

# The CoWork Appliance : Requirement Discussion

Draft : 1

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## Summary

A coworking location requires a certain amount of technology, both to enable the co-worker to function and for the cowork management to physically and commercially operate the space. Part of that technology operates the infrastructure of a location. Our company supplies an appliance that manages shared-space infrastructure but not in many coworking locations. The creation of a cowork-specific appliance is therefore interesting exercise to all parties.

## Requirements Discussion

This document is a “Requirements Discussion” which seeks input from cowork practitioners and other interested parties. There are two key tasks:

- 1) To identify a set of functionality that is important to cowork operators and
- 2) Define interfaces to external functionality being developed by other players or which can be done with generic technology.

## How to comment

Requirement Specifications ask that that you evaluate the proposed functionality. We are interested if you might consider that some function is unnecessary, conflicts with other technology, or that in your experience there are specific constraints on the function. You might also wish that certain functionality can be disabled (eg records of Internet usage are a common area of concern).

The other area is missing functionality, or the “wish list”. This is exciting for us and even if we can’t help now, we will use this information to steer future developments or seek other developers to help out.

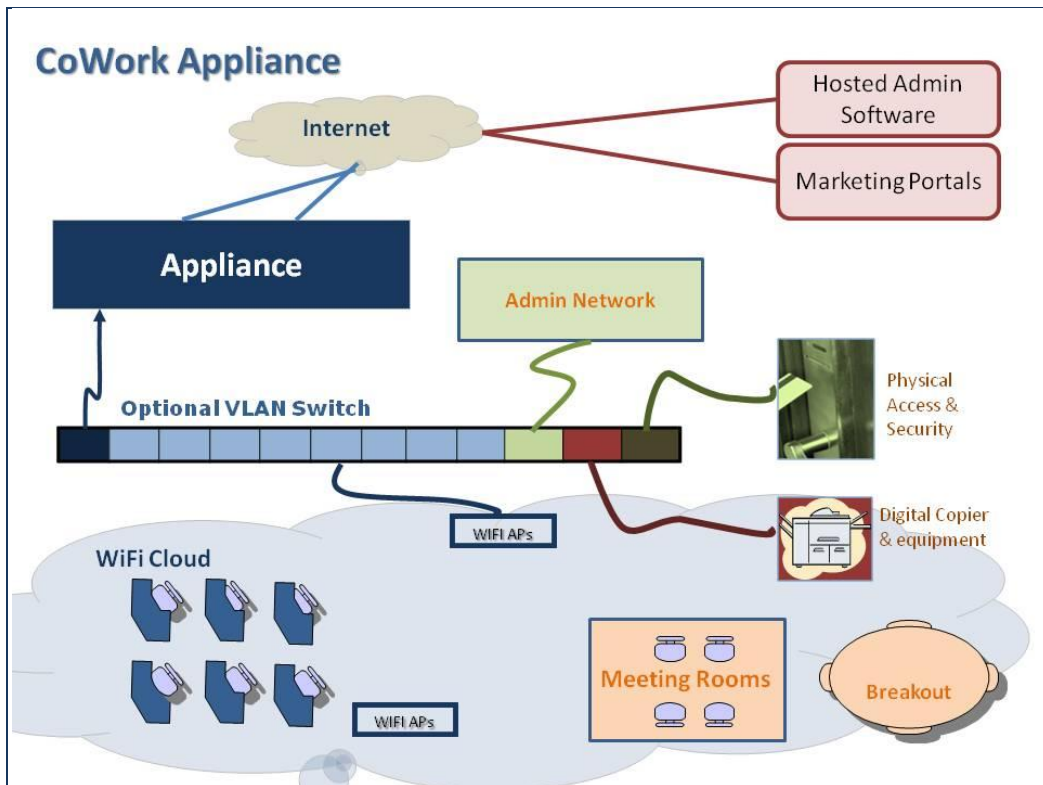
## Correspondence

This document will be posted to a Wordpress blog for access and comment: (<http://tonyfreeth.wordpress.com/>). The PDF can be commented and returned privately via LinkedIn or Facebook or direct to me. Notifications will be sent to relevant cowork social media.

## Cowork Appliance plan

Currently the following development plan is proposed:

- 1) Seek responses from Requirements Document and revise. Iterate cycle 2-3 times until Feb 2010 or complete.
- 2) Publish draft Technical Specification periodically and iterate.
- 3) Identify two cowork development sites (Europe and USA) willing to collaborate in early stage testing and modifications. Ideally the sites will have some IT resource but will probably not be an IT organisation.
- 4) Identify additional test sites for first and second candidate roll out.
- 5) First candidate release.



### Overview: The Appliance in a Coworking Context

To convert an empty space to a coworking space requires a transformation which is greatly assisted by technology. Much of this functionality should operate automatically or very simply if location costs are to be kept low.

#### Internet

Every location requires one or more Internet connections which need managing and securing. Internet access is distributed to users over both wired and wireless media.

The security of users must be ensured along with the site's own security, especially over WiFi.

At most locations some form of resilience of connection is required since users can't work if there is no Internet. This can also be load-balanced.

#### WiFi

WiFi management is especially difficult and there is a trade off between cost, security and management. Automatic management of devices simplifies.

#### Utility Networks

Users also need access to local network resources, notably print/scan/fax. In many locations there may be voice handsets provided and other peripherals used on a shared basis.

There may be automated coffee and vending, IP projection, digital signage and more. There is also the possibility of connecting to Steelcase Inc equipment, a requirement inherited from a related area.

Physical access control via networks may be required. [Note – a special controller is in development separately which will manage industry-standard access hardware.]

### **Internet Traffic**

Users need Internet traffic management for applications to work reliably, especially as Cloud applications become more popular. Anti-abuse measures (whether accidental or deliberate) protect other users. Inherent protection against Trojans etc is necessary.

There may be a case for multiple performance (bandwidth) levels of Internet access, as well as usage accounting.

Multiple circuits and load balancing reduce costs while increasing resilience.

Users may have VPNs, and SaaS or Cloud connections may have specific network needs.

### **Internet Compliance**

Many countries (eg Italy) have strict legal compliance issues that require controlled usage logging.

### **User Connections**

User access to the Internet needs a login portal, especially external users who are not legally contracted. The portal may be branded and may need to present terms and conditions and record acceptance. Links to payment systems may be needed for access. There is some overlap with management software here.

Users may require multiple connections (eg. iPhone and laptop) each with different resources and accounting.

### **Space use modes**

Spaces operate in many modes. The normal individual “hotspot” mode assumes the user communicates only externally or to the utility networks. There are also “meeting” and “training” modes, where some form of networking is needed between users. Additionally “visitor” and “conference” modes support the challenges of external users. Change of space use occurs frequently during the day and evening.

### **Administration networks**

The administration of a cowork requires at least one secure network for staff, and physical security (cameras etc) may require more networks.

### **External Software Interfaces**

External administration software requires an interface, known as an API. Cowork hosted applications such as Cobot and Nadine require two way interaction for functions such as desk and room booking, or other calendar events that need to interact with the infrastructure. This software may also interact with access control hardware onsite, or a login portal for usage accounting purposes.

There are marketing applications (“Desksnearme”) and other broking applications that a cowork may wish to interact with. The cowork community also wishes to create passport/visa applications to allow co-workers to visit on a partnership agreement basis.

## Social media

Finally there is an emerging world of social media that may need to host applications on the network or be linked via the appliance. The appliance will thus continue to evolve.

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## Presentation

There are two ways to present a coworking appliance:

- 1) A software downloadable module that can be built into suitable hardware.
- 2) An off the shelf hardware appliance with support.

Additional equipment: WiFi APs, supported VLAN switches (sometimes), Internet routers as specified by ISP.

The user interface will be web based, with usual management, reporting, configuration and diagnostic functions.

*[The parent product for reference is the Medusa Solo, which will be the source technical specification.]*

## Support

- A major function of an appliance is to support the administration of a location to diagnose issues. This can also be remote as well.
- Updating needs to be automatic, especially security updates.
- Alert functions on error conditions can be useful.
- Support for individual users who experience problems is often necessary.