

Make-Or-Buy Document

This document contains make-or-buy analysis.

The external services found are Apache HBase in Azure HDInsights and Microsoft Dynamics. A brief description can be found in Vendor Analysis Document. These are costs of resources related to the customer needs.

SERVICE	MONTHLY COST (€)	YEARLY COST (€)
Apache HBase+Azure HDInsight	4700	56400
Microsoft Dynamics	2300	27600

Database and Handmade alternative to HDInsight

The following table contains costs related to a handmade version of the database.

COMPONENT	COST (€) per SINGLE COMPONENT
<i>Rack</i>	1000
<i>Server (x10)</i>	3000
<i>Firewall</i>	1000
<i>Setup</i>	1000
<i>Security Integration</i>	2000
<i>Reliability Integration</i>	2500
<i>Backup</i>	4
Total Implementation Cost	150000
Annual Energy Cost	7000
Annual Licenses Cost	7000

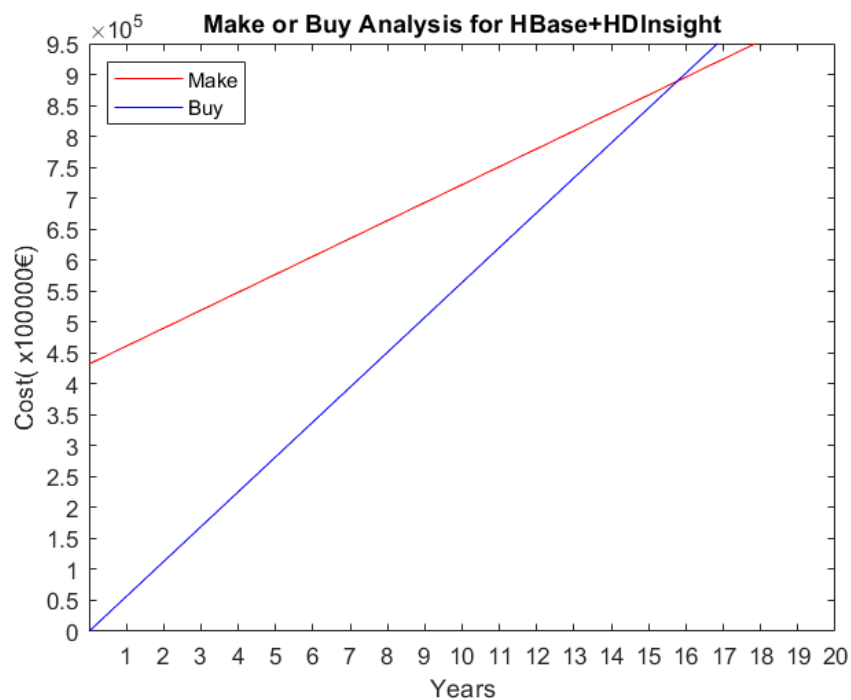
The following table contains costs related to a handmade alternative to HDInsight.

FIGURE	NUMBER OF EMPLOYEES INVOLVED	HOURLY COST (€)	DAYS	TOTAL
<i>Senior Developer</i>	20	16.5	50	132000
<i>Data Science Expert</i>	5	15	50	30000
<i>Junior Developer</i>	25	10	50	100000
<i>Designer</i>	5	10	50	20000
Total Personnel Cost				282000
Annual Updating Cost				15000

The following table contains the comparison between make and buy options.

YEAR	APACHE HBASE+INSIGHT	HANDMADE
1	56400	461000
2	112800	490000
3	169200	519000
4	225600	548000
5	282000	577000
6	338400	606000
7	394800	635000
8	451200	664000
9	507600	693000
10	564000	722000
11	620400	751000
12	676800	780000
13	733200	809000
14	789600	838000
15	846000	867000
16	902400	896000

Equivalently, this is a graphical representation of the previous data.



Handmade Alternative to Dynamics

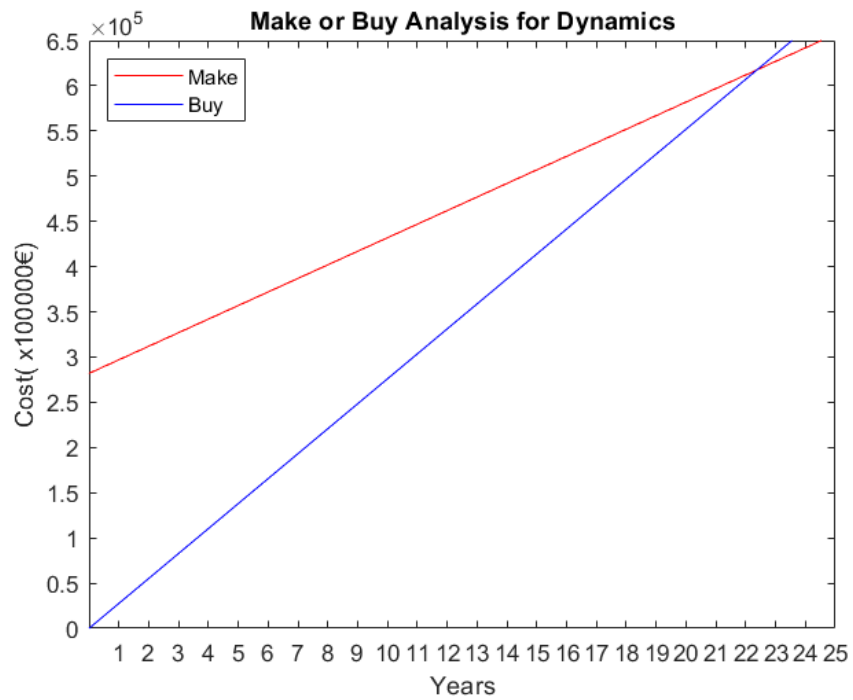
The following table contains costs related to a handmade version alternative to Dynamics.

FIGURE	NUMBER OF EMPLOYEES INVOLVED	HOURLY COST (€)	DAYS	TOTAL
<i>Senior Developer</i>	20	16.5	50	132000
<i>Data Science Expert</i>	5	15	50	30000
<i>Junior Developer</i>	25	10	50	100000
<i>Designer</i>	5	10	50	20000
Total Personnel Cost				282000
Annual Updating Cost				15000

The following table contains the comparison between make and buy options.

YEAR	DYNAMICS	HANDMADE
1	27600	297000
2	55200	312000
3	82800	327000
4	110400	342000
5	138000	357000
6	165600	372000
7	193200	387000
8	220800	402000
9	248400	417000
10	276000	432000
11	303600	447000
12	331200	462000
13	358800	477000
14	386400	492000
15	414000	507000
16	441600	522000
17	469200	537000
18	496800	552000
19	524400	567000
20	552000	582000
21	579600	597000
22	607200	612000
23	634800	627000

Equivalently, this is a graphical representation of the previous data.



Conclusion

As emerged from the analysis, in both cases buy option is more convenient for our company. The breakeven point will be reached in 16 and 23 years respectively.