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imagine X cup™

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capture ^{Beta}

TEAM: GREEN BEANS

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INDEX

Our green issue	1
Our green scheme	2
Green scheme internals	4
The green opportunity	5
Appendix	6
Bibliography	7



Use **MobileCapture** to examine and gather text, sound, photo and video of an environmental occurrence in space and time. Share them by using **CaptureNetwork** while interacting with friends, family and people worldwide. Use the data provided by **SenseCapture** to uncover real environmental data trends in your location.

It is our turn to help create a greener tomorrow!

share

react

evolve

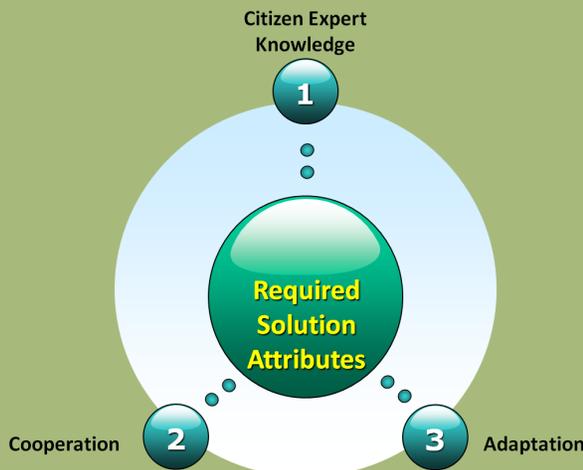
Our green issue

By the end of this year, **50% of the world's population will live in cities** [1] and contribute to **80% of the world's carbon dioxide** [2]. These emissions are responsible for causing **global climate changes** [3] and are being **addressed by authorities** through sustainable planning and policies [4]; nonetheless, they have **failed to cause the expected impact** [5]. Therefore, **citizen participation** is now considered an integral part of the strategy to **resolve environmental sustainability problems** [6][7][8].



Current sustainable computer systems lack concepts to allow citizen participation

Deniz Zeynep states [9] that current **solutions lack three different attributes**, shown in **Fig(1)**.



Fig(1)

Since citizens are demanding more control over decision making, they can provide these missing attributes into inclusive environmental solutions. However, they will not be able to use current developed computer systems because they are expert, decision-making and simulated systems, just like the ones presented by the

U.S. Environmental Protection Agency [10][11][12]. Although there are organizations¹ that provide **plausible proposals**, they **lack the attributes or innovation to promote active, precise and renewable participation** from citizens.

Our green scheme

Capture is a web 3.0 based micro-media mobile social-network

Capture is a **versatile hybrid system** whose essence lies in the hands of green trait citizens [13], as shown in **Fig(2)**. These individuals will have the possibility of solving environmental issues like the ones described in **Fig(3)**. Currently, our solution consists of three modules.



Capture the good and bad actions in your daily environment. **Notify** your friends and family of what you have encountered on your way to your destination.

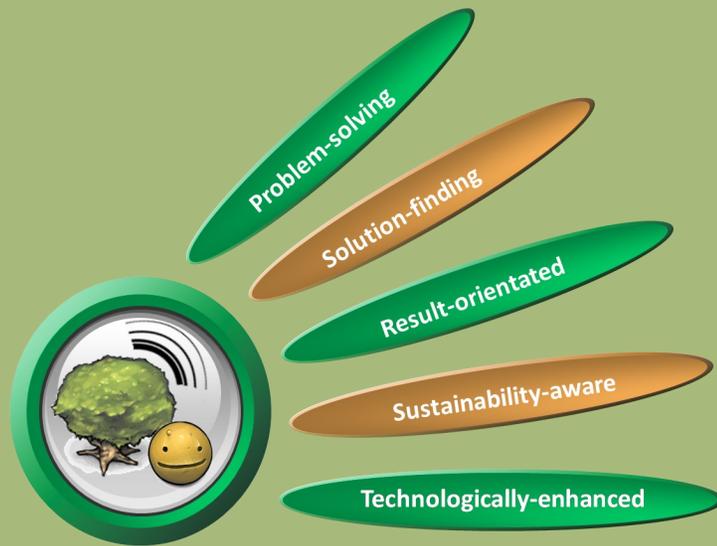


¹ Organization proposals reviewed for this document: [14][15][16][17][18][19][20][21][22][23][24][25][26][27].



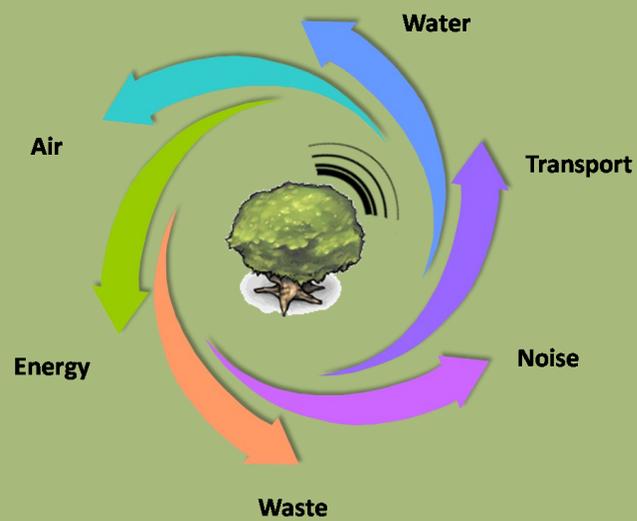


Capture enhances the green citizen traits.



Fig(2)

Capture tries to resolve some of the most important environmental problems.



Fig(3)



Get to **know** your locations environmental problems and **work together** with others to **plan** and **resolve** them. Take individual or group action.



Capture consists of:
MobileCapture,
CaptureNetwork and
SenseCapture.

To begin, **MobileCapture** enables you to gather, create, geo-tag and upload text, sound, photo and videos as evidence of your locations' environmental problems (through smartphones), giving you the possibility of consulting others as well. Next, **CaptureNetwork** provides you with an interactive space to share events and drive expert, cooperative and adaptable solutions that can be acknowledged by anyone or individuals you choose. Finally, **SenseCapture** recollects environmental geo-tagged metrics that are shared with everyone to allow awareness and trend calculation of unforeseen problems. **Capture** provides the following benefits:

- ✓ Incorporates the needed attributes for **tailored environmentally sustainable solutions**.
- ✓ **Simplifies evidence**.
- ✓ **Minimizes efforts in the recollection and publishing process**.
- ✓ Provides a **collaborative constructive** social network.
- ✓ Maximizes **evidence comprehension** through a micro-managed multimedia structure.
- ✓ Integrates **location aware** services.
- ✓ Facilitates **automated recollection of environmental metrics**.
- ✓ Increments **availability** through the web.
- ✓ Supports **extensibility** for other hardware and software.
- ✓ Resolves the necessity of managing and sharing through **data standardization**.

evolve

Become part of a **new era** while using your electronic devices to **empower** the world and help make sustainable environments for everyone.



Green scheme internals

As with any great experience, the **Capture** paradigm starts from the moment you identify an environmental problem or merely suspect there might be one.



Capture system uses the latest Microsoft technology to allow you to get the job done quickly and correctly.

First of all, you whip out your Windows Mobile 6.0/.NET Compact Framework 3.5 smart-phone and use **MobileCapture** to recollect and organize your text, sound, photo, video or other files that summarize the event. With MapPoint, you will be able to select and view locations around the world. It is then stored locally on the device using XML to describe and facilitate sharing with other platforms.

If you do not have a smart-phone, you can either use the **CaptureNetwork** webpage by selecting multimedia on your computer or other devices; or **SenseCapture** to automatically recollect and share environmental data on a fixed location.



Secondly, you transparently share your content through WCF, providing you with a secure, reliable and interoperable communication, with our backend that utilizes Windows Media Services to standardize and stream media, an NTFS file system to store them, and a SQL Server 2008 database which contains its descriptive meta-data.

Next, your **CaptureGroup** of choice will be notified of your recent entry. Now, they will be able to view it just as you wanted, either via **MobileCapture** or the **CaptureNetwork** webpage that uses Silverlight to enrich your multimedia experience and ASP .NET on top of IIS 7. Now, they can respond with a capture² of their own and rate your contribution.

² A set of multimedia and/or data sets that provide ecological events and related information.

*Capture is already
planning for future
integration with new
technology like
The Web 3.0*

*Capture's business
opportunity lies in
mobile social
networks that by
2012 will have a
revenue of \$52 billion
USD*

Finally, you can search for problems in your location with a specific time or read through the monthly reports presented by us, where we award ranks. Individuals with higher ranks will be in charge of communicating this information with their authorities. As a point in hand, your shared data will be transformed into a micro-format, through ADO .NET Data Services, so that we can facilitate location-based data browsing on the web by allowing third parties (as authorities and organizations) to create applications to consume them. By providing *Highly specialized information silos, moderated by a cult of personality, validated by the community, and put into context with the inclusion of meta-data through widgets* [28], we extend our paradigm to Web 3.0.

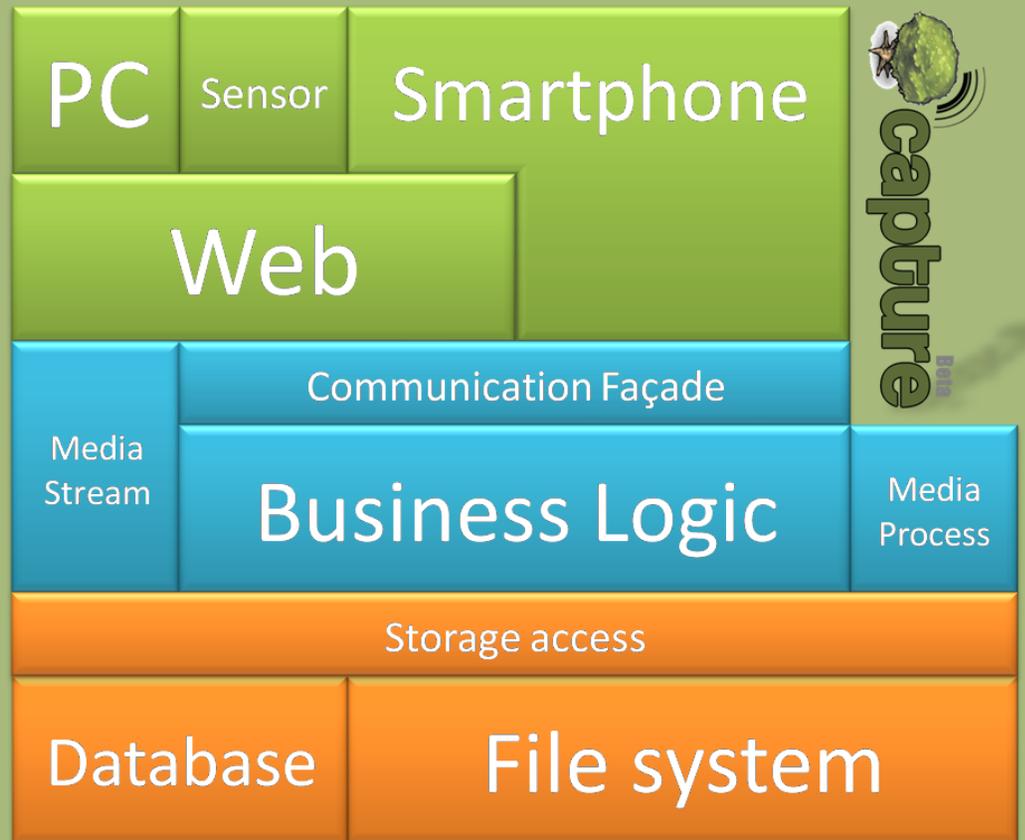
The green opportunity

According to the United Nations Secretary General, **the future of economic growth lies in the hands of environmental sustainability** [29] that is provided by a **green market which is growing and changing extremely fast** [30][31]. However, we can **enhance this business opportunity through the use of social networks** [31], which **by 2010 will have an investment of over \$2 billion dollars for advertising in the US only** [34] and **by 2012, will plateau** [33]. Furthermore, it is expected that social network **growth will be provided by mobile applications** [34]. This is directly related with the newest trend in the creation of small social networks [35] and market research that states that **by 2015 most of the mobile revenue will come from data** [36]. For this reason, it is calculated that **by 2012 mobile social networks will have a revenue of up to \$52 billion dollars** [37]. Thus, large communication companies have recently started a race to acquire mobile broadband coverage [38][39][40].





Appendix: Architecture



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