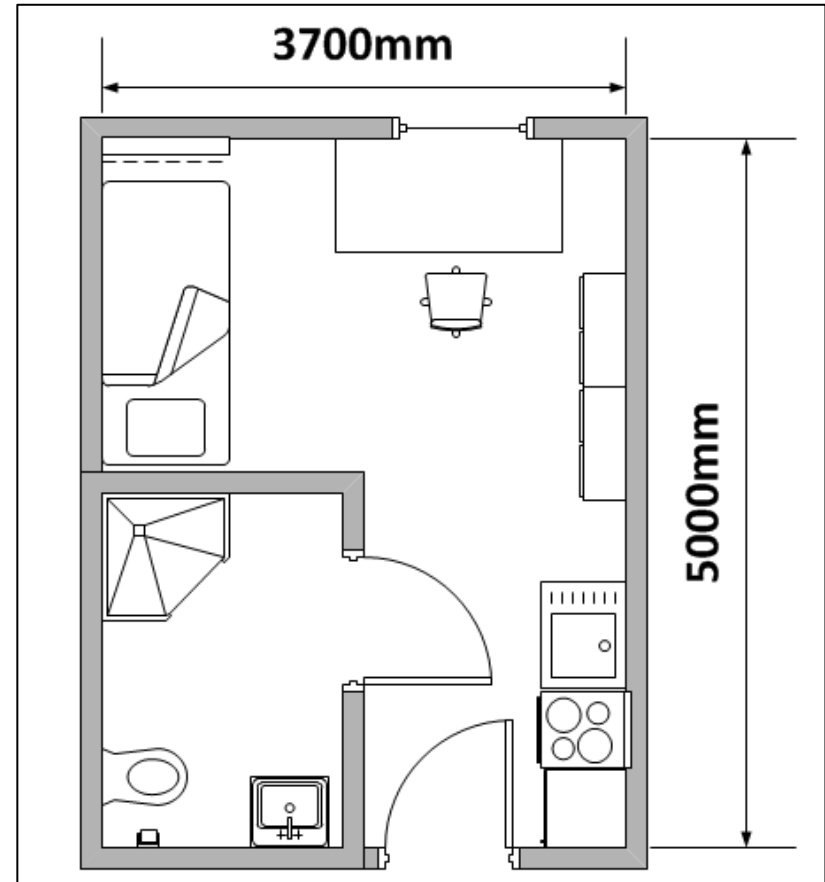
„Rübenhügel“ – Building

- Precast building
→ lower construction costs and time
- 147 rooms (21 rooms per floor, 7 floors)
- Elevator
- Party room in the basement

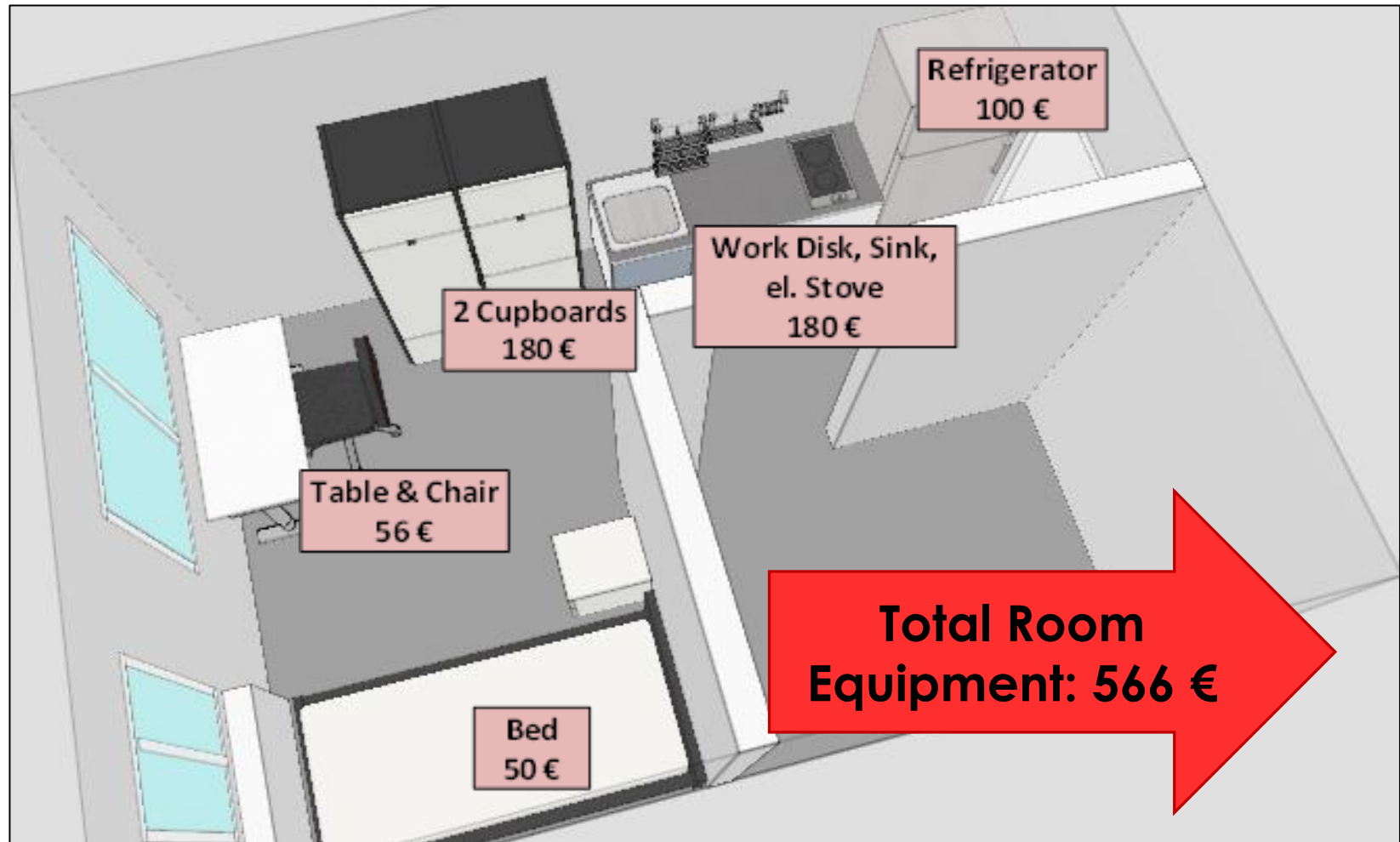


„Rübenhügel“ – Rooms

- 17,5 m² per room
- Equipment:
 - Kitchen:
 - Refrigerator
 - Working disc with sink & electrical 2-plate cooker
 - Bathroom (no extra costs):
 - Shower
 - Lavatory
 - Sink
 - Bed
 - 2 Cupboards
 - Table & Chair



„Rübenhügel“ – Rooms



„Rübenhügel“ – Time Schedule

Task	Responsibility	week																																														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44			
Planning Phase																																																
land acquisition	FFO																																															
preparation of building permission documents	Architect																																															
building permission	Architect																																															
Detail planning	Architect																																															
static calculation	structural designer																																															
inquiry/order placement building company	FFO																																															
Construction Phase																																																
Excavation works	building company																																															
Foundation works	building company																																															
Structural works	building company																																															
Parking area / pavements	building company																																															
Windows/Outer doors	building company																																															
Water installations	building company																																															
Heating installation	building company																																															
Electronic installations	building company																																															
Elevator	building company																																															
Plastering	building company																																															
Floor covering	building company																																															
Inner doors	building company																																															
Furniture	building company																																															
Operation Planning																																																
Acquisition of Maintenance supervisor	FFO																																															
Acquisition of Cleaning Staff	FFO																																															
Student recruitment	FFO																																															
Students Move in																																																

Investment & Depreciation

	Description	Investment Sum [€]	Depreciation Rate [year]	Depreciation [€/year]
Purchase of Land	Estate: 1340 m ² to 120,- €/m ²	160.800,00 €	0	- €
	Additional Expenses	5.000,00 €	0	- €
	Sum Purchase of Land	165.800,00 €	0	- €
Engi- neering	Expenditure / Planning	60.000,00 €	10	6.000,00 €
	Licences	35.000,00 €	10	3.500,00 €
	Sum of Engineering	95.000,00 €	10	9.500,00 €
Exterior Instal- lations	Roads & Parking Lots: 305 m ² to 240,- €/m ²	73.200,00 €	20	3.660,00 €
	Outside Lights	6.000,00 €	20	300,00 €
	Total of Exterior Installations	79.200,00 €	20	3.960,00 €
Building	Student Housing (Grading Work, Foundations, Cable for Power Installation, Water Tubes included) (888 €/m ² x 7 floors x 539,5 m ² /floor)	3.353.532,00 €	20	167.676,60 €
	Heating System	100.000,00 €	20	5.000,00 €
	Safety Installations I (Fire Alarm, etc.)	5.000,00 €	20	250,00 €
	Sum of Building	3.458.532,00 €	20	172.926,60 €

Investment & Depreciation

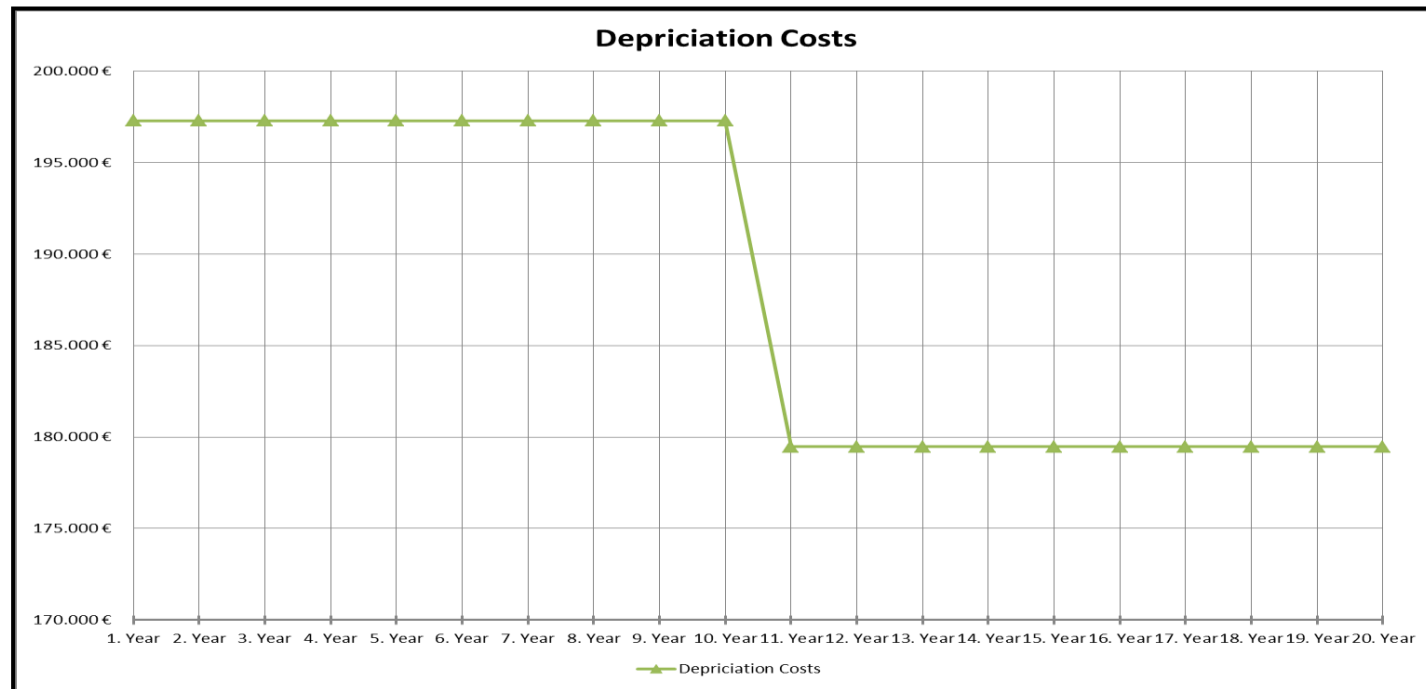
	Description	Investment Sum [€]	Depreciation Rate [year]	Depreciation [€/year]
Equipment Rooms	Refrigerators: 147 to 100 €	14.700,00 €	10	1.470,00 €
	Electric Stoves: 147 to 120 €	17.640,00 €	10	1.764,00 €
	Work Disks with Kitchen Sinks: 147 to 60 €	8.820,00 €	10	882,00 €
	2 Cupboards per Room: 147 to 90 €	26.460,00 €	10	2.646,00 €
	Beds: 147 to 50 €	7.350,00 €	10	735,00 €
	Tables: 147 to 40 €	5.880,00 €	10	588,00 €
	Chairs: 147 to 16 €	2.352,00 €	10	235,20 €
	Sum of Room Equipment	83.202,00 €	10	8.320,20 €
Extra Invest- ments	Tools Maintenance Supervisor	5.000,00 €	10	500,00 €
	Equipment Cleaning Staff	800,00 €	10	80,00 €
	Safety Installations II (Fire Extinguisher, etc.)	2.000,00 €	10	200,00 €
	Sum of Extra Investments	7.800,00 €	10	780,00 €
Vehicles	Multifunctional Tractor (Mowing Gras, Shoveling Snow, Sweeping)	9.000,00 €	5	1.800,00 €
	Sum of Vehicles	9.000,00 €	5	1.800,00 €

Sum of Investment & Depreciation

Investment Goods	Investment Expenditures	Depreciation Rate	Depreciation Costs per year
Sum Purchase of Land	165.800 €	0%	- €
Sum of Engineering	95.000 €	10%	9.500,00 €
Total of Exterior Installations	79.200 €	5%	3.960,00 €
Sum of Building	3.458.532 €	5%	172.926,60 €
Sum of Room Equipment	83.202 €	10%	8.320,20 €
Sum of Extra Investments	7.800 €	10%	780,00 €
Vehicles	9.000 €	20%	1.800,00 €
Unexpected	200.000 €	0%	- €
Circulating Capital	50.000 €	0%	- €
Sum Investment:	4.148.534 €	Total Depreciation Costs:	197.286,80 €

Sum of Investment & Depreciation

- After 10 years there will be no need to replace the complete furniture (maintenance calculated as running cost).
- **depreciation costs will decrease after 10 years**



Labour & Running Costs

○ Labour Costs

Personal in Cost Center	Number	Personel Costs
External Administration Department & Advertisement	1	24.000 €
Maintenance Supervisor (20 hrs/week)	1	40.000 €
Cleaning Staff (10 hrs/week)	1	14.000 €
Total of Labour Costs		78.000 €

○ Running Costs (included in Rent)

Running Costs (included in Rent)	Prognosticated Costs
Reparation Costs & Material for Maintenance	4.000 €
Insurances	2.000 €
Total of Running Costs	6.000 €

Additional Running Costs

- **Not included in the rent!!!**
- Allocation of additional costs & services
- Easy handling (no individual energy & water meters)

Running Costs (Allocation)	Units	Cost Factor	Energy / Water Demand	Annual Costs per Room	Total annual Costs
Heating (Gas-Boiler) ³	144	0,0626 €/kWh	40 W/m2	219,10 €	31.550,40 €
Electrical Energy Rooms ⁴	144	0,2225 €/kWh	1000 kWh/(room*a)	222,50 €	32.040,00 €
Electrical Energy (Floors) ⁴	1	0,2225 €/kWh	3504 kWh/a	- €	779,64 €
Fresh Water ⁵	144	1,50 €/L	80 L/(room*day)	43,80 €	6.307,20 €
Waste Water ⁵	144	3,77 €/L	80 L/(room*day)	110,08 €	15.852,10 €
Unexpected	1	2000,00 €/a	-	- €	2.000,00 €
Internet	1	2400,00 €/a	-	- €	2.400,00 €
TV-Fees	1	0,00 €/a	-	- €	- €
Household Waste ⁵	3	382,56 €/a	-	- €	1.147,68 €
Yellow Bin	4	0,00 €/a	-	- €	- €
Waste Paper	2	0,00 €/a	-	- €	- €
Biowaste ⁵	2	108,00 €/a	-	- €	216,00 €
Total of Running Costs (Allocation)					92.293,02 €
Monthly Allocation per Room					53,41 €

Costs per Room

	1. Year	2. Year	3. Year	4. Year	5. Year	6. Year	7. Year	8. Year	9. Year	10. Year
Utilization of Capacity	80%	98%	98%	98%	98%	98%	98%	98%	98%	98%
Quantity in Rooms	118	144	144	144	144	144	144	144	144	144
Costs	Costs per Year	Costs per Year	Costs per Year	Costs per Year	Costs per Year	Costs per Year	Costs per Year	Costs per Year	Costs per Year	Costs per Year
Depreciation Costs	197.286,80 €	197.286,80 €	197.286,80 €	197.286,80 €	197.286,80 €	197.286,80 €	197.286,80 €	197.286,80 €	197.286,80 €	197.286,80 €
Financing Costs	72.599,35 €	65.339,41 €	58.079,48 €	50.819,54 €	43.559,61 €	36.299,67 €	29.039,74 €	21.779,80 €	14.519,87 €	7.259,93 €
Labour Costs	78.000,00 €	78.000,00 €	78.000,00 €	78.000,00 €	78.000,00 €	78.000,00 €	78.000,00 €	78.000,00 €	78.000,00 €	78.000,00 €
Running Costs	6.000,00 €	6.000,00 €	6.000,00 €	6.000,00 €	6.000,00 €	6.000,00 €	6.000,00 €	6.000,00 €	6.000,00 €	6.000,00 €
Sum of Costs	353.886,15 €	346.626,21 €	339.366,28 €	332.106,34 €	324.846,41 €	317.586,47 €	310.326,54 €	303.066,60 €	295.806,67 €	288.546,73 €
Annual Costs per Room	3.009,24 €	2.406,12 €	2.355,73 €	2.305,33 €	2.254,94 €	2.204,54 €	2.154,15 €	2.103,75 €	2.053,36 €	2.002,96 €
Monthly Costs per Room	250,77 €	200,51 €	196,31 €	192,11 €	187,91 €	183,71 €	179,51 €	175,31 €	171,11 €	166,91 €

[illegible]

Investment & Financing

Share of Total Investment	Source of Capital	Expenses
100%	Total Investment	4.148.534 €
	Herr Florian Bettels	130.000 €
	Herr Oliver Roth	135.000 €
	Herr Frank Südbeck	160.000 €
10%	Capital of FOF Housing GmbH	425.000 €
40%	External Capital Funds	1.649.267 €
50%	Outside Financing	2.074.267 €

**If you invest in our idea, we are able
to receive a construction credit of
2,074 Mio. €**

Investment & Financing

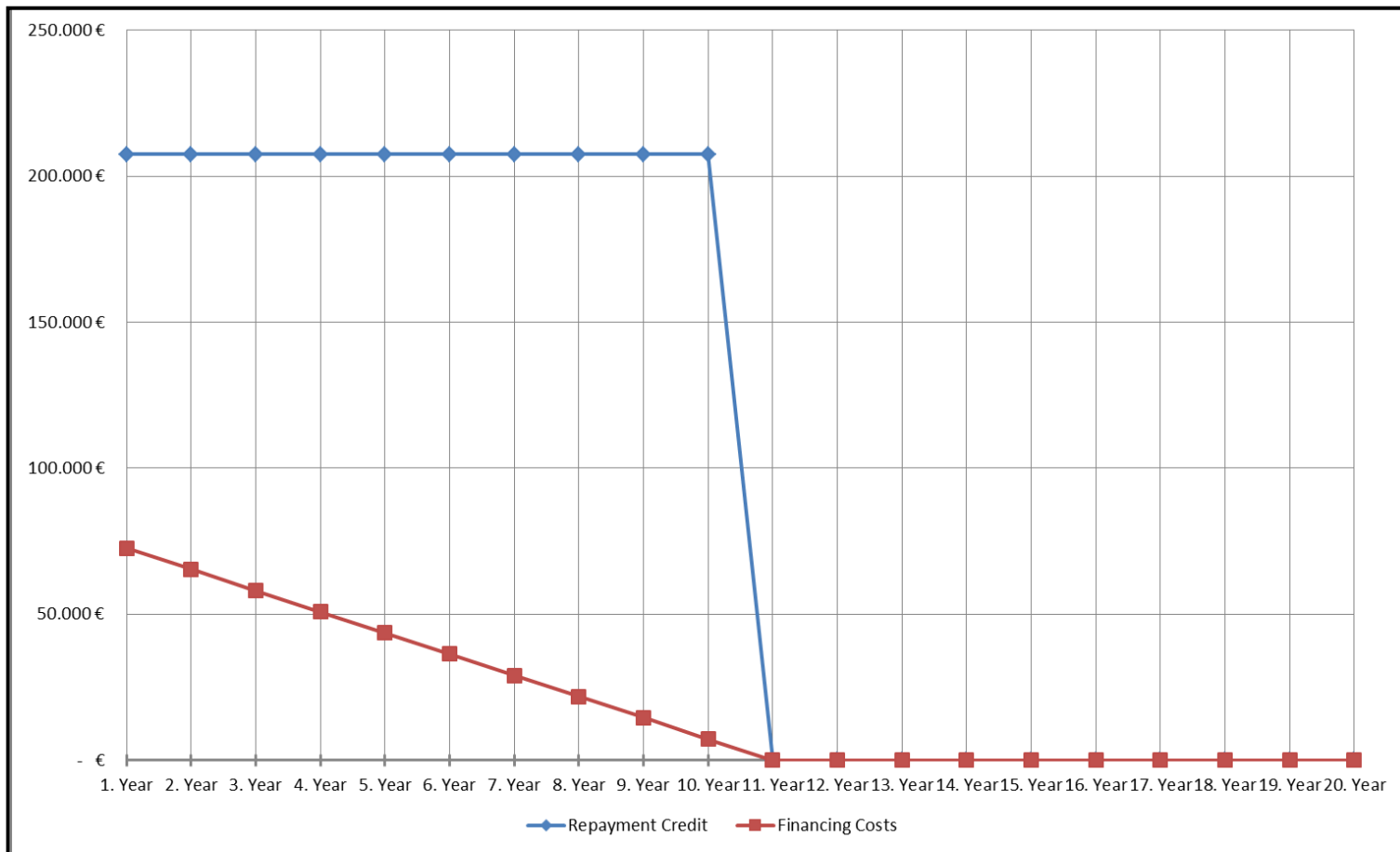
Construction credit: 2.074.267 €

- Running Time: 10 years
- Interest Rate: 3,5 %

Year	Balance of Dept	Interest Rate	Interest Cost per year	Repayment Loan per year
1. year	2.074.267,00 €	3,5%	72.599,35 €	207.426,70 €
2. year	1.866.840,30 €	3,5%	65.339,41 €	207.426,70 €
3. year	1.659.413,60 €	3,5%	58.079,48 €	207.426,70 €
4. year	1.451.986,90 €	3,5%	50.819,54 €	207.426,70 €
5. year	1.244.560,20 €	3,5%	43.559,61 €	207.426,70 €
6. year	1.037.133,50 €	3,5%	36.299,67 €	207.426,70 €
7. year	829.706,80 €	3,5%	29.039,74 €	207.426,70 €
8. year	622.280,10 €	3,5%	21.779,80 €	207.426,70 €
9. year	414.853,40 €	3,5%	14.519,87 €	207.426,70 €
10. year	207.426,70 €	3,5%	7.259,93 €	207.426,70 €
Total Interest paid:			399.296,40 €	
Total Repayment:				2.074.267,00 €

Investment & Financing

Construction credit: 2.074.267 €



Computation of Cash Flow

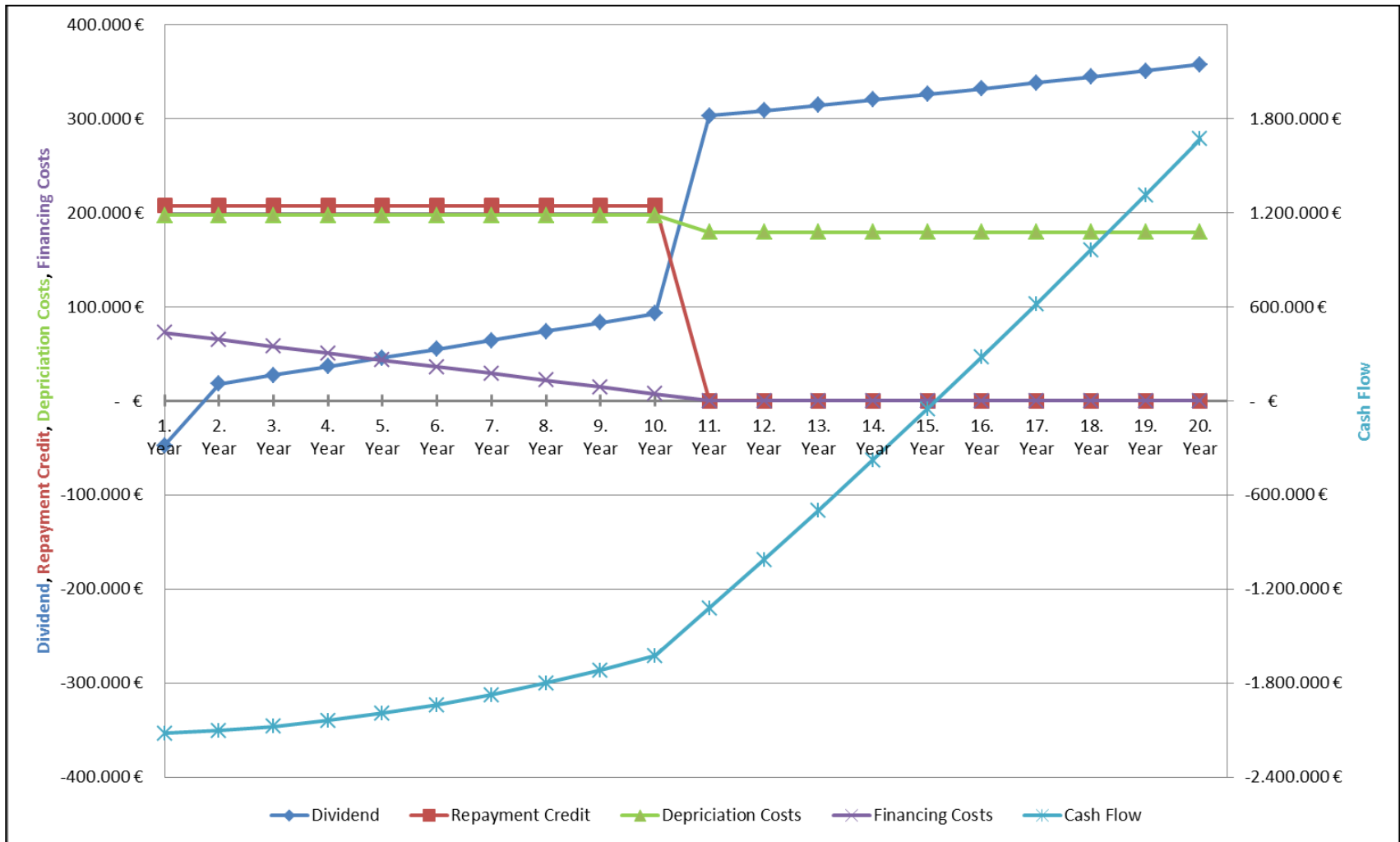
→ To adjust the rent to the inflation and to increase **YOUR PROFIT**, an annual price increase of 2 % is considered.

	1. Year	2. Year	3. Year	4. Year	5. Year	6. Year	7. Year	8. Year	9. Year	10. Year
Rent per Room/Month	220,00 €	224,40 €	228,89 €	233,47 €	238,14 €	242,90 €	247,76 €	252,71 €	257,77 €	262,92 €
Occupied Rooms	118	144	144	144	144	144	144	144	144	144
Turnover / Revenue	310.464 €	387.925 €	395.683 €	403.597 €	411.669 €	419.902 €	428.300 €	436.866 €	445.604 €	454.516 €
Depreciation Costs	197.287 €	197.287 €	197.287 €	197.287 €	197.287 €	197.287 €	197.287 €	197.287 €	197.287 €	197.287 €
Labour costs	78.000 €	78.000 €	78.000 €	78.000 €	78.000 €	78.000 €	78.000 €	78.000 €	78.000 €	78.000 €
Financing Costs	72.599 €	65.339 €	58.079 €	50.820 €	43.560 €	36.300 €	29.040 €	21.780 €	14.520 €	7.260 €
Loss carried forward		- 47.562 €								
Profit before Tax	- 37.422 €	47.299 €	62.317 €	77.491 €	92.822 €	108.316 €	123.974 €	139.800 €	155.797 €	171.969 €
Taxes (40 %)	- €	18.919 €	24.927 €	30.996 €	37.129 €	43.326 €	49.590 €	55.920 €	62.319 €	68.788 €
Profit after Taxes	- 37.422 €	28.379 €	37.390 €	46.494 €	55.693 €	64.989 €	74.384 €	83.880 €	93.478 €	103.181 €
Cash Flow (net Profit + Depreciation)	159.865 €	225.666 €	234.677 €	243.781 €	252.980 €	262.276 €	271.671 €	281.167 €	290.765 €	300.468 €
Repayment Credit	207.427 €	207.427 €	207.427 €	207.427 €	207.427 €	207.427 €	207.427 €	207.427 €	207.427 €	207.427 €
Dividend	- 47.562 €	18.239 €	27.250 €	36.354 €	45.554 €	54.850 €	64.244 €	73.740 €	83.338 €	93.041 €
Interest made on Equity	-2,3%	0,9%	1,3%	1,8%	2,2%	2,6%	3,1%	3,6%	4,0%	4,5%
Cash Flow	-2.121.829 €	-2.103.590 €	-2.076.340 €	-2.039.985 €	-1.994.431 €	-1.939.582 €	-1.875.338 €	-1.801.598 €	-1.718.259 €	-1.625.218 €

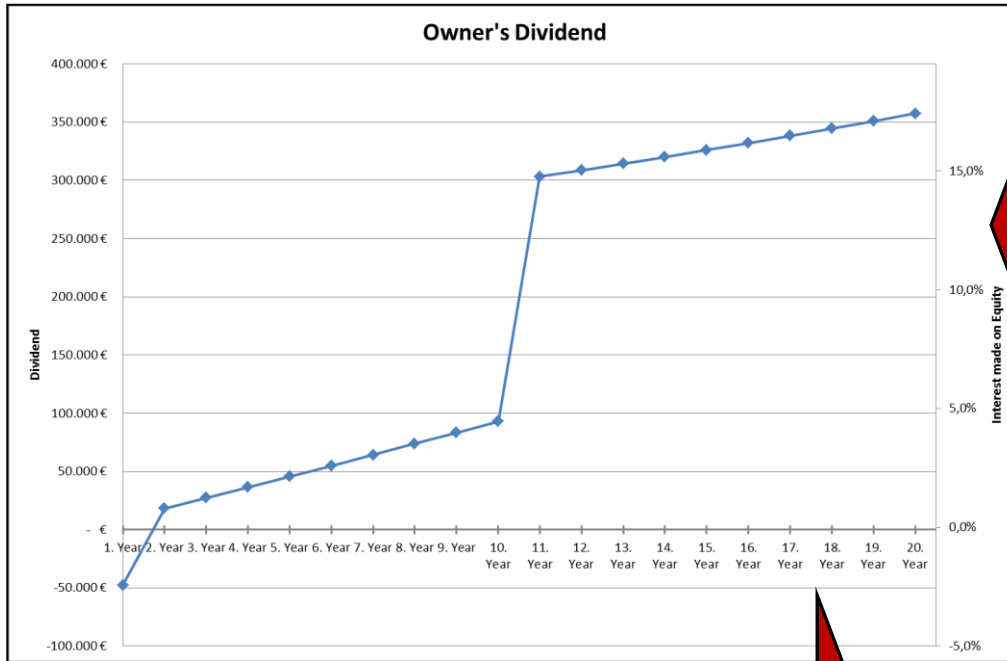
Computation of Cash Flow

	11. Year	12. Year	13. Year	14. Year	15. Year	16. Year	17. Year	18. Year	19. Year	20. Year
Rent per Room/Month	268,18 €	273,54 €	279,01 €	284,59 €	290,29 €	296,09 €	302,01 €	308,05 €	314,21 €	320,50 €
Occupied Rooms	144	144	144	144	144	144	144	144	144	144
Turnover / Revenue	463.606 €	472.878 €	482.336 €	491.982 €	501.822 €	511.858 €	522.096 €	532.538 €	543.188 €	554.052 €
Depreciation Costs	179.467 €	179.467 €	179.467 €	179.467 €	179.467 €	179.467 €	179.467 €	179.467 €	179.467 €	179.467 €
Labour costs	78.000 €	78.000 €	78.000 €	78.000 €	78.000 €	78.000 €	78.000 €	78.000 €	78.000 €	78.000 €
Financing Costs	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
Loss carried forward										
Profit before Tax	206.139 €	215.412 €	224.869 €	234.516 €	244.355 €	254.392 €	264.629 €	275.071 €	285.722 €	296.585 €
Taxes (40 %)	82.456 €	86.165 €	89.948 €	93.806 €	97.742 €	101.757 €	105.852 €	110.028 €	114.289 €	118.634 €
Profit after Taxes	123.684 €	129.247 €	134.921 €	140.709 €	146.613 €	152.635 €	158.777 €	165.043 €	171.433 €	177.951 €
Cash Flow (net Profit + Depreciation)	303.150 €	308.714 €	314.388 €	320.176 €	326.080 €	332.102 €	338.244 €	344.509 €	350.900 €	357.418 €
Repayment Credit	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
Dividend	303.150 €	308.714 €	314.388 €	320.176 €	326.080 €	332.102 €	338.244 €	344.509 €	350.900 €	357.418 €
							Total Dividend after 20 Years:		3.744.729 €	
Interest made on Equity	14,6%	14,9%	15,2%	15,4%	15,7%	16,0%	16,3%	16,6%	16,9%	17,2%
							Total Interest after 20 Years:		180,5%	
							Mean annual Interest:		9,0%	
Return of Investment	- 1.322.068 €	- 1.013.354 €	- 698.966 €	- 378.790 €	- 52.710 €	279.392 €	617.636 €	962.145 €	1.313.044 €	1.670.462 €

Computation of Cash Flows



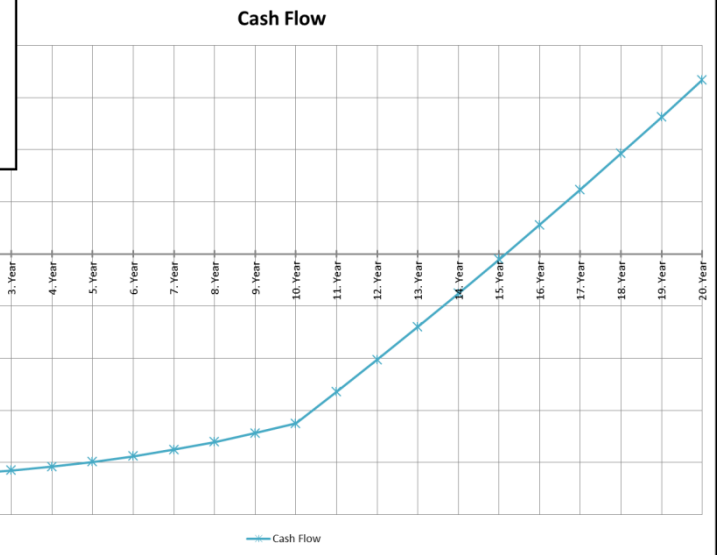
Conclusion



Dividend

- up to 17,2 %
- average: 9,0 %

**Break even point
after 15 years**



Conclusion

- very fast expanding University of Applied Sciences
Campus Jülich & Research Center Jülich
 - lack of cheap student appartments in Jülich
 - students already have to move to Düren or Linnich
 - **huge demand for a new student dormitory**
- For an **investment in our student dormitory „Rübenhügel“ in Jülich**, you will recieve a **mean interest rate of 9 %**, which means that after 20 years **your investment will almost be doubled.**

Thank you for your Interest!

