MNLARS: The Rest of the Story

It's Fascinating and Unknown

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INTRODUCTION

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Background

1. Over 15 years of experience leading organizations doing very large custom development projects with DevOps ($7 to $50 million annual development budgets)

2. 10 years of experience running an Architecture Focused Technology Consulting Company

3. Served as the Director of Application Management, which included day to day oversight of Driver and Vehicle Service IT services, including MNLARS

Agenda

Setting Context

Decisions MNLARS Inherited

What Went Well

What Went Wrong

Closing Thoughts

Setting Context

1. MNLARS Responsibilities

2. The MNLARS Players & My Role

3. Review Timeline

4. MNLARS By the Numbers

5. Scope that had to be accomplished

Overall MNALRS Business Responsibilities

- Vehicle Title – Titles show vehicle ownership

- Vehicle Registration - Registration allows vehicle to drive on the roads

- Auto Dealer Registration – Auto Dealers are licensed

- Collection of $1.7 billion per year or $6.5 million each day in fees for the State of MN

The Players

MN IT Agency (Technology Role)

Partner Agency – Responsible for

- Code Development & Testing
- Infrastructure
- Decommissioning Current Production System
- Data Conversion

MN Dept. of Driver & Vehicle Services (Business Role)

Lead Agency – Responsible for

- Requirements (Epics, Stories)
- User Acceptance Testing
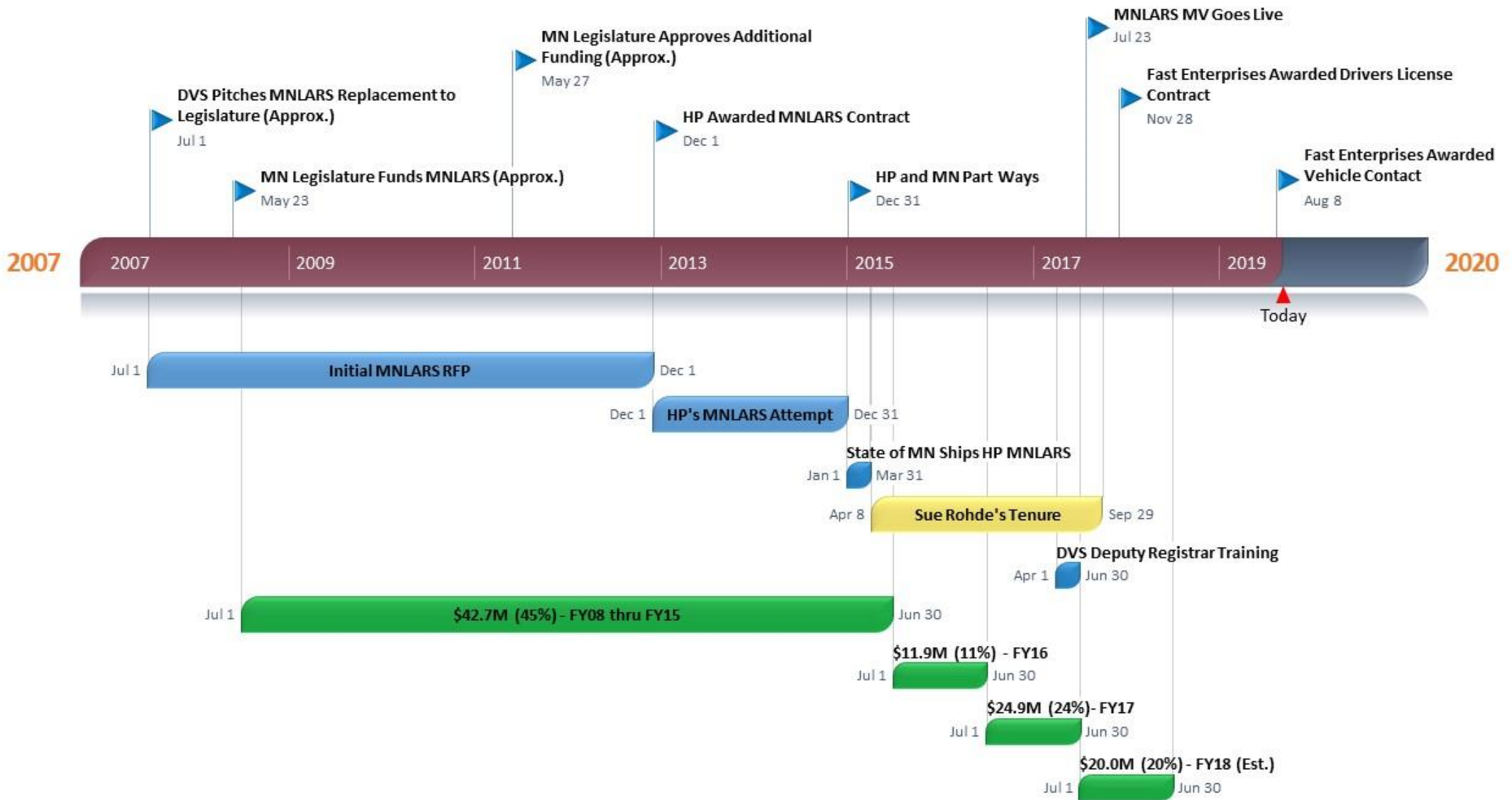- End User Training
- End User Support

Deputy Registrars (End Users)

1500 City, County & Private Individuals responsible for:

- Operating 170 DR Offices
- Real time data entry
- Taking Training on MNLARS

MNLARS Timeline

MNLARS Release MV By the Numbers – as of 1.31.17

Release MV Area	"Number"
User Signup	Over 9000 Users to be Registered
User Agreements	Over 2900 New User Agreements
Plates and Fees	286 types of plates / 1160 Plate Fees (w/ dozens of exceptions)
Finance	1131 Line Items and 316 deposit locations
Data Conversion	93 Million Data Records Converted
Requirements	2162 Stories, 311 Features 38 Epics (Sub-Projects)
Defects	2766 Total Defects (2639 Resolved - 127 still in flight)
Software Quality	4777 QA Test Cases / approx. 600 UAT Test Cases
Legacy Decommissioning	161 Jobs, 740 COBOL members and ~ 300 eSupport Jobs
MNLARS Infrastructure	Approx. 250 Servers, 14 separate environments

MNLARS Release MV Scope for IT

INSTALL AN IDENTIFY MANAGEMENT (IAM) SYSTEM TO REGISTER USERS

INSTANTIATE A SCALED AGILE METHODOLOGY & SOFTWARE TO SUPPORT IT

INSTALL OPERATIONAL TOOLS FOR PERFORMANCE MONITORING & FILE DELIVERY

BUILD A LIGHTWEIGHT IMAGE CAPTURE TOOL

BUILD A INVENTORY MANAGEMENT AND TRACKING COMPONENT

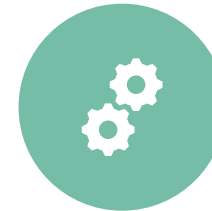**PROCURE A QA VENDOR – SOGETI FOR AUTOMATED AND MANUAL TESTING**

PROCURE APPROX. 60 DEVELOPERS

CREATE A NEW PUBLIC FACING WEBSITE

CONNECT TO 22 DISTINCT SYSTEM INTERFACES

SHUT DOWN VEHICLE PORTION OF LEGACY SYSTEM

STAND UP AND AWS DISASTER RECOVERY ENVIRONMENT

...and build the MNLARS MV System

Decisions MNLARS Inherited

1. Legislative Due Date

2. Deliver MNLARS in two extraordinarily large chunks

3. Real time data entry by Deputy Registrars

4. Let's do a custom software build

5. Agile it is!

6. Minimum Viable Product (MVP) Approach

What went well!

1. Leveraging Scaled Agile Framework (SAFe)

2. Using AWS for Testing and Disaster Recovery

3. Presentation at AWS Public Sector Conference in Washington, DC

4. MNLARS shipped after 9 years of false starts

What went Wrong!

1. Never revisited those early decisions

2. Deputy Registrars did not want MNLARS and did not trust DVS

3. Agencies did not set public expectations properly

4. Deputy Registrar and Public Help Desk was exponentially understaffed, resulting in a terrible user experience

5. MVP is a very bad idea for replacement of an existing system

6. Architecture did not support incremental delivery

MNLARS Traffic – From the start of Deputy Registrar training through first few days of production
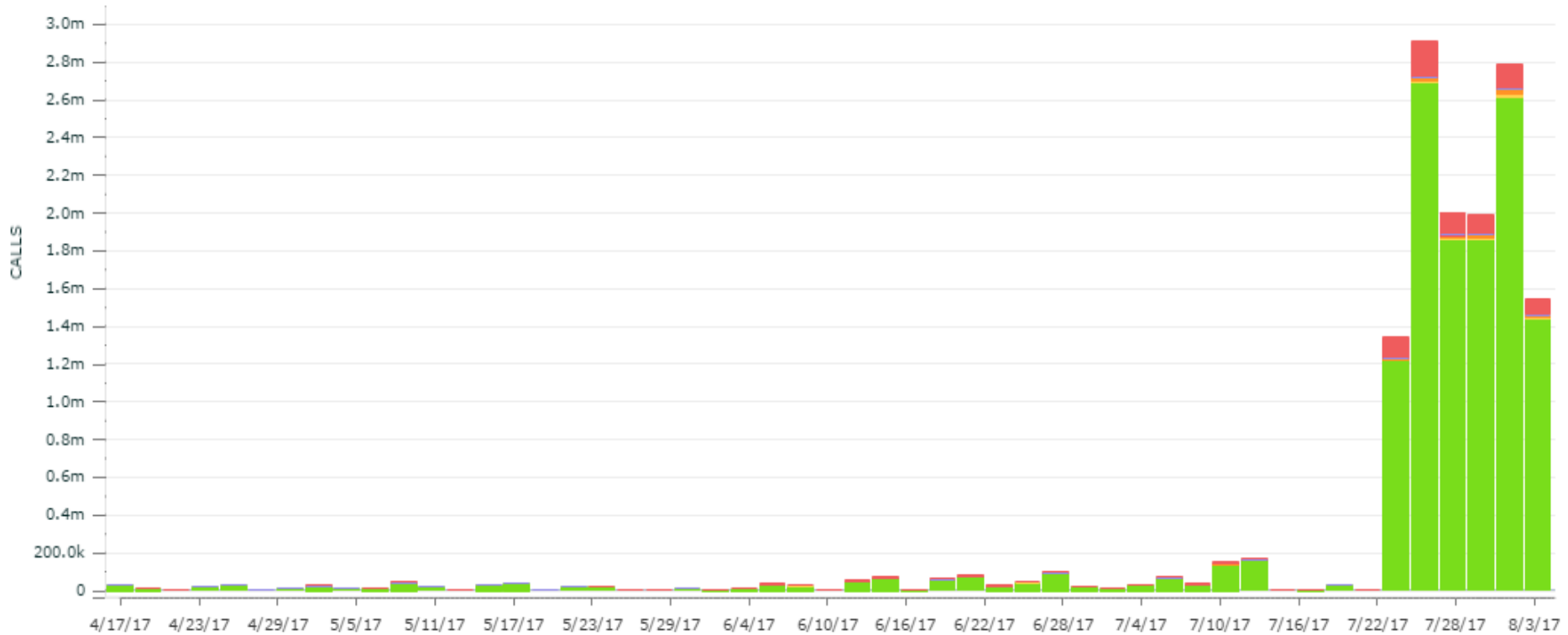
Closing Thoughts

1. The State of MN built the wrong system and is about to repeat the mistake. In 2019 this system should allow the customer to complete these transactions on their phone rather than via mail or by visiting a Deputy Registrar Office

2. The State of MN went looking for individuals to blame rather than learning from their mistakes.

3. MN State Government (Legislature & Administration) need to learn about technology. Our data depends on it.

THANK YOU