



Pay by Licence Plate Fork Lift Upgrade Experiences from the Front Lines in Saskatoon

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Agenda

- Who is Tannery? And what do we do?
- Pay by License Plate (PBL) concept
- Avoiding Pitfalls in a Fork Lift Upgrade for PBL
 - Experiences from Saskatoon
 - With Contribution from Andrew Hildebrandt, Director of Community Services, and his crew



Who is Tannery, What do we do?

- Who is Tannery?
 - Canadian company located near Toronto
 - Specialize in parking enforcement automation
 - Software/hardware, engineering & project management
- What do we do?
 - Digital chalking
 - Scofflaw
 - Permits
 - Pay by Plate, Pay by Space
 - Mobile and stationary systems



autoChalk Mobile PBL in Action



In Calgary autoChalk scans 30,000 vehicles (and plates) daily for the ParkPlus PBL parking system. It is a combination of mobile and stationary LPR.





Saskatoon: The Way it Was

➤ Old Way

- Over 3000 parking spaces
- Individual pay meters per parking stall
- Simple operation

➤ New Way

- Desired to modernize & make more parker friendly
- Support new technology such as pay by app
- Pay anywhere and move around
- Easily extend parking duration
- Increase productivity of staff
- Facilitate downtown business
- Chose Pay by License Plate (PBL)



Pay-by-Plate Operation

- Replaces pay & display or parking stall meters
- No need to go back to car to display receipt
- Parker enters license plate info & pays at kiosk
 - Or by smart phone app or IVR
- Plate, time, duration, pay station info sent to central server
- autoChalk receives notice of these sessions
- autoChalk LPR scans at 40 km/h checking for valid paid sessions



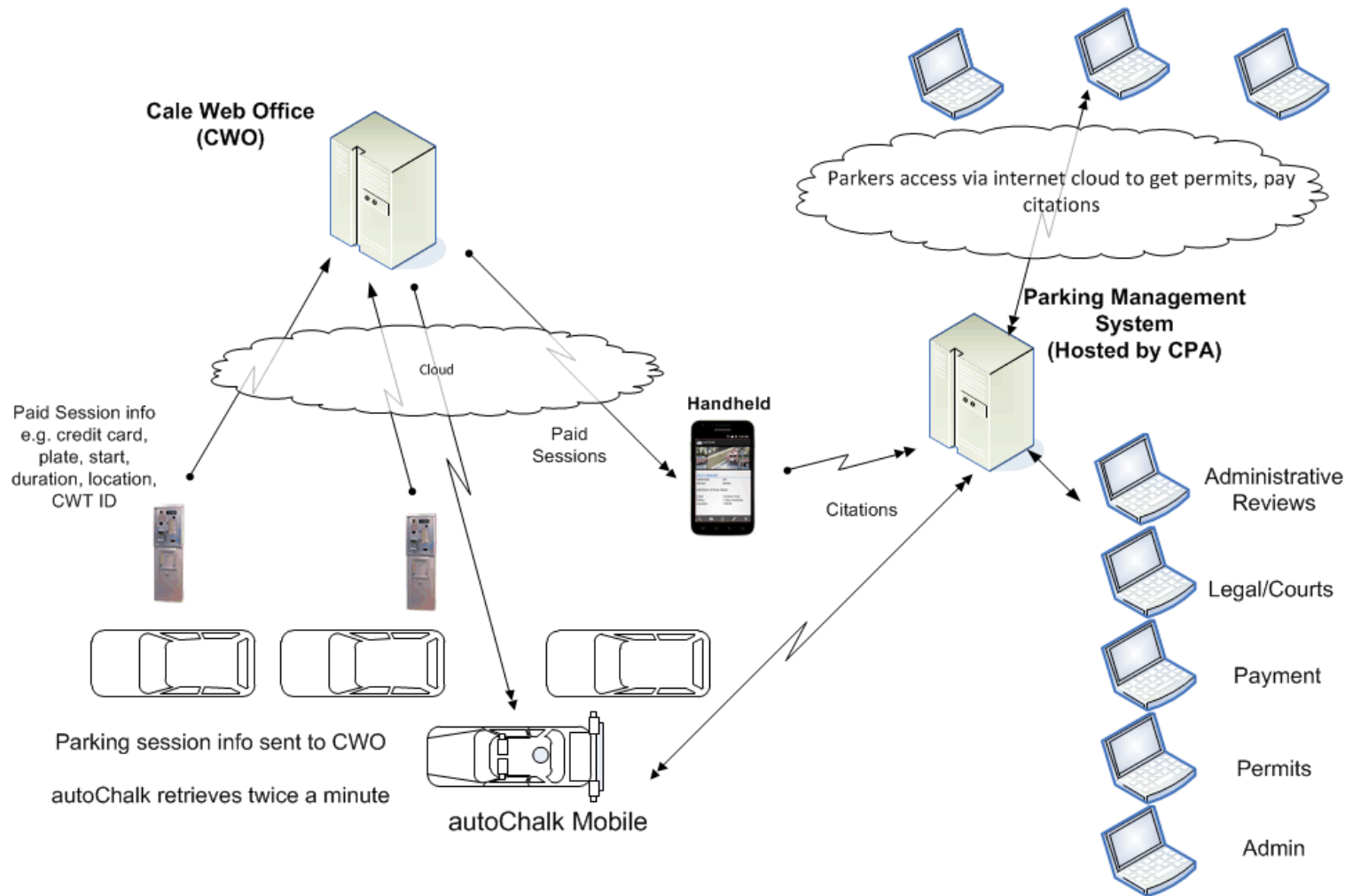
Pay by Plate Advantages

- For Parkers
 - Pay only, pay slip on vehicle dash not needed
 - Notification of parking expiry & can extend time
 - Initiate sessions via smartphone
 - Fast and convenient, no coins needed
- For the City – enables, facilitates
 - Enforcement 3x faster & mail-out tickets even faster
 - Credit card
 - Zone pricing
 - Block face marking (5% more parking than individual stalls)
 - Use PBL for hourly, daily and contract parkers
 - Green parking (e.g. small cars get discounts)
 - Gateless garages
 - Pre-booking for premium spots
 - Excellent parking utilization data



The Plan....

Simplified Pay by Plate Parking System In Saskatoon





The Project

- Install and deploy (in winter)
 - 325 Cale Web Terminals (Solar powered, 4G/LTE)
 - About 10 handhelds
 - A central database for paid sessions and citations
 - Four vehicle mounted LPR units
- Piece of cake?



MAYBE NOT!!



What Was That!?





OMG





You Might Want to Avoid This



**WHAT THE
*&^%\$# ⚡💥👁️
IS GOING ON!!**

**IT'S TIME FOR
*PUNISHMENT...***





A Recipe for Smoother PBL Deployment

- Before starting assign a strong project manager
- Convene a working group and brainstorm
 - Not just parking, reach out to other departments
 - External, e.g. Downtown business association
 - What are implications of doing this project?
 - Identify critical features and nice to haves
 - How does staffing, skill sets change
 - Operational changes, e.g. Credit card, zones, dynamic pricing
 - IT, legal, finance, collections, policing, enforcement, maintenance, roads, engineering, planning
 - City policies e.g. parking policy, credit card payments, enforcement



A Recipe for Smoother PBL Deployment

- Develop scenarios such as:
 - Looking at the whole system, how does it work from a:
 - User point of view, e.g. parkers, reviewing appeals
 - Technical e.g. IT, networks, security, reliability
 - Identify differences between current & new systems
 - How do these differences get accommodated?
 - How will legacy systems be accommodated?
 - Will it be deployed in stages or 100% from get go?
 - Note: highly recommend pilot



A Recipe for Smoother PBL Deployment

- More scenarios such as:
 - Communication to stake holders, influencers
 - Intent of project, progress, going live, issues
 - Politicians
 - Media
 - Web
 - Impact on revenue
 - Parking fees
 - Citations
 - Revenue likely will be disrupted
 - E.g. warning citations initially? = no revenue



A Recipe for Smoother PBL Deployment

- Even more scenarios such as:
 - Parker behaviour, learning and adaptation
 - Consider staff acting as ambassadors
 - Technical failures
 - Single machines
 - Larger challenges such as a major communication failure which affects all machines or enforcement
 - Operational program once launched
 - Maintenance e.g. regular inspections, spare parts
 - Staffing
 - Upgrades and adaptations to solve recurring issues



A Recipe for Smoother PBL Deployment

- Output at end of this planning is a document describing:
 - Functionality and user scenarios
 - Strong project plan
 - Project and implementation team and roles
 - Operational model following release
 - Well thought out contingencies
- Achieve “buy in” from all primary stakeholders



Good Project Management

- Strong collaborative project manager (PM)
- Detailed project plan with reasonable timeframe including a Gantt chart and critical path
- Each group (parking, legal, etc.) should have a single lead manager or go to person

Task	Description	Owner	Start Date	Finish Date	Status
Install Pilot CWTs	First 25 CWTs for pilot implementation	Andy	Jan 15	Feb 15	50% done
IT equipment	Equipment speced & ordered	Zach	Jan 22	Feb 28	ordered
Test Plan	For pilot verification	Judy	Dec 15	Mar 1	Draft done



Technology

- The technology parts need to work in part and as a whole
 - Pay station system
 - Smart phones and IVR
 - Parking management system
 - Bridge to legacy systems
 - Mobile photo and handheld enforcement systems
- Recommend PM go to other cities to learn
 - Consider expert assistance, i.e. hands-on people who have done these projects before
- Assess each subsystem's ability to perform



Groups Impacted: Parking

- Project management – parking group the prime?
- Construction
 - Survey and payment machine locations
 - Civil and Electrical work
 - Painting, Signage
- Additional and possibly different people, new skillsets
 - Training on new devices
 - Electronic and computer
 - New partners (e.g. IT colleagues)
- Different enforcement equipment & techniques
- Ambassadors



Groups Impacted: Finance

- Finance
 - Credit card transactions, new?
 - You will need Payment Card Industry Data Security Standard (PCI DSS)
 - Paying for citations on line
 - New methods for auditing payments?
 - Does your credit card policy stipulate all client info must be local to your jurisdiction?
 - For example within the province, within Canada
 - Contract parkers



Groups Impacted: IT

➤ IT

- In general the system must be 24/7 hence
 - Communication system needs to be highly reliable
 - Computing resources always on line
 - How do upgrades get handled?
- Information security
- Easy remoting vendors to diagnose problems, train clients – how does that impact infosec
- Integration with legacy systems
- A go to person for operational issues



Groups Impacted: Legal

- Legal
 - Information privacy
 - New offer/acceptance model
 - Veracity of equipment and status of payment
 - Accuracy of enforcement equipment
 - Credibility that will withstand legal challenge
 - Case law and precedents



Deploying PBL

- Highly recommend pilot
- Pick a location where it is **not politically sensitive**
- Mgmt needs to dress down, hit the street, try the equipment and talk to clients (i.e. parkers, merchants)
- Test until satisfied **all** parts are working smoothly (from parkers to payments to enforcement to legal to operational)
- Roll out system



Summary

- PBL is a good system
- Opens doors on features and convenience
- Must be planned and executed carefully
- Saskatoon PBL is over the hump and running smoothly



Saskatoon's autoChalk Mobile Units for PBL





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