

Improving the Auto Claims Process
with Mobile Technologies

arcstream solutions, inc.



white paper

The insurance industry has successfully weathered many challenges in recent years, from an unstable economy to geopolitical turmoil. Yet, it remains in the midst of a financial squeeze. High claims payouts, declining stock valuations and eroding profit margins are taking their toll. No insurer is immune.

Insurance companies are responding to these pressures in several ways. They are seeking to grow their market share — to attract new customers and retain existing ones by offering higher quality service than their competitors. They are also seeking to do more with less — to improve their operating efficiency while containing costs. And, given the economic climate, they are favoring low-cost, but high-payback methods of achieving these goals.

Many insurers are turning to mobile and wireless solutions as a cost-effective and high-ROI method of advancing their goals. Among property and casualty insurers in particular, with their ranks of mobile appraisers, adoption of mobile and wireless technologies is fast growing. When applied to the auto appraisal process, for instance, these technologies bring significant improvements, helping insurers meet their efficiency and service goals, while providing a path for future growth. Moreover, even a relatively modest implementation can deliver quick payback and substantial returns.

To illustrate the potential benefits of mobile and wireless technologies, this paper examines the auto appraisal process of an actual insurance provider operating in the U.S. Although the data and examples cited in the paper pertain to the profiled company, they can be extrapolated to any auto insurance provider. The paper explores, through charts and graphs, how mobile and wireless solutions can improve the productivity of appraisers, rein in operating costs, enhance revenues through better customer service, boost employee satisfaction and more tightly integrate disparate information systems.

THE AUTO CLAIMS PROCESS

To provide a realistic portrayal of the benefits that mobile and wireless technologies can bring, this paper is based upon an analysis of the actual claims process of a major auto insurance provider, “AIP,” operating throughout the U.S.

AIP has 325 appraisers who are on the road daily visiting that process auto claims, visiting auto repair shops, homes or offices daily to inspect vehicles for damage, write estimates and potentially issue checks. An appraiser typically performs 6.5 appraisals per day, spending a total of 1.5 hours on each one (including drive time, appraisal time, and final paperwork). In a given year, appraisers work 240 days, and AIP’s fully burdened cost per appraiser is \$50,000. AIP expects to increase its appraiser headcount in the coming three years to cope with an anticipated 4.6% compound growth in the annual volume of claims.

A typical workday for an AIP appraiser is depicted in Figure 1. After downloading his assignments the night before using a laptop and Internet connection, the appraiser reviews his set of First Notice of Loss (FNOL) forms for each appraisal assigned to him. He plans his route and heads out in a van equipped with his laptop, cell phone, forms and company checkbook.

FIGURE 1 - AN APPRAISER'S WORK DAY

Appraiser Steps at Each Damaged Car					
Drive Time	Conversation	Visual	Estimate	Check	Home Office
To and From Damaged Cars	Direction to Pay, Tax ID, Shop Estimate	Paper & Pen Photos	Forms Input, Paint Source, Calculator, Cell Phone, Used Parts	Data Entry, Checkbook: • Check • Skirt • Tab	Update Photos & Estimates Complete Forms & Logs, Activate & Process Checks, Download FNOL Forms
3+ hours	5 minutes	10 minutes	15 minutes	15 minutes	90 minutes

At a shop visit, the appraiser collects the shop's taxpayer ID and estimate. He may also contact the customer for approval to pay the shop directly. Using paper, pen and camera, the appraiser visually inspects the vehicle, taking notes and photos. To create the estimate, the appraiser returns to his van and enters data into electronic forms on his laptop, guided by an estimation software package widely used in the industry. He looks up paint and used part information, telephones parts suppliers for availability and prices, and calculates final figures. The appraiser writes a check to cover the estimate, fills out the check tab or stub, and gives the check to the shop. The appraiser then performs two follow-up activities to close out the check-writing process. First, the appraiser activates the check by phoning the bank. Second, when the appraiser returns home in the evening, he faxes a copy of the paper check stub to AIP's offices, where back-office clerks enter the check into AIP's financial systems.

An appraiser may also visit a shop to perform a supplemental appraisal to correct an earlier estimate. There are many reasons for corrections, but a known culprit is data entry errors made at the time of the original estimate. Because AIP's appraisers visually inspect vehicles using paper forms, and then transcribe their notes into electronic form, inadvertent data entry errors may arise. As many as 20% of the original estimates performed each year contain errors that require a supplemental estimate.

Upon concluding his appraisals, and driving more than 3 hours in the process, the appraiser returns to his home office to finish up the day's work. He completes forms and logs, and uploads photos and estimates from his laptop to AIP's servers. He faxes check stubs to AIP's offices for processing, and downloads his FNOLs for the next day. When tallied, these tasks take approximately 90 minutes each evening.

At AIP's head offices, clerks perform a range of tasks to support the appraisers. One time-consuming task involves manually entering data from the appraisers' hand-written forms, and entering check data into AIP's financial systems. For each check cut by an appraiser, a clerk spends approximately 10 minutes entering data into the financial system. With checks cut for about 50% of claims, these clerks collectively spend as much as 176 hours each day simply re-entering check information. Each clerk costs AIP \$50,000, fully burdened, per year.

BENEFITS PROVIDED BY MOBILE AND WIRELESS TECHNOLOGIES

The nature of the auto claims process makes it ripe for the application of mobile and wireless technologies that can improve customer satisfaction and deliver impressive organizational benefits. Examined below are several benefits, including productivity improvements, expense impact, revenue enhancement, increased satisfaction and more tightly integrated systems. Charts and figures, where used, draw data from the AIP case study. Any auto insurance provider, however, can use this data as a baseline to extrapolate the benefits available to its own organization.

PRODUCTIVITY IMPROVEMENTS

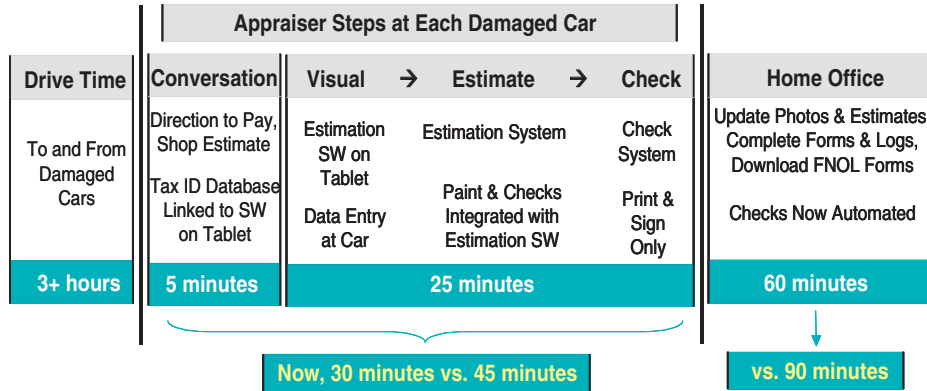
By selectively applying mobile and wireless technologies, and integrating key systems and data, auto insurers can reap substantial productivity improvements, allowing them to increase their work volume without growing overhead, and vastly increase customer satisfaction, through quicker response rates and decreased time to money.

Mobile & Integration Capabilities

Equipping appraisers with portable, tablet computers allows them to fill out electronic estimation forms while visually inspecting vehicles. Entering data directly at car-side eliminates time spent transcribing handwritten notes into electronic forms and trips between van and shop. A pre-requisite to performing estimations at car-side is having the necessary data — from paint and parts lists to shop taxpayer IDs — on the tablet computer. By enhancing existing estimation software packages, and putting data sources right on the tablet PC, mobile solutions give appraisers a complete estimation solution in the palm of their hands. Moreover, by enhancing existing estimation software systems rather than requiring their replacement, mobile solutions provide a cost-effective method of upgrading and extending the tools at the appraiser's disposal.

In addition, integrating functions performed in the field with back-office systems produces additional timesavings. For example, allowing appraisers to enter check information into an electronic form for nightly upload to financial systems spares appraisers from faxing hand-written check stubs to the back-office for re-entry. Figure 2, when compared to Figure 1, shows how mobile and integration capabilities can improve the appraisal process.

FIGURE 2 - MOBILE & INTEGRATION IMPROVEMENTS TO THE APPRAISAL PROCESS



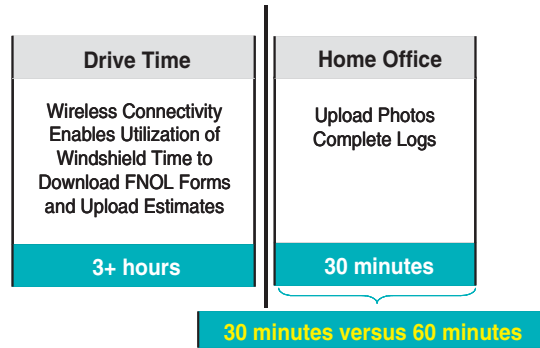
Total Mobile Savings: 20 minutes per appraisal or over 2 hours per day

Wireless Connectivity

Using a wireless network connection to transmit data and forms while the appraiser is in the field achieves additional benefits. Timesavings is one example, Figure 3. With wireless access, appraisers can use otherwise unproductive drive time to upload and download forms and data to/from the head office rather than waiting until end-of-day to transmit them via land-line. The other benefit is real-time dispatch of FNOL forms. With wireless connectivity, handlers can accommodate new claims in the local vicinity on the same day. On-the-fly schedule modifications optimize logistical planning and improve adjuster productivity, but more importantly, afford faster claims resolutions for customers.

Although wireless network capabilities do impact the level of benefits that can be derived, today's networks are sufficient to deliver quantifiable savings. Assuming even a relatively conservative bandwidth, current networks have the capacity to transmit modest-size forms and data in the time it takes an appraiser to travel to appointments. And, although network coverage may be spotty depending on where appraisers are located, they can always choose to perform their uploads and downloads when coverage is adequate, since real-time transmission of forms is not a necessity.

FIGURE 3 - ADDITIONAL SAVINGS WITH WIRELESS CONNECTIVITY



Total Wireless Savings: At least 5 minutes per appraisal or 30 minutes per day

To show the magnitude of productivity improvements afforded by mobile and wireless solutions, consider the cost savings (expressed in fully burdened appraiser salary) that an insurance company like AIP would reap. Figure 4 illustrates the savings that result from applying mobile enhancements alone, and from applying both mobile and wireless technologies.

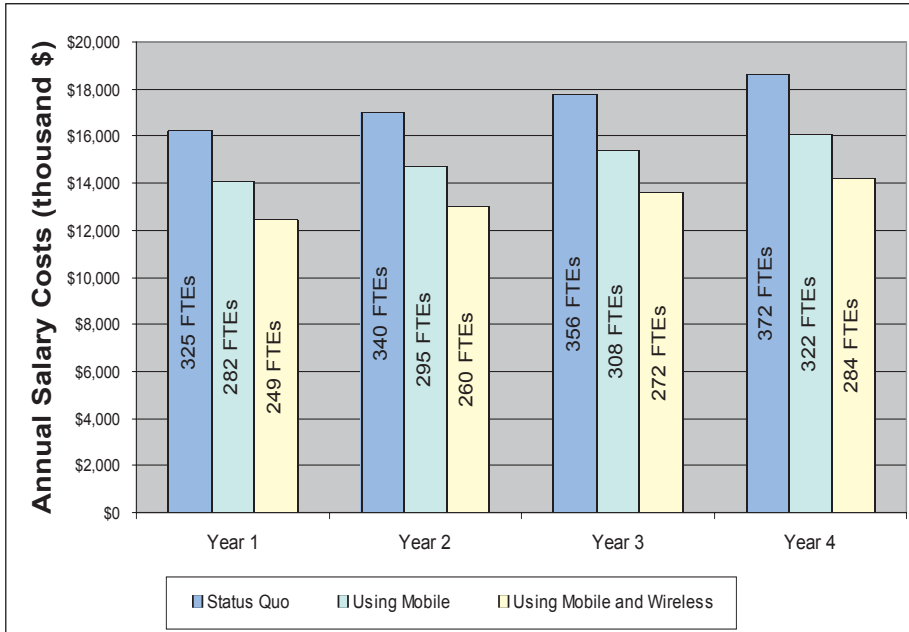
FIGURE 4 - SALARY COST SAVINGS WITH MOBILE AND WIRELESS TECHNOLOGIES

	Year 1	Year 2	Year 3	Year 4	
Appraisals per Year	507,000	530,322	554,717	580,234	
Current Processes and Technology					
Staffing with Current Productivity Rate of 6.5 Appraisals/Day	325	340	356	372	
Fully Burdened Salary Costs (thousand \$)	\$16,250	\$17,000	\$17,800	\$18,600	
With Mobile Technology					
Staffing with Increased Productivity Rate of 7.5 Appraisals/Day	282	295	308	322	Total Savings From Mobile
Fully Burdened Salary Costs (thousand \$)	\$14,100	\$14,750	\$15,400	\$16,100	
Salary Savings from Mobile Alone (thousand \$)	\$2,150	\$2,250	\$2,400	\$2,500	\$9,300
With Mobile and Wireless Technology					
Staffing with Increased Productivity Rate of 8.5 Appraisals/Day	249	260	272	284	Total Savings Combined
Fully Burdened Salary Costs (thousand \$)	\$12,450	\$13,000	\$13,600	\$14,200	
Salary Savings from Combined Mobile and Wireless (thousand \$)	\$3,800	\$4,000	\$4,200	\$4,400	\$16,400

Assumptions	
4-year CAGR for appraisals	4.60%
Fully burdened cost per appraiser	\$50,000
Number of work days per year	240

Consider also the overall impact of wireless and mobile enhancements on current and future headcount, and corresponding staffing expenditures, as illustrated in Figure 5.

FIGURE 5 - STAFFING REQUIREMENTS / EXPENDITURES WITH MOBILE AND WIRELESS TECHNOLOGIES



EXPENSE IMPACT

The cost of adding mobile capabilities to the appraisal process is greatly offset by the potential savings. These savings fall into two categories. First, integrating check writing in the field with back-end financial systems means that clerks no longer have to re-enter check data from paper records. Second, enabling appraisers to enter data directly into electronic forms while inspecting vehicles, instead of taking handwritten notes for later transcription, greatly reduces the chance for data entry errors and reduces trips to perform supplemental estimates. Figure 6 depicts the types of expenses incurred and avoided by applying mobile and wireless enhancements to AIP’s appraisal process.

FIGURE 6 - MOBILE AND WIRELESS TECHNOLOGY IMPACT ON EXPENSES

Assumptions	Current Expenses	Expenses with Mobile and Wireless	Estimated Cost Savings
Tools			
Tablet*	\$3,500	\$0	\$1,137,500 (\$1,137,500)
Implementation			
Integration Work	\$700,000	\$0	\$700,000 (\$700,000)
Wireless Service			
Monthly Fee Per Appraiser	\$50	\$0	\$16,250 (\$16,250)
Back-Office Data Re-Entry			
Hours of Support per Day	176		
Burdened Cost per Hour per Clerk	\$26	\$1,100,260	\$0 \$1,100,260
Appraiser Data Entry Errors			
Number of Original Appraisals per Year	253,500		
% With Data Entry Errors	20%		
Estimated % Error Reduction with Mobile	75%	\$1,625,000	\$310,662 \$1,314,338
Total Savings Using Mobile and Wireless			\$560,849

Assumptions

Number of appraisers	325
Number of work days per year	240
Fully burdened cost per appraiser	\$50,000
Fully burdened cost per back-office clerk	\$50,000

* Appraisers are already equipped with laptops, which are replaced at least every 3 years. Therefore, this expense could be eliminated.

REVENUE ENHANCEMENT

Perhaps the most potent benefit of mobile and wireless technology is the ability to protect and enhance revenues. Even modest improvements in customer acquisition and retention can bring significant impact to the bottom line. Customers gravitate toward insurers that offer the swiftest and most convenient claims service. By shortening the claims process and decreasing the time to cut checks, mobile and wireless technologies offer benefits that attract new customers and induce existing customers to remain.

As Figure 7 shows, the impact on overall revenues and profits can be substantial, even when based on highly conservative assumptions for new business growth. If, by improving customer service, mobile technologies increase revenues even modestly, by a factor of 0.4%, 0.6% or 0.8%, the resulting gains provide attractive bottom line results. Taking AIP's projected baseline revenue growth of 4.6%, and adding these modest increments, demonstrates the types of gains reasonably achievable through mobile technologies.

FIGURE 7 - REVENUE AND PROFIT SCENARIOS USING MOBILE AND WIRELESS TECHNOLOGIES

	Additional Growth Rate		
	0.40%	0.60%	0.80%
Revenue Enhancement (Year 1)			
Baseline premium growth	\$104,772,728	\$104,772,728	\$104,772,728
Additional premiums with mobile	\$113,883,400	\$118,438,736	\$122,994,072
Net Revenue Improvement	\$9,110,672	\$13,666,008	\$18,221,344
Profit Improvement	\$911,067	\$1,366,601	\$1,822,134
Assumptions			
Total written premiums for auto	\$2,277,668,000		
CAGR (w/o mobile)	4.60%		
Profit margin	10%		

INCREASED EMPLOYEE SATISFACTION

Hiring and retaining skilled appraisers is a perennial problem for auto insurers. By improving the daily workflow of appraisers and by reducing the amount of nightly time devoted to paperwork, mobile and wireless solutions can eliminate some of the tedious paperwork of the job, increase appraisers' job satisfaction and reduce turnover.

GREATER SYSTEMS INTEGRATION

Integrating disparate systems has many organizational benefits. Tightly integrated systems help streamline IT operations, alleviate maintenance burdens and reduce the opportunity for errors. They also provide a more stable platform for future development, allowing IT organizations to realize productivity gains on subsequent projects. In the case of AIP, by giving appraisers a way to enter check data electronically in the field, mobile solutions integrate the check writing function with back-end financial systems and create a more highly automated, error-free process.

THE BOTTOM LINE

In summary, an investment in mobile and wireless solutions pays for itself in Year 1 on cost savings alone, as outlined in Figure 8. Moreover, in years 2 and onward, the only offset to these substantial savings is the nominal recurring charge for wireless network service.

FIGURE 8 - BOTTOM LINE COST SAVINGS

Year 1	
Outlay For Mobile and Wireless	
Tools	(\$1,137,500)
Implementation	(\$700,000)
Wireless Service	(\$16,250)
Total Outlay	(\$1,853,750)
Cost Savings	
Eliminated Back-Office Data Re-Entry	\$1,100,260
Reduced Data Entry Errors	\$1,314,338
Total Cost Savings	\$2,414,599
Net Cost Savings	\$560,849

Finally, when the dollar value of productivity and profit improvements are added in, the total returns of the investment become significantly higher, as Figure 9 attests.

FIGURE 9 - BOTTOM LINE BENEFITS

Year 1	
Net Cost Savings¹	\$560,849
Additional Improvements	
Productivity Improvement ²	\$3,800,000
Profit Improvement ³	\$1,366,601
Total Improvements	\$5,166,601
Net Benefit	\$5,727,449

¹ From Figures 6 and 8

² From Figure 4

³ From Figure 7

HOW ARCSTREAM CAN HELP

To take advantage of the benefits described in this paper, mobile and wireless know-how and systems integration experience are essential. At ArcStream, these skills are our core competence. We have extensive experience in designing and implementing mobile and wireless solutions across a range of industries and companies, and the knowledge to integrate these solutions effectively with existing IT operations.

Our mobile and wireless solutions for the auto claims process are designed to capitalize on the productivity, cost and revenue benefits cited above, heighten employee satisfaction, and produce a more tightly integrated systems architecture. We focus on building cost-effective solutions for auto insurers that offer high business value and quick payback, and that establish a foundation to offer customers speedier, and higher quality, claims service.

Although we have the flexibility to customize our services to meet our clients' unique needs, our auto claims offering consists of five basic components:

- **Opportunity Assessment**

With client involvement, we perform an opportunity assessment of the current auto claims process to develop two key strategy documents — a mobile initiatives roadmap and an outline of high-value recommendations.

- **Integration Strategy Workshop**

After the roadmap is complete, we work with clients to prioritize the highest value recommendations, and create the critical documents (specifications, architecture and technical plans) needed to turn the strategy into a working, adaptable solution.

■ **Pilot Implementation**

For proof-of-concept purposes, we build, pilot and test functionality for an improved auto claims process, adding mobile and/or wireless capabilities where desired.

■ **Production Rollout**

Based upon the feedback from the pilot phase, we build out any remaining functionality, fine tune the solution and proceed to production rollout.

■ **Support**

Based upon client desires and needs, we provide a variety of ongoing support options for the production solution, including help desk support, application monitoring and tuning, problem resolution and application enhancement.

If you are interested in exploring the benefits that mobile and wireless technologies can bring to your organization's auto claims process, please contact ArcStream at **617-393-2400** or visit www.arcstream.com for more information.