

MAYORS CHALLENGE

WOW! Walk Our Way

Municipality of Larissa, GR
Konstantinos Tzanakoulis, Mayor

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Vision

1. What is the problem you are taking on?

Crisis.

Economic, developmental, eventually humanitarian.

An anxieting society suffers fierce unemployment, long lasting austerity, lack of investing initiatives, all these deteriorating people's health perspectives.

2. Why did your city choose this problem? Describe the problem's breadth and depth and its significance to your city, and include specific data points as appropriate.

Beyond feverish efforts to provide immediate relief to sufferers or vulnerable citizens, it is crucial for the Municipality to take actions that can – even partially - result in a permanent and significant change of the future of city residents.

Among other, one can attempt targeted catalytic interventions that will change life habits, leading also to a better city functioning.

Larissa who for years hosted Hippocrates, the greatest doctor of ancient Greece and finally received his dust, still has health issues at the center of its interest and its development axis.

We chose therefore to tackle the issue of citizens' health, planning a proposal that easily, simply and intelligently will change the life quality of Larissa, fortifying people's health and thus removing a part of crisis-imposed difficulties.

3. All "new" ideas stand on the shoulders of ideas that came before. Tell us what you know about prior efforts (programs, research, initiatives) to address this problem. What actions, if any, has your city taken on this issue? What about other cities? Tell us what elements you'll reuse and what you'll improve.

Walking, Socializing, Health, Technology.

All fundamental! We bridge them all in a new way.

Just to mention some walking initiatives:

Canada Walks!, Paths for All Scotland, Ramblers UK, Walk for Lunch USA, Walking for Health UK, Global Corporate Challenge, walkeurope, Walk 21.

And the most recent Michelle Obama's initiative "Let's move!"

Online walking tools:

MapMyWalk ,WalkIt , Walkscore etc.

There is also a vast range of equipment for serious walkers to keep track of their effort, and new smart phones also help.

Larissa has been actively caring for giving pedestrians enhanced walking conditions. Its pedestrian downtown (starting back in 1985), as well as special corridors in parks, ramps, resting benches etc encourage walking - apparently jogging and biking is equally favored.

We, here, for the first time ever, put technology literally **in place** to further facilitate and encourage people's walking. Citizens no more have to care about purchasing any equipment, charging it, keeping any kind of log, writing down anything or uploading recorded data. It will all be there waiting for them just to pass by! NFC technology will link every participant to the system, accumulating information and creating a qualitatively valuable sense of socialization.

4. Tell us the first sentence you'd like to read in an article about the launch of your project in the local paper.

Larissa moves people!

Our Municipality's project, Walk Our Way (WOW), won 5M Euros in Bloomberg Philanthropies's European "Mayors' Challenge", and we will lead the world's walking towards a healthier future.

5. Describe your idea and how it actually works on the ground.

We will deploy a - the denser the better - mesh of NFC sensors where pedestrians, bearing an appropriate token, will "check in" (or should we say "check by"?) to record their position, and hence their entire trail of walking. This will be absolutely voluntary, i.e. every citizen will be absolutely free to obtain or not the NFC token, as well as to check in or not at the one or the other check point.

NFC recordings will be transmitted via interconnected wifi spots, into the system's database

Walking will also be more enticing for all citizens, through:

- Expanding and ameliorating of walking paths with lighting, trees, kiosks.
- Lockers' units to serve as resting bases and changing room.
- Sets of gym equipment for walkers to work out
- A caravan set up as "walking clinic" equipped with a defibrillator and other medical gear
- Sponsors' supporting tents promoting sport gear, body composition analyzers, healthy diets etc

More active citizens will be given - always voluntarily - advanced instruments, some with telemetry, plus other perks. Data of people / walking distances will be thoroughly evaluated by the Medical (both Orthopaedics and Cardiologists) and Gymnastics Faculties of UTH (MEDUTH and GYMUTH from here onwards), who will provide guidelines, monitor the individuals' progress, choose the walkers to obtain the aforementioned special equipment and conduct extensive research in their scientific fields.

Information will be broadcasted in a multichannel way (email, SMS, RSS), giving people daily report on their walking activity and communicating announcements, current site of the walking clinic etc.

6. Explain specifically what elements are new and innovative about your idea.

The idea is new and innovative, because it puts the state-of-the-art today's technology of easy communication and data transfer, namely NFC, into the use and facilitation of the citizens' most usual physical exercise. It also feeds valuable data of an unprecedentedly-sized sample of population into scientific research.

That is, it uses a totally innovative method to support:

- Citizens' health and engagement
- City's necessary connectivity, preparing Larissa for the Internet of things
- City's scientific competence

7. Is your solution primarily (a) solving an issue-specific problem, or (b) improving the way city government does its work? (choose one only)

Issue-specific: Public Health/Healthcare

Impact

8. Describe the citizens or stakeholders who this idea will impact most. How will your idea improve their life, the way they work, and/or their experience with the city?

Our idea targets the vast majority of our citizens. Imposing, always on an absolutely voluntary basis, a new way of life with more walking, it will lead a big part of Larissa's inhabitants towards a healthier future, empowering in the same time their engagement with the city, as they will all share and "compete" on a common cause. Moreover people needing special attention will have an enhanced opportunity to be thoroughly monitored and guided at their exercise. MEDUTH will also conduct extensive applied human performance research, evaluating walking effects on cardiovascular and musculoskeletal indices and quality of life.

9. Talk to some actual citizens and/or stakeholders from other areas of government about your idea. What are three of the most interesting responses (please enter one interesting response per box)? What stands out as exciting and/or most impactful to people?

INTERESTING RESPONSE 1

We understand that caring local authorities can urge their citizens towards systematic exercise and help improving their quality of life

Associate Professor in Orthopaedic Surgery, MEDUTH

INTERESTING RESPONSE 2

I believe in the wealth of city data and in collecting and processing them to improve citizen's health, city attractiveness, productivity and innovation.

Account Manager, Public Sector, Cisco Systems, Greece

INTERESTING RESPONSE 3

I think that Larissa's walkers will engage more with their habit if they are motivated and marked as "regular walkers", "Walk Our Way" is a very interesting idea.

Local Journalist

10. What two to four key metrics will you track throughout this project, starting now and continuing through and beyond launch? How will you collect this information?

Main metrics showing the extent and value of our intervention will be (1) the number of people that adopted walking as their preferred and everyday way of working out and (2) the measurement of their endeavor.

In the starting phase, properly addressed evaluating questionnaires will be used.

After launching, due to the nature of our proposal, we will apparently be gathering a vast amount of data on these two metrics, unprecedentedly enriched with detailed information on our walkers' physical performance, social characteristics and quality of life. Preferred as well as avoided walking routes will feed a third valuable metric.

Implement

11. Provide the name and title of the city employee who will serve as project lead. Describe their position within your city's government.

George Oikonomidis, Civil Engineer NTUA.

Directing the Municipality's central coordinating office (Operational Planning Dept) he worked with his team to develop - and get enthused by - the idea behind present proposal.

12. List the team that will implement this idea within your city government. What value does each member bring?

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- Kostoulas Aristotelis, Oikonomist MBA, University Of Macedonia
- Vlachou Spiridoula, Civil Engineer UTH,
- Karanika Athina, Civil Enginner M.Sc. AUTH

are the rest team members and will share project conducting responsibilities, project management, and administrative work.

Technical and Garden Services of the Municipality will take on studies and construction work and IT dept will handle informatics planning, cloud "installations" and the rest of supporting work.

Municipal Athletic Department will run the program and supervise the SLA contractor, design and implement perks plan, cooperate with sponsors and support MEDUTH and GYMUTH in their research.

13. Who are all the people that need to say yes in order to bring your idea to life?

Our idea brings the merit of not needing any permits to be issued!

It is all up to the Mayor's and Municipality's City Council's institutional power to install the system, connect it and run the program.

14. Thinking about the phases from idea to implementation, what parts of your idea might you prototype? What early opportunities do you see for testing aspects of your strategy that can help inform your overall idea?

A first pilot will be tested, including a few NFC sensors plus one wifi repeater, so that we will be able to test and witness the functioning of the system.

Pilot will be integrated by testing data transmission, storing data in a cloud hosted database, and returning SMSs and emails toward users.

Pilot's tests will be broadly communicated in order to raise interest and help plan final project's implementation in full scale.

Medical researchers will test the functioning of more sophisticated equipment and telemetry for final calibrating, with refer to indexes of physical capacity and scales of quality of life.

15. Describe your implementation plan and its key phases. Specifically note when you will (a) begin implementation (assuming you receive a prize in fall 2014), (b) fully launch, (c) record your first measurable outcome or impact, and (d) achieve full scale.

Our plan begins in March 2015 (point a) after budget fine tuning. Up to then, the pilot will have been completed.

The plan needs to have two phases:

First: Setting up the system i.e. putting in place the NFC and WiFi network (a National WiFi network is due for 2015 also) and finishing the procurement work as well as preparing the publicity campaign and legal groundwork. All this is foreseen for September 2015, just in time to launch the project and make it "Talk of the Town" just after summer vacations (point b)

Second: Improving infrastructures. This includes the majority of the infrastructure work that is not included in phase #1. These interventions, requiring some technical studies, will be constructed in a period of approximately one year, up to next September of 2016 to set the stage for a new refreshed deployment of our campaign calling people to join city's common endeavor. This comprises the full launching (point d), apart for system's further extensions.

Due to project's nature, immediate results will be recorded from Sept. 2015 and growing. First collateral findings (on people's physical capacity and quality of life) are awaited over the next two to three years. (point c).

16. How will you engage organizations, talent, and/or resources outside of the municipal government both in developing your solution, as well as during implementation? Who would you like to engage and how would they add value to your project?

We have turn to the relevant scientific bodies of the city i.e. School of Health Sciences, Faculty of Medicine, UTh and the ICT Department of the Technological Educational Institute as well as the UTh's Department of Physical Education & Sport Science.

We already cooperate with them in various programs ("R.enewing Health", being a recent one, run by the ICF-awarded as "Smart21 Communities of 2009", e-Trikala SA, bearing important expertise in innovation)

To reach people's interest and enliven the project, we'll call city's hiking, walking and biking clubs, plus the several hundreds of individuals serviced by the Municipal athletic department.

17. At this stage, what is your best estimate of the cost to both implement and sustain your idea? Provide two costs with a brief explanation: one for all the work that will lead up to launch, and another for the project's year-to-year cost.

Leading up to launch

€ 2.747.000

Phases

#1: = 1.203.400 Euros

#2: = 1.543.600 Euros

Excess prize money if available will be invested in further expansions and in making the network denser.

In the case of a prize of 1 M Euros we will have no problem finding the remaining 203.400 Euros to launch the system.

**Year-to-year
€ 95.930**

From which 55.000 operation costs and the rest for minor expansion, depending on specific demands.

Spending this money will not be a problem, since today's yearly Municipal expenditure in sports sums appr. 900.000 Euros

18. **What are the three largest risk factors that could derail your idea and why? What is your plan to mitigate those risks?**

The proposed idea, faces no real dangers whatsoever, with respect to its implementability nor its operability, once launched.

It is also our hope that the interest and the presence of major athletic equipment sponsor companies will raise citizens' eagerness to know about the project, adopt it, embrace it, thus helping to overcome the only risks, being:

1. Privacy concerns. This is answered, and we will have to communicate it extensively, by the strictest declaration of the voluntary character of the project. A specific "privacy scale" will be followed and the most rigorous provisions of cloud hosting policies as well. Every individual will have access only to his or hers data. Medical researchers will also maintain appropriate rules.
2. Abuse issues. "Attacks" against the functionality of the program (e.g. fake check-ins on a motorbike) will be diminished by the correct placing of system's elements.
3. Other technicalities that might raise any controversies, worries or complaints will be dealt with readily and with taking into consideration people's opinion. In any case system's numerous parts make it sufficiently redundant to withstand any temporary local problems (even usual maintenance). Users will be anyway early warned about system's functioning in its different areas.

Transferability

19. How universal is the problem you're addressing? Make your best effort to quantify the effects of this problem locally, nationally, and globally.

Crisis, as the operative cause of the problem we chose, is prevailing throughout Europe (mainly south) but the problem of health is totally global.

We try building a counterbalance on economic recession's detriment of population's health.

In any case, the health issue is apparently present round the globe, with each country facing various threats.

Our local health factors aren't any worse than the national ones, set aside Larissa's midland-type climate being a little heavier.

On a global scale, health threats vary dramatically, if we only consider developed countries' obesity problem against third-world's lack of adequate health infrastructure and prolepsis.

20. Share your idea with city employees from three different cities (feel free to reach out to any city that might benefit from it—not just ones that are eligible to apply for the Mayors Challenge). How do they respond? Describe the need they see and any challenges they anticipate.

CITY 1

A terrific initiative that tackles problems common among the developed countries and offers widespread health and economic benefits. We would welcome this in Heraklion as well.

CIO Municipality of Heraklion

CITY 2

The project seems quite promising. Enabling new technologies, it deals with a great issue of modern cities, upgrading the quality of life. It must be intensively communicated.

CEO E-Trikala SA

CITY 3

The city "fellow traveler" of the citizen.

An innovative action helps people both mentally and physically, and, through mass data collection, paves new roads for Medicine.

Employee, Municipality of Skopelos

21. Make the case for why your idea, if successful, will be able to spread to other cities.

The idea is absolutely transferable to any city in the world.

We dare say that the word "spread" is too weak to describe what will happen, should we officially launch our project. This will trigger "walking cities" mushrooming all over Europe and further more. All it needs is being informed about it and seeing the easiness and the benefits.

We like to think of a worldwide net of cities competing for walking activity and records under WHO's lead! Interoperable project's cloud application will give the possibility for people to walk around in a city abroad and yet be welcome and "credited"!

Summary

Imagine you are presenting your idea to the Mayors Challenge selection committee. How would you summarize your idea in a way that gets people excited for its implementation? Make sure you clearly articulate the problem, the solution, and how your idea will change your city for the better.

Sphinx's riddle, according to Greek mythology, implicitly matched man's culmination era with the ability of natural walking.

World Health Organization data shows that:

Crisis results in health expenditure cuts that, subsequently, are statistically correlated with decreased life expectancy.

We chose to counterbalance this by encouraging the simplest and easiest way of working out for our citizens:

We'll entice them to walk in and around the city in an ameliorated environment while monitoring their effort in the simplest manner.

Absolutely voluntary, every citizen will be equipped with an NFC token (either card or bracelet, etc) and will check in at NFC readers installed allover in town! Data of walked trails will be recorded, and citizens will be electronically informed on their daily walk achievements. Concurrently, scientists and researchers of the U.TH. will correlate people's activity to improvement of physical capacity and quality of life providing at the same time advise for prevention of adverse effects and for further progress.

But it's not all! Rewards and perks will await our more active walkers!

Sensors of several medical parameters will be granted to them, as well as sporting equipment, discounts at collaborating companies, hiking excursions, bus tickets (... for the rainy days) and many other.

The idea also brings reduced vehicle use and increased citizens' engagement in a city's common cause.

The idea can reach a worldwide spread, escalating up to a WHO competition of "walking cities".

Additionally, we will lay the foundations of the emerging Internet of Things for the city!

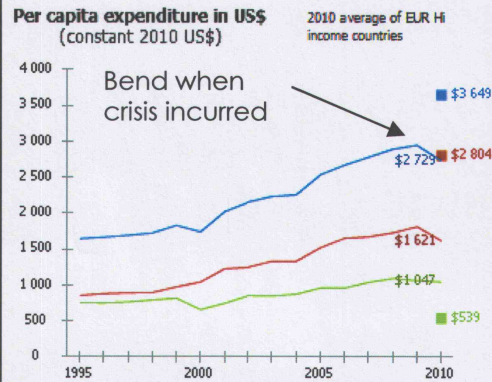
A great idea needs a great name. What are you calling your initiative?

WOW! Walk Our Way

THE PROBLEM

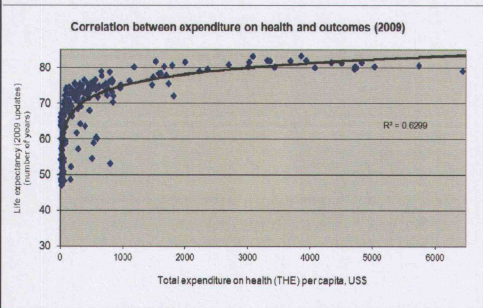
Crisis results in cutting health expenditure

Fig. 1 WHO Global Health Expenditure Atlas p. 127



Life expectancy is directly related with health expenditure

Fig. 2 WHO Global Health Expenditure Atlas p. 8



* Estimated as weighted average (weighted by population).
Source: National Health Accounts unit, Health System Financing, EIP, World Health Organization www.who.int/nha

So, what do we do?

We build a counterbalance to this, moving our citizens at the upper margin of fig. 2

How?

LARISSA'S INTERVENTION

- We set the feat: to get fit
- We stand up on our feet
- We move. Forward.

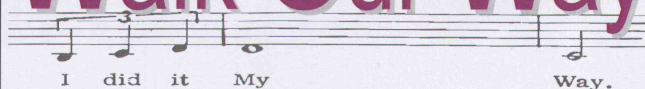
we walk!

But:

- We walk smart
- We walk & record

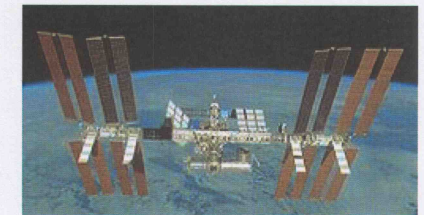
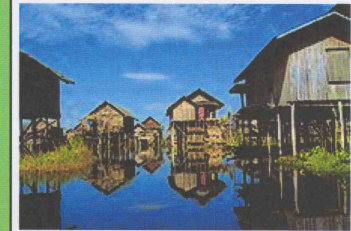
we

Walk Our Way



Can others do the same?
YES, absolutely,

(well,except them)



afterall WOW gives birth to:

“Walking Cities”

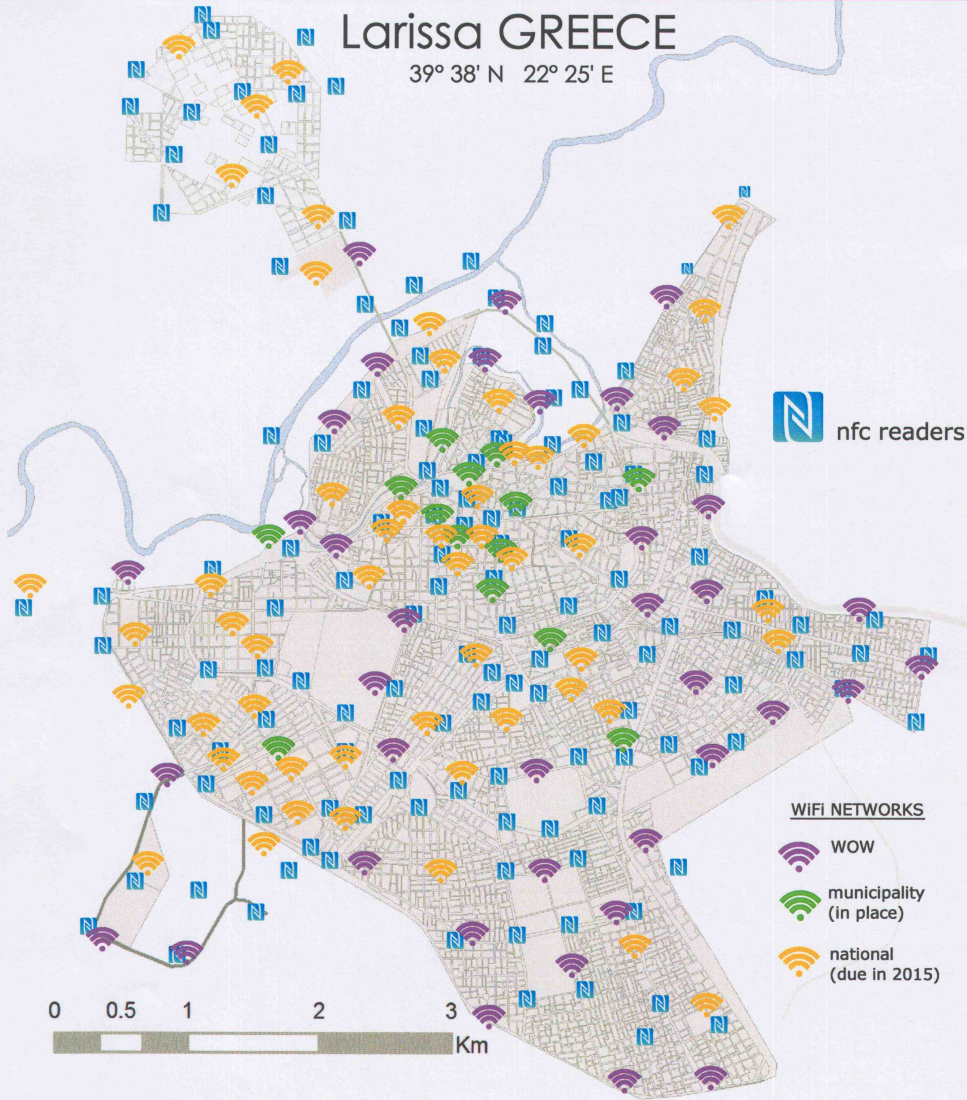
The implementation of the idea can escalate up to a worldwide cities cooperation and competition in the framework of World Health Organization mission!

SPREADING OUT

IMPLEMENTATION

Larissa GREECE

39° 38' N 22° 25' E



nfc readers

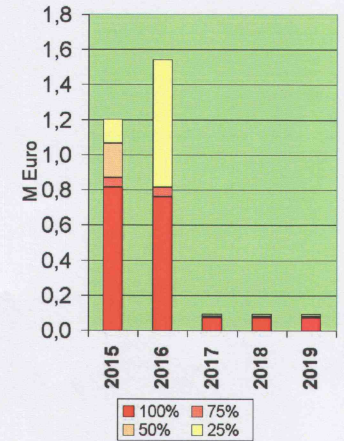
WiFi NETWORKS

- WOW
- municipality (in place)
- national (due in 2015)

WOW project budget and timetable

no.		Leading up to launch			Year-to-year	cause dependency*
		phase A	phase B	Total		
I	Electronic Equipment	633.000	515.000	1.148.000	12.500	
1	cards, bracelet	15.000	15.000	30.000	500	100%
2	heart rate monitors	250.000	250.000	500.000	5.000	100%
3	special meters	250.000	250.000	500.000	5.000	100%
4	nfc readers	60.000	-	60.000	1.000	100%
5	wifi spots / repeaters	50.000	-	50.000	1.000	50%
6	control center	8.000	-	8.000	-	100%
II	Electronic Application	36.500	1.500	38.000	2.000	
7	Application Development	35.000	-	35.000	-	100%
8	Web hosting	1.500	1.500	3.000	2.000	100%
III	Infrastructure	362.400	749.600	1.112.000	26.230	
9	nfc readers power	15.000	-	15.000	1.500	100%
10	nfc readers bases	4.000	-	4.000	80	100%
11	nfc readers photovoltaic power	30.000	-	30.000	600	100%
12	wifi spots / repeaters power	15.000	-	15.000	300	50%
13	wifi spots / repeaters connections	20.000	-	20.000	400	50%
14	pairs wireless link	44.000	-	44.000	-	50%
15	pedestrian bridges	-	360.000	360.000	-	25%
16	pavements	75.000	225.000	300.000	3.000	25%
17	pedestrianisation	-	80.000	80.000	-	25%
18	bike paths	25.000	25.000	50.000	10.000	25%
19	lighting along side paths	22.500	22.500	45.000	3.000	25%
20	ramps for people with disabilities	6.400	1.600	8.000	1.200	50%
21	athletic equipment	6.000	6.000	12.000	4.000	75%
22	tree planting along side paths	12.500	12.500	25.000	1.250	25%
23	urban equipment	2.000	2.000	4.000	500	25%
24	lockers bases	15.000	15.000	30.000	-	100%
25	vertical marking (walking, biking)	30.000	-	30.000	200	50%
26	horizontal marking	30.000	-	30.000	200	50%
27	routes' maps	10.000	-	10.000	-	100%
IV	Services - Staff	32.000	152.000	184.000	31.200	
28	assistant staff	-	120.000	120.000	12.000	100%
29	special / scientific staff	32.000	32.000	64.000	19.200	100%
V	Medical	50.000	50.000	100.000	-	
VI	Walking clinic caravan	50.000	50.000	100.000	-	75%
VII	Publicity	57.000	33.000	90.000	8.000	
31	Publicity campaign	42.000	18.000	60.000	5.000	100%
32	telecommunication costs (SMS)	15.000	15.000	30.000	3.000	100%
VIII	Legal	32.500	32.500	65.000	6.000	
33	Legal support, Insurance coverages	32.500	32.500	65.000	6.000	100%
IX	Operation	-	10.000	10.000	10.000	
34	Operation contractor (SLA)	-	10.000	10.000	10.000	100%
	TOTAL	1.203.400	1.543.600	2.747.000	95.930	

Phase A: Setting up the system 2015
Phase B: Improving infrastructures 2016



* All implementation costs are weighted according on how much each of them is necessary for the project to be implemented, or it will just add some value:

Level	Dependency
100%	Stuff absolutely necessary for the project
75%	Stuff, without which the project would be launched but not integrated
50%	Stuff without which the project would not be as attractive and productive
25%	Stuff useful to the project, but that would anyway be constructed or purchased

PRIVACY SCALE	You give:	You get:
On the privacy level you choose on obtaining your NFC token:	1. nothing	Emailed info towards token's ID mail e.g. wow302410012345@provider.com
	2. age, sex, height, weigh	Eligibility for special monitoring equipment and medical screening
	3. name	Full perks (tickets, discounts etc)

