The Financial Implications of Managing Cellular Devices

The following whitepaper outlines the true costs of providing cellular devices in the workplace

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1.0 Introduction

The true cost of corporate mobility ranges from $12.50 - $19.00 per month per line using internal resources*. To give you an idea of how this can add up, we'll use a mid-point of $15.75 per line.

An organization with 100 employees, spending $5,000 per month on carrier spend is spending another $1,575.00 monthly or $18,900.00 annually to support the fleet. This additional cost is broken down as follows: IT = $4.00, AP/Finance = $5.00, Admin/Purch = $4.00, Dept Mgrs. = $2.00, Executive $0.75.

AOS Mobile Technologies has analyzed more than 100,000 lines in every vertical market in Canada and the USA over the past 3 years in support of our findings. The average rate for a Full-Time Equivalent (FTE) in our findings is **$36.05 per hour.**

* This excludes Mobile Device Management (MDM) software which can add another $5.00 per line.

When identifying the current state of Total Cost of Operation (TCO) for cellular devices, companies should evaluate all costs associated with the technology. Historically organizations have relied heavily on very basic metrics for the measurement of the costs associated with this technology in the workplace. Such as:

1. Total carrier expense
2. Average plan cost
3. Roaming costs
4. Additional carriers add on features
5. Hardware and accessory expenses

This simplistic approach can lead to significant hard and soft costs to an organization.

Though there are seven cost drivers for cellular devices in the workplace, employee usage is the primary driver of cost. The question then becomes—Do employees drive mobility costs or do the plans?

Answer: Employees full stop.

1. Employee use
2. Carrier Base Plan, plus features such as roaming costs, hardware, and accessory costs
3. Internal support costs (IT, Admin, Dept Mgrs., Purchasing, Finance, Executive)
4. Device life cycle
5. Poor current state analysis/baselining, comparing current vs proposed at the plan level
6. Weak metrics that identify problems before contracting
7. Ownership is fragmented between IT, Finance, Purchasing, Admin, and others

To address these cost drivers, there are two potential solutions:

Invest internally	Invest in internal staff, software, process, and workflow automation.
Partner with a Telecom Expense Management (TEM) provider	Engage an organization that provides the dedicated support, software, process, and workflow automation, and leverages the advantages and expertise with governance at the forefront in all they do.

2.0 Market Drivers

There are several market drivers motivating organizations to evaluate how to cost effectively provide cellular support to meet growing user demands:

1. Economic climate and constant change
2. Constant shift in roles, job types, and revenue sources
3. Technology vs paper internally and externally (external customer adaptation)
4. Complexity of mobility carrier contracts, terms, and conditions

Economic climate	Reduced administrative budgets and support staff has resulted in mobility being managed as a secondary, or at best, a tertiary activity.
Shift in sources of revenue	Shorter and more geographically dispersed projects and service types have resulted in increased administrative work to effectively account for expenses and costs required for a geographically dispersed employee base.
Technology usage	Changing job functions are driving the requirement for increased mobile usage as end-customer demands are forcing the move from paper to electronic.
Carrier complexity	Carriers can provide 100+ different plans, features, data options, voice options, SMS, and hardware programs all tied up in a 75-page contract with terms and conditions, making it increasingly difficult to properly assess and/or manage the contract for optimization using internal resources.

3.0 Plan Costs

Most organizations evaluate and negotiate cellular contracts utilizing a "Supply" approach, meaning how much of the raw material they can procure (data, minutes, texting) at the lowest overall cost for that supply. When evaluating plans and carrier, the most common criteria questions are:

1. What are your plans?
2. What does that include?
3. What is my best price?

This approach enables a company to evaluate vendors against each other, but NOT affectively evaluate the company's actual requirements. One question that needs an answer is: Do we complete a baseline study first and then design the contract based upon needs or do we design the contract first based upon our current state? These are materially different approaches, and one is very costly compared to the other.

The following table outlines typical "strategies" that evolve from the "supply" approach.

Strategy	Description	Challenges	Option
Current state vs proposed	Lack of detail creates a very superficial approach.	Current state is frequently not an accurate representation of need.	A partner-led baseline assessment provides the necessary details required prior to starting carrier engagements.
Flexible terms	The terms and conditions (T&C) are as important as the base plan and feature costs.	The constant state of change with employee adds and departures as well as evolving roles and responsibilities.	Engaging with a professional TEM partner can help ensure you are MARKET CONNECTED with the T&Cs.
Life cycle ownership	A contract should be managed as an evergreen document, not a point in time. The question of "Who owns this?" can be a mystery.	Struggle to recall or manage the T&Cs, even if they negotiate them into the contract. Defined ownership is also a barrier.	A proven TEM partner will clearly know your T&Cs and provide the flexibility to cost-effectively manage each line and optimize your monthly spend.

The most cost-effective approach to managing cellular plans is identifying the lowest possible cost of each employee's device. This approach can only be accomplished using Key Performance Indicators (KPIs) that clearly identify each opportunity and feature as well as quantifying the benefits of change.

When evaluating plan costs the elements that should be scrutinized are:

1) End User – What are the end users doing today? Why are they using these features today? Do they need these features on their lines? Step 1 is to complete a detailed current state "BASELINE".
2) Per Unit Cost – Organizations need to evaluate and identify the lowest cost per unit, or potential cost per unit, not per device. The units that need to be evaluated are:
   a) Base rate with included GB
   b) Minutes
   c) SMS, pictures
   d) Data overage rates
   e) Roaming rates
   f) Hardware and accessory costs/options
   g) EHUG and ETF provisions
   h) Credits
   i) Hardware or accessory shipping fees
   j) Labor cost to support the entire process end to end

The bottom line can differ tremendously when all factors are clearly understood and evaluated. Considering that users will require a different combination of features to achieve this result, significant time and expertise must be invested or tools deployed to properly analyze usage patterns. The ability for organizations to effectively conduct this type of analysis is impacted by:

1. The volume of devices, users, and mobility applications in an organization
2. The limited access clients have to information regarding plan and feature options
3. The type of analysis that carriers provide does not enable effective feature or plan alignment

4.0 End-User Support

An organization with 500 devices will address 50-70 end-user requests, issues, or challenges per month. Each request will create 25-30 minutes of work, for a support person or administrator. This will result in 17-21 hours of lost productivity per month, not including the end users' time.

End-user support for mobility typically falls into one or more of the following 8 categories:

1. New hire hardware request – an employee joins the organization and is entitled to the use of a corporate device
2. Employee departure or resignation – an employee leaves the organization, and the device needs to be recovered and the line suspended/cancelled
3. Hardware upgrade request – an existing employee has misplaced or damaged their asset
4. Trouble issue – an end user inquires about an issue with the device, the network, or coverage
5. Accessories – an end user requests a case, screen protector, or device for their vehicle
6. Email not working
7. Roaming package needed
8. MDM is not functioning properly

These end-user support requirements create challenges for internal support groups for several reasons:

1. Most activities require involvement with a carrier, which can result in time delays
2. Seldom standard processes in place with the appropriate approvals to address issues
3. Seldom tools in place to track resolution of support requests
4. Mobility is typically a secondary or tertiary activity for the supporting team members such as IT, Admin, Purchasing, Dept Managers, etc.
5. Knowledge of how to action and address all end-user needs with contractual T&C, managing amendments, making changes, allocating correct plans and features, governance assurance, approval workflows, report updates, and more are a challenge for any organization
6. Many exiting processes are ad hoc at best, as evidenced by billing errors and costly mistakes

End-user support requirements for mobility will cost your organization on average $15.75 per device monthly.

5.0 Employee Use

Employee use as a cost implication for mobility is neither a technology issue, nor a wireless plan issue. It is a productivity issue, and a real cost to the organization. The cost of the service is negligible compared to the impact on productivity. Costs associated with employee use result from two primary areas:

1. **End-User Awareness:** The cost of a corporate device is usually restricted to the individual(s) responsible for paying or managing the expense. Since most employees feel accountable to the organization, they will change their behavior if they are aware of its implications and cost to the organization.
2. **Employee Abuse:** Addressing employee abuse is not about policing an organization. It is about identifying exceptions and opportunities for improvement. Through proper analytics, most organizations realize that 7% or less of their end users account for 80% of the mobility abuse.

The table below provides a real-life scenario of the productivity impact realized by a publicly traded organization in the energy sector in western Canada, with 400 employees and a $96.0 million a year in revenues, utilizing 215 mobile devices:

Total minutes of usage 1 month	48,677
Total text messages	20,329
Outbound non-internal minutes	18,843
Assumed percentage of abuse	25%
Assumed time to create a text	30 seconds
Assume non-business-related text message during work hours	50%

Although the carrier cost for certain features, like domestic minutes and texting, are free, the real cost is tied to employee productivity or lack of cost. In this scenario, the organization can be losing as much as 156 hours tied to calls and texting that are non-business related during working hours. This equates to $5,623.80 of lost productivity cost per month or $67,485.60 annually.

The situations identified above can be challenging to identify and address, primarily because:

1. Use of mobile device expectations for acceptable usage are inadequately detailed
2. A mobile device is often considered a perk and is difficult to assess what usage occurred during working hours and employee time off
3. Inability to conduct forensic research on employee behavior
4. If the feature is FREE who really cares? Essentially this ties back to the question: Who owns mobility? Or better yet, who should own mobility management?

6.0 Device Life Cycle

Failing to effectively manage mobility asset life cycles can have a significant impact on operating and capital costs.

The two primary drivers of device life cycle management costs are:

1. Unused lines/devices
2. Asset loss and/or recovery upon employee exit

6.1 Unused Devices

Unused devices, from employees leaving an organization or changing devices, can carry a cost up to $100.00/month per unit. On any given month, 20% of an organization's devices are unused. Of that 20%, 50% of those devices will typically be unused for multiple months, sometimes years, not including the devices on vacation or are in suspension.

The following is an example using a 250-device count for a services organization in Eastern Canada.

Devices not in use	Average monthly cost per device	Average monthly overall cost	Average number of months unused	Annual cost to the organization
50	$40.00	$2,000.00	18	$24,000.00

6.2 Asset Loss

Mobile hardware for the enterprise ranges from $175.00 - $800.00 per device with the average cost at $350.00. The cost associated with the loss of hardware assets results from three primary drivers:

1. Loss – Employee leaves the organization, and their device does not get returned or is "bricked"
2. Neglect – Employee leaves and the appropriate people are not notified or don't know the exit process (phones are left with managers and tucked in drawers)
3. Damage – Users require multiple replacement devices over short periods of time

On average, asset loss results in an annual loss of 10-20% of an organization's fleet. The organization mentioned above was also unable to recapture the unused or missing devices. This ended up costing them an estimated ***$17,500.00 annually due to total asset losses.***

The cost of unused devices and asset loss can be reduced and, in some cases, avoided if an organization can effectively:

1. Create a clear and concise policy with consequences, such as payroll recovery
2. Track the use and location of the mobile devices
3. Implement a closed loop process for MAC (moves, adds, changes)
4. Provide proper onboarding and exit checklist processes for managers
5. Develop a clear process for asset recovery with detailed instructions for employees

7.0 Internal Support and Resources

The following table outlines the numerous touchpoints and tasks conducted by many individuals responsible for mobility in their organizations. On average the time to effectively *manage* mobility is directly related to the device count each month.

This example is a Canadian organization using 375 devices with an agreed to hourly rate of $45.00.

Activity	Description	Frequency	Total duration in hours	Monthly productivity cost to the organization ($250.00/hr.)
Bill audit	Reviewing high-level user costs, evaluating for correct charges	1 (2 People)	8	$2,000.00
Billing allocation	Completing the cost allocations	1	1	$250.00
Hardware orders	Replacing and net-new adds for various reasons	9	2.5	$625.00
End-user troubleshooting	Assisting end users with their device or addressing issues	10	2.5	$625.00
ESN switching	Managing hardware changes, loaners, new employees, spare management, or exit management	33	5.5	$1,375.00
End-user analysis and notifications	Identifying high users, notifying managers via email or phone, and sending proof of usage, etc.	1	2	$500.00
TOTAL		**55**	**21.5 Hours**	**$5,375.00/month**

In most circumstances, these activities are conducted manually. The best practice of most internal support groups is the application of an Excel spreadsheet.

A managed mobility services provider offers dedicated resources, standard approaches, and technology to support the activities normally conducted by internal staff. Why can they do it for less? Simply put "Economies of Scale".

8.0 IT Utilization

Today, many companies use IT as the de-facto owner of cellular device management. One can easily argue this was needed in the past for many technical reasons but today presents a different landscape. Once requiring technical experience to set up, today devices enrolled in an MDM, such as Cisco Meraki, enable users to simply login, enter a password, and voila, they are up and running.

Below are the top 7 reasons why organizations are looking to outsource cellphone management:

1. IT has limited resources and knowledge to properly support cellular devices
2. Internal stakeholders demand faster project turnaround, but time, resources, and cost make it difficult
3. IT time is better spent on greater ROI projects than wasting time and resources supporting cellular devices
4. IT budgets are limited and getting smaller
5. Increase in ransomware attacks pose greater corporate security challenges
6. IT investments in software to properly manage mobility is too expensive and time consuming
7. IT faces competing priorities from stakeholders

Corporations are faced with determining the best possible IT utilization to stay competitive and win the race. Placing the emphasis on "I" *__Information__* is the new goal and technology is no longer the sole objective. Defining what can be best served using internal IT staff and other internal resources vs partner led is the new world for CIOs and IT Managers alike.

9.0 AOS Managed Mobility Services

AOS is a management services and technology provider that utilizes proprietary software and processes to improve costs, control, and visibility of cellular users, devices, and environments. AOS's life cycle management services and solutions optimize your organization's mobility management, for you.

AOS offers several services designed to address client challenges with mobility. All services utilize our Wireless Manager 4.0 proprietary software that ensures the consistency, flexibility, and scalability of services.

- Device procurement management and approval governance
- Asset management and utilization
- End-users help desk support
- All financial reporting and expense allocations
- End-user and Departmental Manager reporting and notifications
- Cellular expense management
- Mobile device management data security
- Contract design and post-contract management
- Carrier agnostique
- One process regardless of location or carrier across North America
- Lowest TCO possible in the industry
- AOS can do it for as much as 50% less than using internal resources

The solution to the problem is very simple. Select the correct partner and all your problems will go away … Guaranteed!

10.0 AOS Managed Mobility ROI Tool

Current State 3 Month Summary		Details			Total Cost / Savings
Carrier Mobility Expense (Average of last 3 months)		$60,000			
Total Line count average last 3 Months		1000			
Ave Cost Per Line			$60.00		
Internal Labour Support Average FTE Salary	Labour % BY Line Monthly	$ 40,000.00			
IT	0.18%	$ 6.03			
Administration	0.05%	$ 1.69			
Purchasing	0.05%	$ 1.71			
Finance AP/Audit	0.07%	$ 2.32			
Dept Mgrs.	0.04%	$ 1.21			
Executive	0.05%	$ 1.77			
Total Internal Labour to Support			$ 14.73		
Total Costs Currently					**$74.73**
Industry Proposed State 3 Month Summary					
Industry Standard ROI + AOS Managed Services Savings (50,000 lines studied)					
Ave Unused Lines		10%			
Actual Lines Unused		100			
Actual Unused Line Cost		$6,000.00			
Vacation Mode Cost		$15.00			
Total Vacation cost		$1,500.00			
Total Unused Line Savings Monthly		$4,500.00			
Average Line Savings Monthly			$4.50		
Process Management - EHUG, Churn Allowance, Contract Optimization, Plan changes, Feature changes, GB Rate Plan Changes, Amendments, Monthly Bill Audits, Cost avoidance, Asset & Line Repurposing, Employee engagement, Dept Mgrs Ownership, Executive Reporting, Awareness, Education, Accountability and more.		8%			
Actual Monthly Ave Savings		$4,800			
Average Audit Savings Monthly per line			$4.80		
Contract, Feature, Amendment Optimization Savings		5%			
Actual Monthly Ave Savings		$3,000			
Average Contract Savings Monthly			$3.00		
Managed Services Savings (TEM + HD)				$12.30	
Internal Resources will go from 100% to 5% Cost to Support	Labour % BY Line Monthly				
IT	5%	$ 0.30			
Administration	5%	$ 0.08			
Purchasing	5%	$ 0.09			
Finance AP/Audit	5%	$ 0.12			
Dept Mgrs.	5%	$ 0.06			
Executive	5%	$ 0.09			
Average Internal Labor Costs			$ 0.74		
Managed Services Fee Per Line (TEM + HD)		$8.50			
Managed Services Monthly Fee		$8,500.00			
Average Cost per line for Managed Services			$8.50		
Average Cost for Managed Services + Internal Resources				$ 9.24	
Net Cost Diff +/- Per line Monthly					$ (3.06)
Managed Services Monthly Cost Per Line					**$71.67**
Net Savings Monthly					$ (3,063.57)
Net Savings Annualized					$ (36,762.86)

For more information:

To find out how AOS can help your organization reduce the "Financial Implications of Managing Cellular Devices" and take advantage of a mobility no-charge assessment contact: Louis.gagnon@aosgroup.ca or call 1.855.322.2234.