Nokia One – Mobile Connectivity Service

Business Case Prepared for: Company X

This sample Business Case is based on a European company.

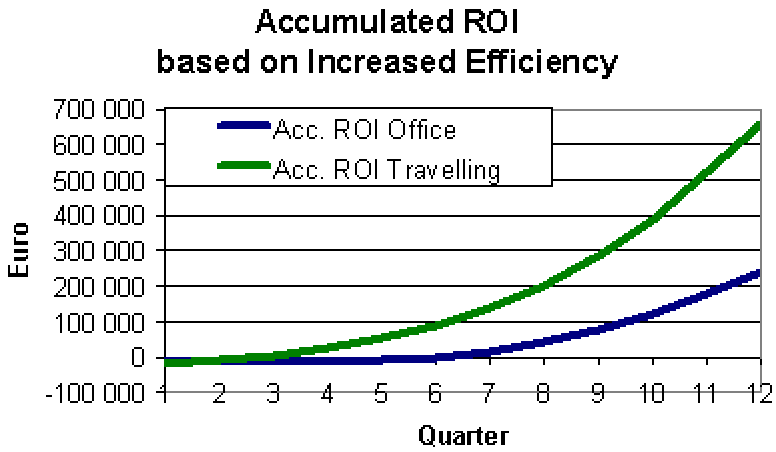
NOKIA

Management Summary

Based on initial information on the "Company X" business and culture, Nokia One can provide a measurable increase in efficiency, productivity and employee satisfaction. The business case described in this document is an approximate calculation of business benefits and value that Nokia One brings the "Company X" organisation. There may be additional benefits that are not quantified in this analysis and others that are not quantifiable.

The results of this case study projected over a 3 year period are as follows.

- Return on Investment (ROI) of 655.000 Euro for travelling employees
- ROI of 240.000 Euro for office employees
- Throughput of the organisation is expected to increase by 4,34% on average
- Employees should feel less stressed and more in control of their time and schedule after routinely using Nokia One



The information in this document will describe how "Company X" can benefit from Nokia One through

- Increased Efficiency of Employees,
- Increase Productivity and Workflow Throughput,
- Reduction in Communication Costs, and
- Improvements in Balance between Work and Life.

Productivity is expected to increase and the value of this can only be estimated, not precisely calculated, in advance. The calculations in this business case are based on a scenario where all employees are users of Nokia One. In reality, a roll out would be done in phases over a period of time. The calculations show that employees who travel should have first priority.

"Company X" needs to implement mobile IT solutions to support and evolve the mobilized business culture. The Nokia One service fulfils all the expected requirements that corporations consider when choosing platform for mobile IT solutions.

- No Large Upfront Investment
- On-going Costs for Operations, Maintenance and Administration are low
- Future proof and Flexible
- General Mobile Connectivity Platform for future Corporate Applications

The best way to understand mobility in the "Company X" organization, is to deploy Nokia One for an evaluation with a limited number of users. Specific measurement during the evaluation project will show how well the calculations in this business case fit with the real experience of Nokia One users in "Company X". The final purpose of the service evaluation is to make the final decision on whether or not to provide Nokia One throughout the organisation.

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1. Expected Efficiency Increase

All employees, who are Nokia One users, will be able to increase their personal efficiency. Nokia One enables employees to make *idle time* while travelling and between meetings *productive time*. This business case estimates how much idle time it is possible to realize in the "Company X" organisation. The information used for all of the calculations can be found in Appendix 1.

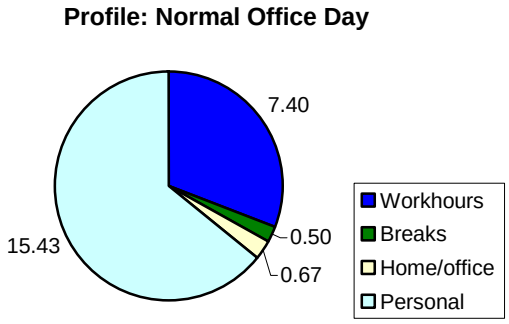
Efficiency is increased by simply answering only a few urgent mails during conferences, training sessions, or any time an employee is away from his or her desk. The voice interface makes it possible to check and respond to your e-mails while driving the car, and the SMS interface makes it possible to work in trains and taxis, or just about anywhere.

1.1 Typical Workday Profiles

To quantify the value of being connected anytime from anywhere with Nokia One, it is necessary to understand the normal work pattern of employees. In "Company X" there are 3 different workday profiles: a normal office day, short distance travelling and long distance travelling.

1.1.1 A normal office day

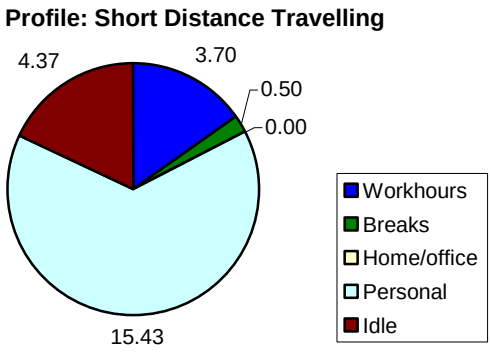
A normal office day in "Company X" is 7,4 hours excluding lunch break. Employees use on average 40 minutes to travel between home and work.



1.1.2 Short distance travelling

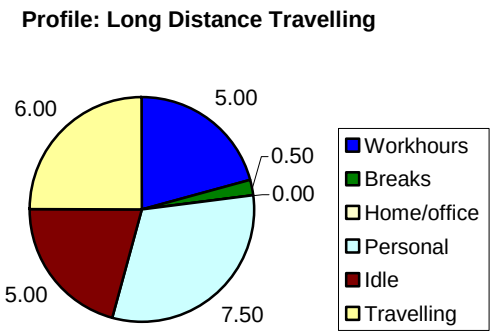
A short distance travelling day is a day "on the road", where the travelling employee has several meetings during the day without going to the office. A short distance day can be abroad with a hotel as base.

On short distance travelling days it is expected, that the employee drives from home or the hotel directly to their destination and on average increases normal work hours with same amount of time, as they use at home for transport between home and the office.



1.1.3 Long distance travelling

A typical long distance day is getting to the airport, check-in, waiting, travel 1,5 - 2 hours by plane, taxi to first destination and then after a normal workday return to the airport.

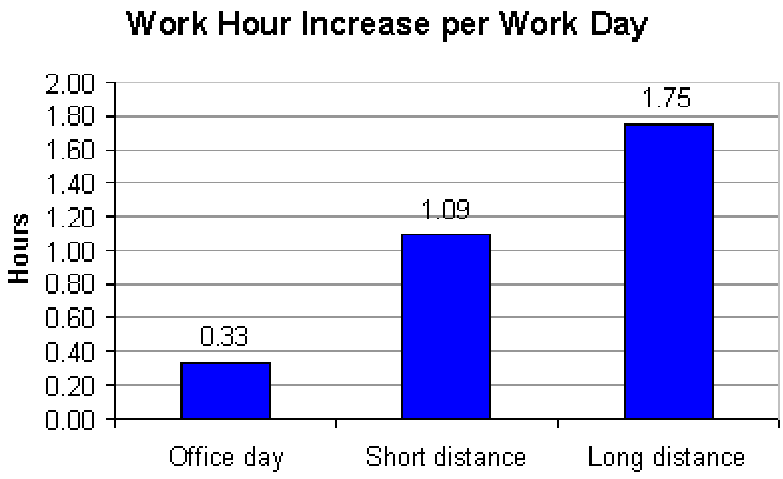


1.2 Estimated potential efficiency increase

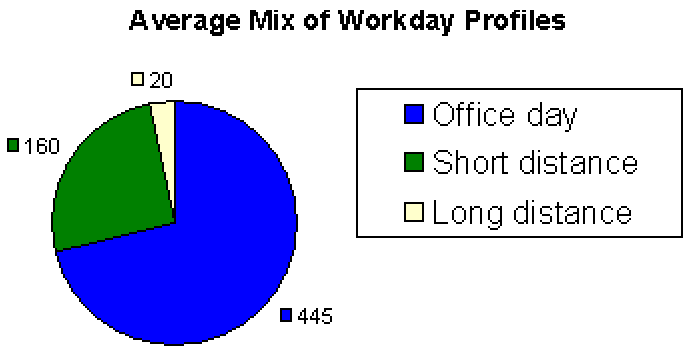
Nokia One enables nearly any employee to reduce idle time during the workday. This time can be regarded as potential work time, when a dynamic mobile solution is available for employees.

Office Day	Short Distance Travelling	Long Distance Travelling
• 40 minutes in travel time between home and office is calculated to be a potential work time increase. • Maximum 25% of the travel time is expected to be realized + 10 minutes per office day by experience. • The net effect of using Nokia One is **20 minutes per day**.	• 4,37 hours idle time • The potential work time increase is 25% of the idle time. • The net effect of using Nokia One is just over **1 hour per day**.	• 5 hours idle time and 2 hours of travel time (out of 6) • The potential work time increase is 25% of the idle time. • The net effect of using Nokia One is **1 hour and 45 minutes per day**.

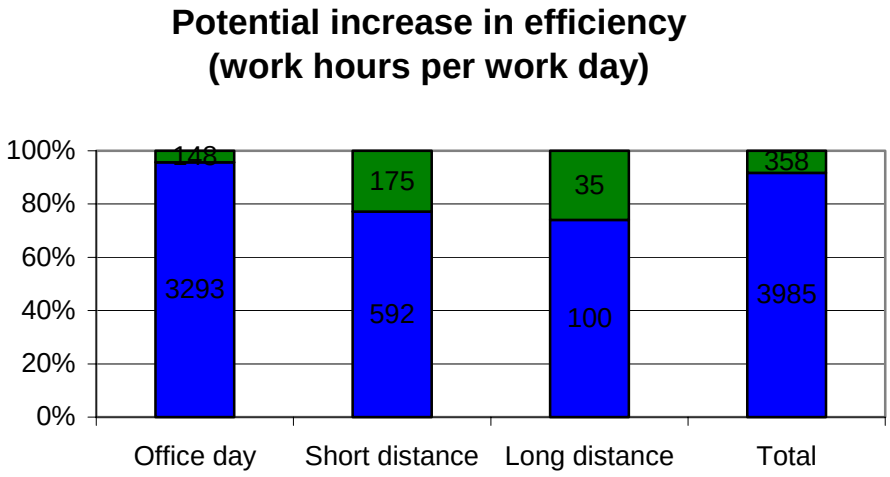
Experience shows that people working in the office tend to use Nokia One while they are moving around, attending meetings etc. On office days, employees use Nokia One while they are travelling to and from the office.



Based on these assumptions the work hour increase per workday can be calculated for the whole organization. The number of employees in "Company X" are 625. Approximately 300 employees travel in average 3 days a week. Approximately 100 of the travelling employees travel long distance 1 day a week in average.

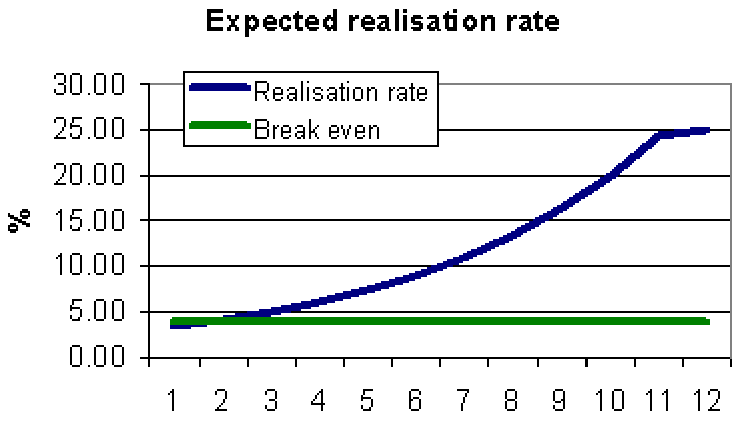


Combining the mix of workday profiles with the calculated potential work hour increase it is possible to calculate the overall potential efficiency increase in work hours. **Total potential work hour increase: 8,98%** of normal work hours, equivalent to 358 extra work hours per workday.

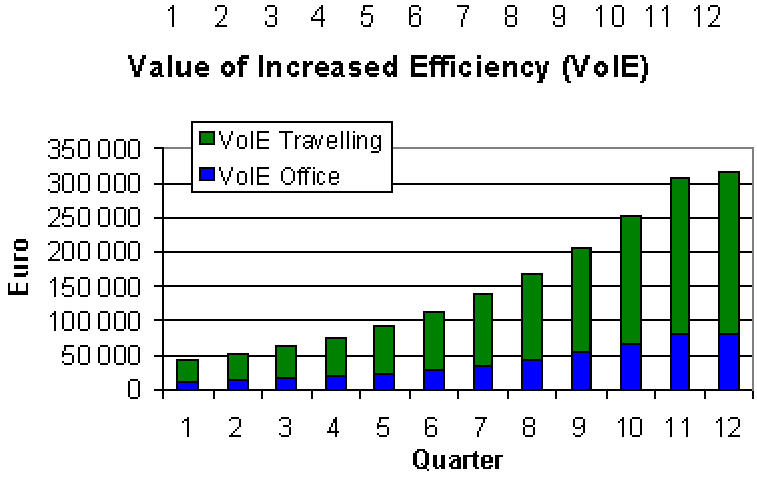


1.3 Expected Rate of Realisation of Efficiency Increase

Realisation of the potential efficiency increase takes time, because employees need to adapt to new tools and ways of working. After using Nokia One for some time it is expected that it will be possible to realise 25% of the idle time on work days out of the office and 25% of the time used between work and home on office days. The change in behaviour is expected to happen over a 3 years period with a slow starting learning curve, witch is expected to flatten out when the 25% mark of the total potential is realised.



The ability of being able to realise the idle time on work days are of course important for the business value of Nokia One. To illustrate the margins in this business case, the **break-even level of 3,8%** is shown in the chart above. The break even level is the point at which the increased efficiency is equal to the monthly cost of Nokia One.



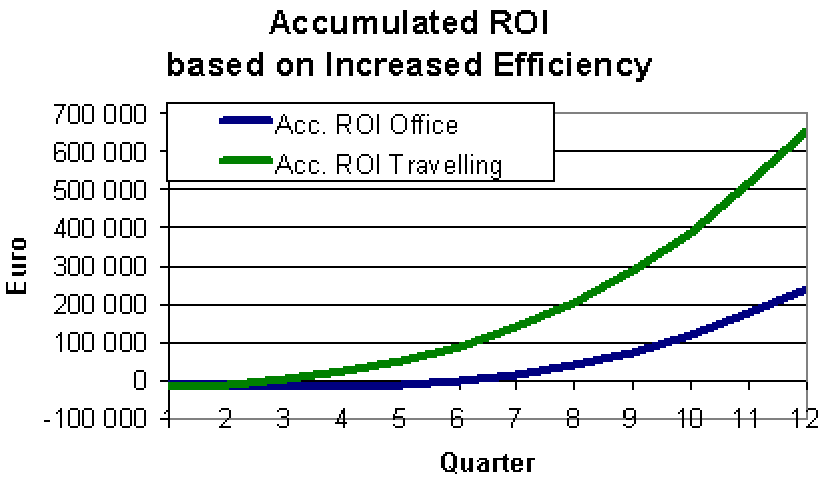
1.4 Value of Increased Efficiency

The average number of workdays in a month is 18,3 and the average total cost per employee is estimated to be 7.500 Euro per month. Combining the expected efficiency increase with these numbers and the expected realisation rate we can estimate the value of increased efficiency to be **42.111 Euro in first quarter growing to 315.832 Euro in twelfth quarter**.

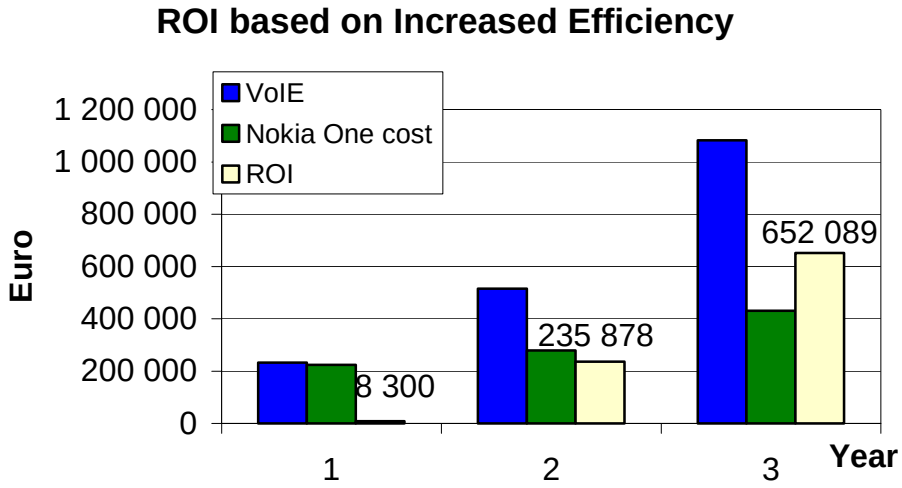
1.5 ROI based on Increased Efficiency

Combining the theoretical monthly cost of Nokia One with the value of increased efficiency gives a picture of the expected return of investment based solely on increased efficiency. The cost of Nokia One is specified in section 3.2 Impact on Communication Cost.

Naturally it is the travelling employees who create most business value with Nokia One because this group of employees have the highest need of flexible and mobile tools.



As shown in the chart above, it is possible to realise significant efficiency value with very small rates of daily conversion between idle time and productive time. The expected annual ROI is shown in the chart below.

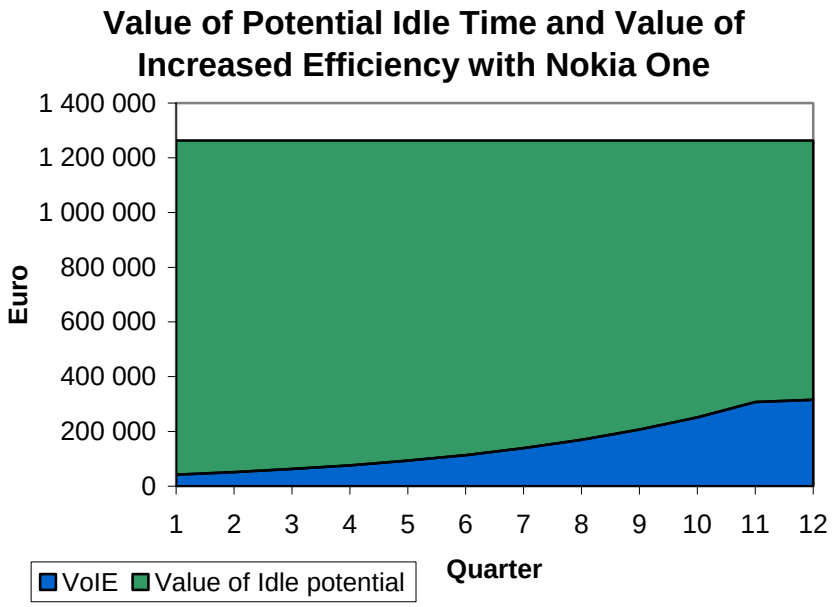


	Year 1	Year 2	Year 3
Share of potential value realized:	4,60%	10,20%	21,42%

Internal resources for installation (5-10 man days), training (1-2 man days) and operation of the internal Nokia One help desk function are excluded from these calculations.

This chart shows the value of idle time which is expected to be realised during the first three years with Nokia One.

The Nokia One calculation is very conservative and the actual ROI to "Company X" could be much greater than the estimate.



2. Expected Productivity Increase

Introduction of Nokia One in "Company X" is the beginning of an always-connected culture, which enables employees to respond to important and urgent business. The lead-time for business transactions are expected to decrease and the workflow is expected to become smoother.

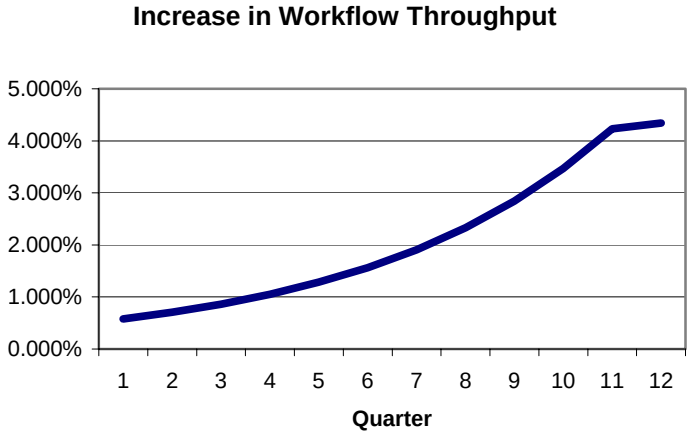
The value of shorter business cycles could be better estimated with more detailed information about transaction processing at "Company X". However, a reduction in lead-time can have a direct impact on the turnover and customer service level, especially in sales and service units.

Based on current knowledge, the average reduction of the lead-time for business transactions has is estimated in this section. During an evaluation it is possible to register the value of increased speed of reaction.

2.1 Expected increase in workflow throughput

Based on the assumption that business events are equally distributed over time, it is possible to estimate the overall average reduction of lead-time of business processes. The estimated potential increase in workflow throughput is for "Company X" calculated to be 4,342%.

Transactions done by Nokia One are on average shortened by half of the time before the next on line connection to the office network. The number of transactions is estimated based on the amount of work time out of office and the assumption that transactions are spread equally over time.



For short distance travelling days the target average increase in workflow is half a day for all transactions done by people on short distance travelling, which is 160 out of 625 employees in average per workday. The value for short distance travellers is: 0,5 standard workday / 160 * 625 = 1,95%

3. Expected Impact on Communication Costs

Nokia One will influence the mix of remote access and communication cost in "Company X". It is expected that users will use Nokia 6310i phones and Nokia 6210 phones.

SMS: The number of SMS' sent from mobile phones are expected to increase. Employees will use SMS to get notification of important mails coming into their inbox, check their calendar, look up contacts in the corporate directory and handle e-mails. Handling of e-mails on small phones will primarily be forward and short replies.

WAP: The Nokia One WAP interface provides convenient and fast access to read long e-mails, even on small phones. WAP will be used over GPRS on 6310i phones where possible and alternatively over GSM on 6210 phones and in locations, where GPRS is not available, GSM minutes for WAP use will increase, as WAP is not in use in "Company X" today.

Voice: The Nokia One voice interface is expected to be used for listening to e-mails and to create voice replies to e-mails. Especially while travelling between home and the office. Voice minutes for this purpose will of course increase, as this functionality is not available today in "Company X".

Introduction of text based mobile communication will influence the normal way of communicating. It is expected that minutes used on conversation on mobile phones will drop, and by experience the number of synchronisation of laptops over mobile phones will decrease significantly. The use of the Equant service is expected to drop. Today employees use the Equant solution 4-5 hours a month at a cost of 4-7 USD per hour.

3.1 Theoretical Nokia One Communication Costs

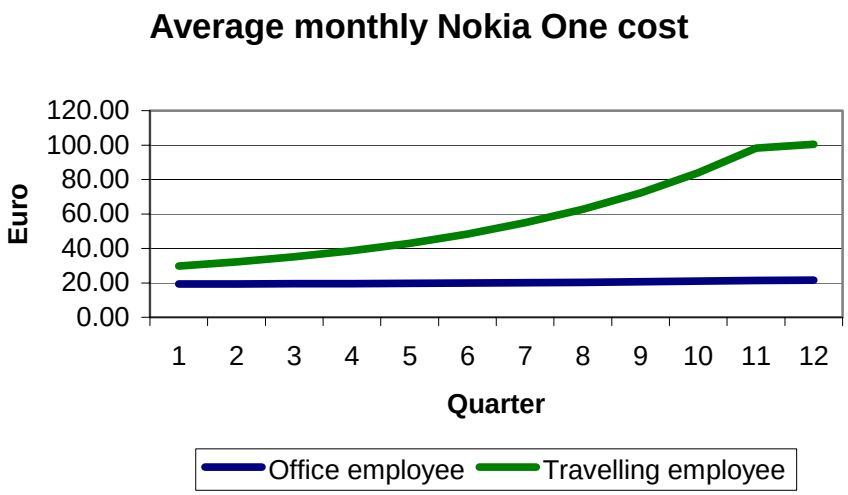
To calculate the expected ROI it is necessary to estimate the theoretical Nokia One communication costs for "Company X" employees. During the evaluation the total impact on communication cost will be monitored.
Following values are used for the calculations:

Avg. Incoming mails / workday	15
Avg. Outgoing mails / workday	15
Avg. SMS / mail	3
Avg. Minutes / mail	1,5
Avg. Control SMS / day	8

Following rates are used for the calculations:

Avg. National SMS rate (Euro)	0,05
Avg. International SMS rate (Euro)	0,33
Avg. National voice rate per minute (Euro / min)	0,14
Avg. International voice rate per minute (Euro / min)	0,67
Avg. Nokia One outbound SMS rate (Euro)	0,14
Nokia One subscription (Euro / Month)	19,00

It is important to notice that use of GPRS will decrease the cost of online connections using WAP. In all calculations we have used the worst case by expecting all WAP sessions to be based on GSM connections.



4. Expected Impact on Balance of Work and Life

Implementing Nokia One in the "Company X" organisation is expected to have a positive impact on the quality of the daily work life. The fact that employees are always connected means, they can be calmer and improve their perspective, in addition to making it possible to plan better.

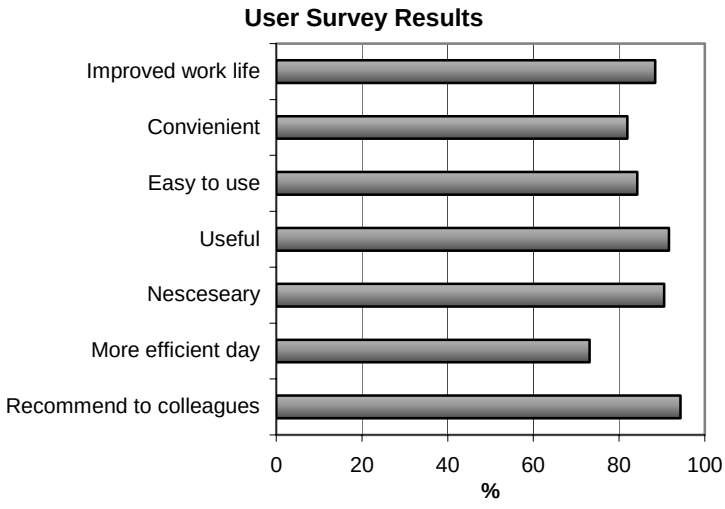
The phrase "Work is no longer a place" becomes more and more true. An increasing number of "Company X" employees are on the move. Their efficiency is reduced, the workflow gets delayed and often stress on the individual increases.

User experience shows that the Nokia One service makes employees more efficient, and at the same time Nokia One users feel they have more control over office communication, after they have had access to Nokia One.

4.1 Experience from Nokia One User Surveys

Up front it is impossible to calculate the value of an improved welfare of employees. User surveys, made among Nokia One users, gives some indication of the reaction, which could be expected from "Company X" employees.

During the evaluation it is possible to register, how employees feel about changes in their work life by asking them to fill in questionnaires. Estimating the business value of this kind of improvements is, on the other hand, very difficult.



5. Measurement During Evaluation

The purpose of the Nokia One evaluation project is to study the impact on the company culture and the business value of Nokia One in the "Company X" environment. At the end of the evaluation project measurement done during the evaluation can be used to compare the results against the expectations described in this business case.

Exact studies and registrations in the evaluation project would interfere too much and require too many resources; this is why, a more practical approach is recommended. Questionnaires and sheets for registration will be provided based on the following examples.

5.1 Increased Efficiency Estimation

More than the direct time used to read or writ e-mails will be activated by Nokia One. The fact that employees are able to respond to incoming mails and other events using Nokia One enables them to think, plan, prioritise, seek information and make phone calls during a larger part of the idle work time.

The following example came from a user at another company. A travelling employee estimated the direct achieved increase in work time during one week based on a printout of all mails sent and received.

Measured increase in work time during one week

Day	Received mails	Read on phone	Send mails	Written on phone	Direct increased minutes
Monday	28	7	5	0	8
Tuesday	12	6	9	3	37
Wednesday	14	14	6	6	54
Thursday	11	11	1	1	26
Friday	11	4	8	1	18
Total	76	42	29	11	143
Value Euro					176,00

These numbers show only the direct active time used for reading and writing the mails on the phone. Total time for the week is 143 minutes. Based on the normal work hours and the total cost for the employee the value of the increased work time is 176 Euro.

If this employee was a "Company X" employee the realised efficiency increase could be calculated as shown in the table below. The specific week is divided into the three different profiles. This way the standard idle time for a workweek with this mix is calculated by multiplying with the calculated daily idle time for the different profiles. In this example, the average realisation rate for the week is 44,97 %, which is very high compared to the estimated 25% for "Company X" employees.

Achieved increase in work time

Day	Office days	Short distance days	Long Distance days	Standard Idle time	Realised efficiency increase
Monday	0,5	0,5		0,71	18,78%
Tuesday	0,5		0,5	1,04	59,29%
Wednesday		1		1,09	82,57%
Thursday			1	1,75	24,76%
Friday	0,5	0,5		0,71	42,25%
Total	1,5	2	1,5	5,3	44,97%

5.2 Estimation of Productivity Increase

The productivity gain from Nokia One is based on lead-time reduction in workflow and the value of increased speed of reaction. An objective measuring of the impact from Nokia One is very difficult if not impossible.

Analysing the above mentioned travelling employee's work week it was possible to decide, which transactions had a real impact on the workflow. Based on that and the assumption that the employee would have accessed the e-mail from a laptop in the evening, if Nokia One were not available, the realised workflow improvement can be calculated:

Realised workflow improvement

Day	Received mails	Send mails	Transactions	Trans-actions with workflow impact	Workflow improvement %
Monday	28	5	33	0	0,00%
Tuesday	12	9	21	3	7,14%
Wednesday	14	6	20	8	20,00%
Thursday	11	1	12	3	12,50%
Friday	11	8	19	1	2,63%
Total	76	29	105	15	7,14%

As shown 15 transactions had an impact on the speed of the workflow. In average this impact was half a day and this means in total that the e-mail based/initiated workflow was improved by 7,14 %. In "Company X" the ambition is to reach 8,98% in average after a three years period.

5.3 Measurement of communication costs

In this business case the cost for Nokia One communication is based on the expected number of SMS's, WAP and Voice minutes. In the "Company X" evaluation all communication costs are going to be monitored. Nokia One has an impact on the use of other channels and services.

	Before Nokia One	Actual period	Difference	Difference %
Subscription				
- Operator				
- Nokia One	0	19	+19	+100
Voice				
- Person				
- Nokia One	0			+100
SMS				
- Person				
- Nokia One	0			+100
Data				
- Other				
- Nokia One	0			+100
Dial-Up				
Total				

5.4 Study of impact on work life quality

During the evaluation soft values will be measured by user questionnaires. The example shows the kind of questions, which can be used to study the impact Nokia One has on users daily quality of life. Surveys can be done during course of the evaluation to compare opinion over time.

Example of simple questionnaire for users

1.	Do you feel less stressed using Nokia One?	Yes / No
2.	Does Nokia One improve your ability to plan the day?	Yes / No
3.	Does Nokia One make your day more flexible?	Yes / No
4.	Has your efficiency improved?	Yes / No
5.	Do you provide better service to customers?	Yes / No
6.	Are you able to support colleagues in a better way?	Yes / No
7.	Is Nokia One easy to use?	Yes / No
8.	Are you satisfied by the quality of the service?	Yes / No
9.	Do you prefer Nokia One for remote access?	Yes / No
10.	Do you think you get enough value for money?	Yes / No

5.5 Help desk activities

To observe the amount and kind of help desk services, which are needed, all user contacts to the help desk during the evaluation will be logged. Frequency and type of service tasks will be registered by the help disk function.

Example Information in the Help Desk Log

1. Date and time for contact
2. Date and time for problem solved
3. User ID
4. Device Type
5. Type of problem: Settings or Functionality
6. Subject:
    a. Nokia One User Profile
    b. Nokia One WAP
    c. Nokia One SMS
    d. Nokia One WEB
    e. Nokia One Voice
    f. Mail Server/Account
    g. Operator Service
7. Description/Comments

6. Strategic Benefits of the Nokia One Solution

"Company X" needs to implement mobile IT solutions to support and evolve the mobilized business culture. The Nokia One service fulfils all the expected requirements that corporations consider when choosing platform for mobile IT solutions.

6.1 No large upfront investments

Nokia One complements existing solutions and architecture in "Company X".

- No additional servers or software are required to install the Nokia One solution.
- The installation does not require any changes in existing systems, and changes in configuration are kept on a minimum. As a result, Nokia One can be installed with only 5 man days of work in the IT department.
- There are no minimum requirements for devices. Nokia One supports all existing mobile devices in "Company X". No large investments in devices or software for devices are needed.
- Training of IT people for the help desk function is 1-2 days, and users will be able to start using the system with 1 day of initial introduction.

6.2 No large continuing cost for operation, maintenance and support

- After installation all monitoring, maintenance and operation of the solution is done from the Nokia One data centre 24 hours a day all year around.
- No software updates on existing systems will be required and no software updates on handsets will be necessary.
- Only operational cost will be the internal help desk function, where users can get support from internal IT employees. The help desk function will be able to call on the Nokia One second-level support function for assistance. The evaluation project will show the level of required assistance to users, which naturally should be a declining need, when users get experienced.

6.3 Future proof and flexible

Nokia will continuously develop and maintain the Nokia One service, so it supports the rapid development, which takes place in the handset market.

Services for new relevant devices coming to the market will immediately be available for "Company X" employees without delay, and no changes in the "Company X" installation will be required.

Nokia One can be used on the Internet, in all wireless and fixed net telephone networks in the world. The future broadband wireless networks will be seamlessly integrated into the Nokia One service enabling "Company X" employees to always benefit of the best available network connection at hand.

New ways on communicating on mobile handsets, like MMS and others, will be integrated in the Nokia One service, when they are becoming general available in the countries where "Company X" operates.

The interface to back end applications are based on standard protocols, which means that "Company X" are free to switch to other standardized applications without substantial changes to Nokia One.

6.4 General corporate mobile IT platform

In the first phase "Company X" will have access to e-mail, calendar and phonebook using the Nokia One service. The Mobile Application Interface, which is an optional facility in Nokia One, makes it possible for "Company X" to use Nokia One as a platform for global mobile access to back end applications. The Mobile Application Interface is based on web applications, which means that all existing systems can be made available globally without large and expensive development projects.

Furthermore the Mobile Application Interface ensures support of future devices without any changes in the backend applications. This way maintenance to support the rapid changes in the handset market is held at a minimum.

Appendix 1: Input for Business Case

All calculations in this business case is based on following input from “Company X”:

1	Number of employees:	625
2	Avg. Active work hours / day (hours):	7,4
3	Avg. Home/Office travel time/day (min):	20
4	Avg. Workdays / month:	18,3
5	Number of travelling employees:	300
6	Avg. Number of travelling days per week	3
7	Avg. Percent of long distance travelling (%):	100 emp 1 day/week
8	Avg. Active work hours on long-distance travel days:	10 + travel time
9	Avg. Workdays between possible intranet access:	1
10	Avg. Effectively booked time/travel day (%):	50
11	Avg. Total cost per employee (Euro/month):	7.500
12	Avg. National SMS rate (Euro)	0,05
13	Avg. international SMS rate (Euro)	0,33
14	Avg. National voice rate per minute (Euro/min)	0,14
15	Avg. International voice rate per minute (Euro/min)	0,67
16	Avg. Nokia One outbound SMS rate (Euro)	0,14
17	Avg. Incoming mails/workday	15
18	Avg. Outgoing mails/workday	15
19	Avg. SMS / mail	3
20	Avg. Voice min/mail	1,5
21	Avg. Control SMS/day	8

Notes:

1 Total number of employees
2 Average number of work hours per workday exclusive breaks
3 Average transportation time between work and home in minutes (One way)
4 Average number of workdays per month
5 Number of travelling employees
6 Average number of travelling days per week
7 Percentage of travelling days witch are long distance
8 Average number of work hours on long distance travel days
9 Average number of workdays between intranet accesses when travelling. Example: If travelling employees is able to connect from hotel in the evening the number is 1.
10 Approximately average total cost per employee per month in Euro including all expenses.
11 National SMS rate
12 International SMS rate
13 National mobile phone minute rate
14 International mobile phone minuet rate
15 Nokia One rate per outbound SMS from Nokia One to user
16 Average number of received mails per workday
17 Average number of sent mails per workday
18 Average number of Nokia One SMS used per mail for reading/writing
19 Average number of Nokia One minutes uses per mail on the Voice interface
20 Average number of control messages used per day (ex. M=Fetch new mails, Notify On/Off)