



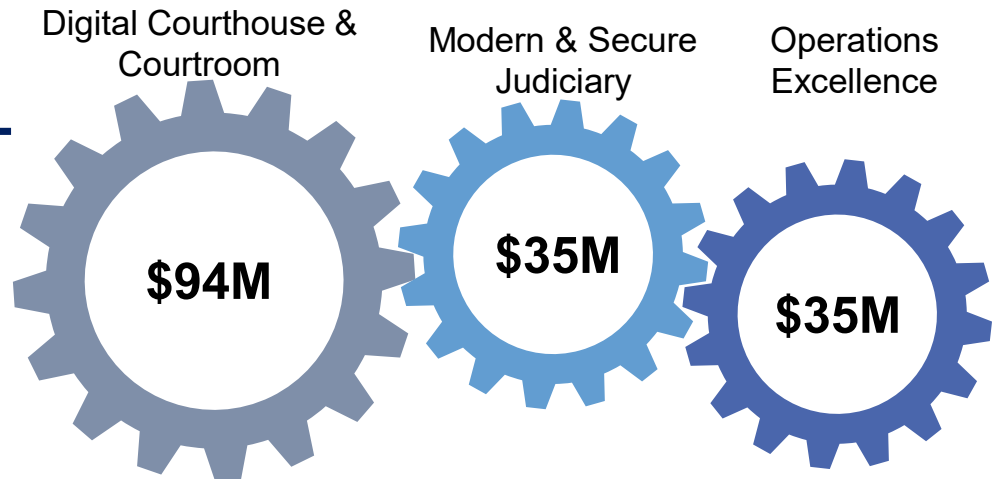
# Massachusetts Court IT Capital Bond Request



**One Mission:  
Justice with Dignity and Speed**

# Judiciary Technology Bond Request

**The Court IT  
Capital  
request is  
\$164M**



The Massachusetts Judiciary is positioned to dramatically improve the experience of all court users and connected agencies. In the near future, a court user will experience a seamless, continuous experience, able to approach their legal needs with dignity before even stepping into the courthouse. Court users will be well informed by readily available information and online court functionality.

Court users will have the ability to file forms, find information, and access guidance from their home, work, or attorney's office – wherever they need to be to focus on their legal needs.

Getting to the modern judiciary requires a major investment in systems, security, and infrastructure to match the pace of expectations by the public and court staff.

## Project Elements

### Digital Courthouse & Courtroom:

- Content Management & Workflow Management
- Enhanced web presence
- Digital Signage
- Wi-Fi (Staff & Public)
- Appeals Case Management System Replacement
- MassCourts Replacement Planning
- Video Remote Interpreting
- Access to 2 Justice (A2J) Portal
- Digital Supreme Judicial Court Reports

### Modern & Secure Judiciary:

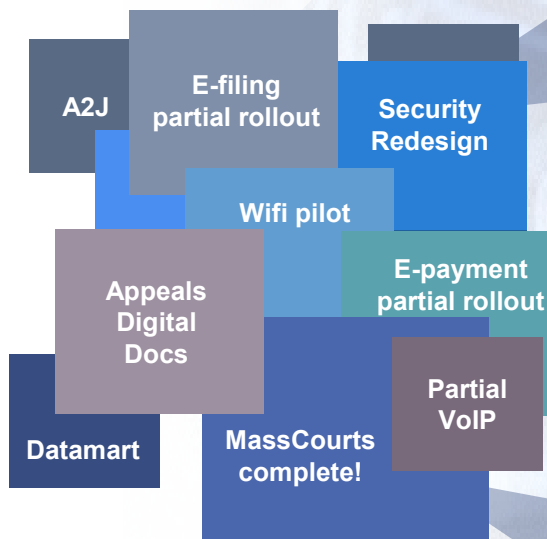
- Physical Security
- Digital Security
- Law Enforcement Comm.

### Operations Excellence:

- Enterprise Resource Planning
- Energy Management System (control system & dashboards)
- Voice over IP (VoIP) Phone System
- Data Centers
- Bandwidth
- VPN Access

# Judiciary is in a Digital Transformation

**Patchwork of investments  
in infrastructure & pilot  
technology...**



**...challenged by limited  
\$\$\$ and no capital for IT  
since 1997!**

**Digital  
Courthouse &  
Courtroom**

**Modern &  
Secure Judiciary**

**Operations  
Excellence**

**Need a major investment to bring to scale**

# Digital Courthouse & Courtroom

The Judiciary is in the midst of a digital transformation. The courts have made ongoing investments to bring advancements such as e-filing, e-payment, and electronic document storage into the court system. However, these investments have been limited in their scale and scope due to ongoing budget challenges and competing priorities. The court has also been challenged by a case management system (MassCourts) that was modern for its time but took too long to customize and implement across all court departments. In short, the court has fallen behind. Court users today need more expansive investment into faster,

more accessible, more secure and more integrated systems.

The vision for this bond funding is to move nearly all court functions to efficient, paperless processes along with all of the supports necessary to realize this vision, including digital security.

There are three initiatives to fulfill the vision of the court and better serve users and constituents. The initiatives are: Digital Courthouse & Courtroom, Modern & Secure Judiciary, and Operations Excellence. Within each of these initiatives there are multiple projects.



**Timeliness  
(Speed!)**



**Cost  
Efficiency**



**A2J & Public Access  
(Dignity!)**



**Reduced Physical &  
Digital Security Risk**



**Integrated Systems**

## Digital Courthouse & Courtroom: \$94M

1. **Content Management & Workflow Management**
2. **Enhanced web presence**
3. **Digital Signage**
4. **Wi-Fi (Staff & Public)**
5. **Appeals Case Management System Replacement**
6. **Video Remote Interpreting**
7. **Access to 2 Justice (A2J) Portal**
8. **MassCourts Replacement Planning**
9. **Digital Supreme Judicial Court Reports**

### What is a digital courthouse and courtroom?

The vision for the digital courthouse and courtroom is that all court related work can be created and managed electronically for both constituent and court staff. Before entering a court house, attorneys and self-represented litigants alike will have access to the relevant information necessary to prepare their case, file the appropriate forms





# Digital Courthouse & Courtroom

and documents, pay the fees, and prepare for the day-of court (including way-finding). Once the “paperwork” has been submitted, clerks and registers will be able to manage the case electronically. Once in court, Judges, staff, and the public will have access to Wifi to enable them to access case related material while in the courthouse and courtroom.

## 1. Content Management & Workflow

The core of the digital courthouse and courtroom is the notion that nearly all case related material can be stored and managed electronically. To realize the vision of the digital courthouse and courtroom, the Judiciary intends to implement a content management system to manage e-filed documents, forms, and evidence along with a workflow engine to manage the operations of the courts. The digital workflow will also help to enable inter-court case transfer (a very manual process today).

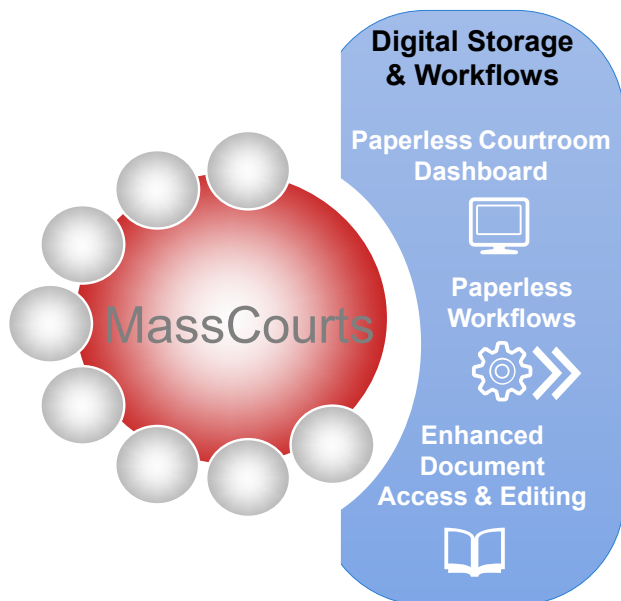


With this capital request, all these processes and files can be managed and stored electronically for the appropriate parties to access. Additionally, court users will be able to access their case information online - reducing the need for clerks and registers to mail paper copies to court users. In Probate and Family Court alone, the annual postage cost to mail records is \$370K (this does not include labor, paper, or envelope costs)<sup>1</sup>.

Adding to the frustration for constituents today is that court events, such as Judge’s decisions, are not immediately accessible because very few courts today are able to do real-time docketing.

Realtime docketing is essentially where the clerk or register takes notes in the case management system during the court session instead of compiling a paper docket and then updating the MassCourts system. Realtime docketing is limited in the courts today because clerks and registers have limited access to the case material necessary and it is often easier to take paper notes. By updating the court content management system, court users, including probation, all have the appropriate information at the right time, supporting efficient workflow and greater transparency to the public.

## Improved Digital Workflow added to Case Management System



<sup>1</sup> (DiCenso , Casey, & Medonis, 2018)

# Digital Courthouse & Courtroom

## Enhanced Probation Access

With the digital court of the future, a probation officer is able to gain real-time access to the latest information on the probationer they are about to visit with. From remote locations, probation officers can gain access to the status of open cases in Massachusetts, any warrants or open cases in other states, along with relevant information from the Registry of Motor Vehicle (RMV), and Department of Children and Families (DCF) among other agencies. And documents added to the system are at the Probation Officers fingertips. This reduces the risk for the probation officer and enables to probation officer to better serve the community and the probationer.



## Real-time data access

Judges, Probation Officers, Clerks, Registers, and Bail Magistrates, for example, need access to data at the right time to make informed decisions. Examples of data that needs to be available include: in-state and out-of-state criminal records and warrants, Registry of Motor Vehicle (RMV), sex-offender registry, Department of Correction (DOC), mental health history, out of state probation, and federal information. This information today, in most cases, is only available on an ad hoc basis. Similarly, other state agencies, federal agencies, and inter-state agencies need access to the data in a timely manner.

## 2. Enhanced Web Presence and Access to Justice (A2J) Portal

The Access to Justice (A2J) portal will provide the necessary information and process flows to enable self-represented litigants to find the information they need, file the appropriate case material, and have access to online dispute resolution (ORD) and mediation services. The portal will also provide information to prepare people for the day-of a court session, including way-finding.

Users need a strong, informed, and updated online presence to meet modern needs and expectations. Online, mobile friendly access is critical to supporting the many self-represented litigants, families, attorneys, and others.

## 3. Digital Signage

The idea of going to court is in-and-of itself intimidating. Parties have a legal matter that they have not been able to be resolved outside the court system. People disagree and are often emotional. The idea of going before a Judge adds another layer of stress. Now imagine walking into a new building and trying to understand where you need to go.

Today, the session schedule is generally printed and hung outside each courtroom while wayfinding to the courtroom is often challenging with large, multilevel court facilities. The vision for the digital

# Digital Courthouse & Courtroom

courthouse includes digital signage in all courthouses and outside of all courtrooms.



*Digital signage installed outside of a courtroom in the San Bernardino Justice Center. (Infax, n.d.)*

These signs are akin to the signs in airports. The screens will display a map of the court, the cases on the docket for the day and associated court room. These signs may display text in multiple languages and assist with wayfinding. The goal of outfitting the courts with these signs is that it allows constituents to feel more empowered and more confident upon entering the court, making the experience overall more positive. Furthermore, the Judiciary envisions incorporating wayfinding into the online portal to allow people greater preparation and confidence for their court session.

## 4. Wifi

Court staff are a highly mobile team, often moving between courthouses to ensure appropriate coverage and processing.

Not only do they often travel from court to court, but the moment they leave their desk to go into the courtroom, they are mobile. To support this mobility, we are proposing outfitting the courts with Wifi for court staff.

With potentially the same or greater impact than employees, court users need Wifi to access their electronic files, research legal precedents and terms, and other case related information, an access to justice initiative. Wifi is a significant enabling technology and critical to a number of initiatives, such as electronic document workflows and getting the best out of real-time access.

Open, appropriate access to the internet from the courthouse has the potential to massively improve the access to justice.



WiFi in court buildings will improve the experience of court users and increase access to justice.



# Digital Courthouse & Courtroom

## 5 & 6. Planning for MassCourts and replacing the Appeals CMS

While the focus is on existing functionality and document flow, we are also planning for the replacement and/or upgrade of the legacy case management system. The plan is for the Appellate case management system to be replaced within the next 4 years. A component of the replacement project is to inform the much larger replacement of the MassCourts system, the Trial Court case management system. While full replacement of the system has not been included in this capital request to keep the focus on the many supporting applications, the intent is to do the requirements collection to be ready for the eventual replacement of MassCourts.

## 7. Video Remote Interpreting (VRI)

Video Remote Interpreting (VRI), a technology that is used in many other states, allows for centralized interpreters in remote locations to provide services for language and American Sign Language (ASL) interpretation. VRI allows interpreters to focus more on client needs and less on travel time, improving support for many types of cases, from traffic violations to urgent Probate and Family matters. VRI technology has proven to greatly increase staff time (and per diem employee) efficiency.

This technology is not limited to just courtrooms or interpreters. This technology can also be used in Department of Corrections (DOC) or police station

settings (e.g. restraining order) and for remote court sessions (i.e. housing court).

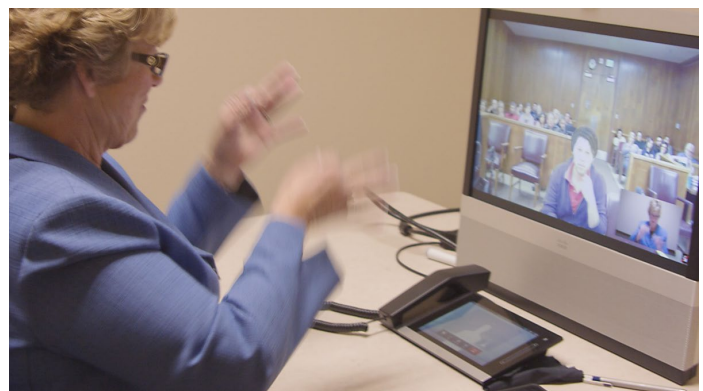


## Bringing it all together

The final component of the Digital Courthouse and Courtroom vision is that once the technology is in place, more court matters can be handled remotely. With Online Dispute Resolution (ODR), Alternative Dispute Resolution (ADR), and Video Remote Interpreting solutions, nearly one third of daily court activity has the potential to be completed remotely, from home, from a police station, or from a library. The technology will enhance the quality of justice for people in the state. Fewer people will need to take time off from work or find child care, for example. The technology will become invisible to staff and constituents alike and allow the court to better serve the public.



Source: (Judicial Council of California, 2012)





# Digital Courthouse & Courtroom

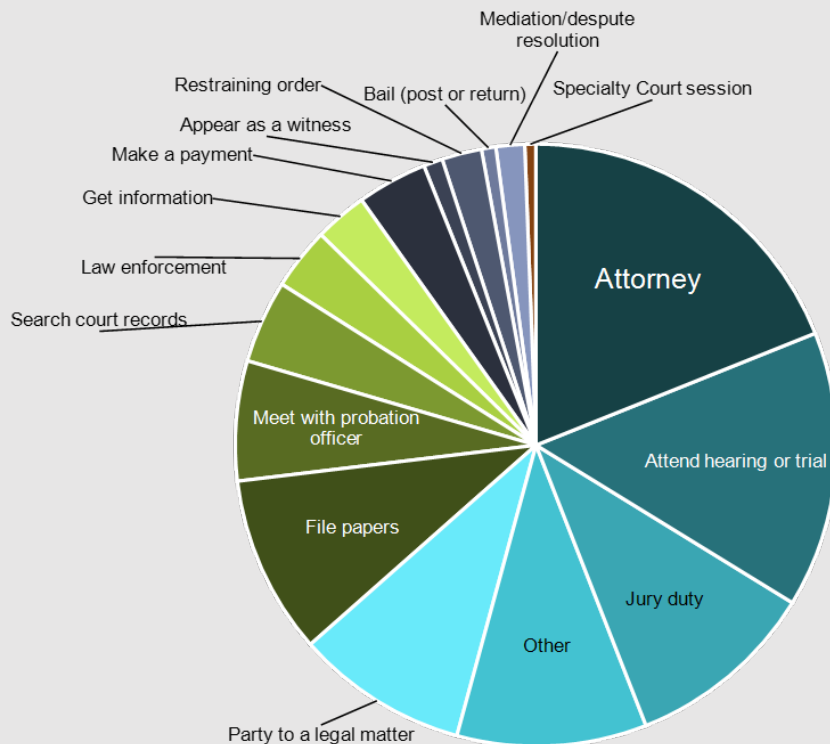
## Removing the need to walk into Court

The Report on the 2017 Access and Fairness Survey found that 11.2% of people who were in the courthouse were there to file paper work, 5.2% to search court records, 3.3% to get information, and 4.4% to make a payment. In the Digital Courthouse of the future, these tasks may be completed remotely, saving constituents a trip to the Courthouse and removing the challenges of finding childcare, coordinating transportation, or taking time off of school or work. In the same 2017 survey, 66.9% of respondents without attorneys identified that they made one or more accommodation to show-up in court (language, brought help, childcare, transportation, school/work).

Once the Digital Courthouse and Courtroom has been implemented, constituents will be able to file paperwork for all case types electronically, search case records electronically, and make payments for all case types electronically.

## Why are you in court today?

December 2017



Source: The Report on the 2017 Access and Fairness Survey Massachusetts Trial Court, Figure 6

There are several case studies from other state courts that demonstrate the best practice case type use of online dispute resolution (ODR) services. The case types are often high-volume case types including small claims, criminal show cause hearings (especially traffic), and probate and family contempt, among others.

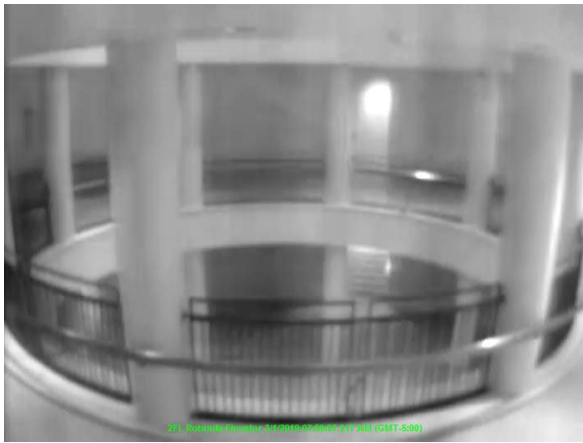
Sources: The Report on the 2017 Access and Fairness Survey Massachusetts Trial Court, Massachusetts Trial Court Summary of Case Filings by Type, Joint Technology Commission Resource Bulletin Case Studies in ODR for Courts

# Modern & Secure Judiciary

## Modern & Secure Judiciary:

1. **Physical Security**
2. **Digital Security**
3. **Law Enforcement Comm.**

### 1. Enhanced Physical Security



*Low resolution cameras provide limited value to court security. This is an image from a security camera in a high-volume courthouse.*

By nature, the courtrooms and courthouses are contentious locations. Users of the court, including the public, judges, probation, and staff, expect that the court has the most up-to-date security systems. The physical security systems of your “grandfather’s court” are no longer sufficient.

The Judiciary is proposing to update systems, add more cameras, centralize security monitoring, duress systems, and in-building communication to improve the effectiveness of the security department. Security staff will be able to more efficiently monitor day-to-day court activity and improve threat handling abilities. Centralized monitoring and greater camera visibility help to improve the security department’s reaction time.

### 2. Enhanced Digital Security

The Judiciary is moving to a digital court environment. In order to safeguard the sensitive

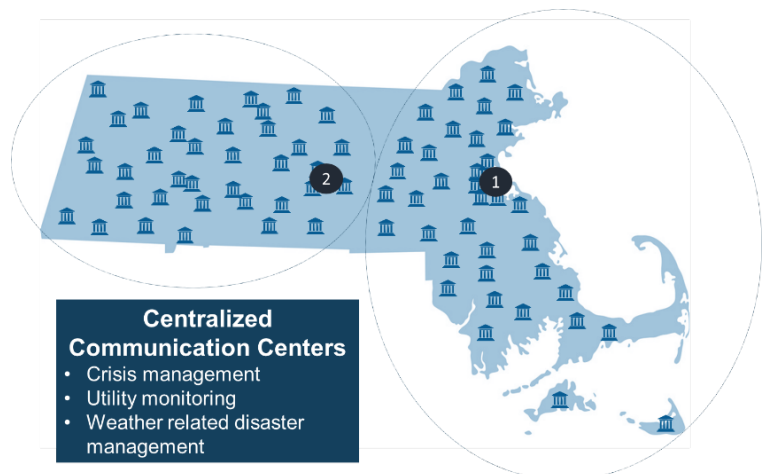
Today, 25 courts have black-and-white, low-resolution surveillance cameras. The grainy images these cameras produce provide limited detail, rendering them a difficult to use as a reference. People’s faces, actions, and belongings are not easily identifiable.

Source: Darrell Richardson, Assistant Chief Information Officer for Security

information in the court, emphasis needs to be placed on ensuring digital security. If there were to be a breach of court data, this would not only be a financial risk, there would be a loss in constituent confidence with the court, and in some cases, it may put people at serious risk (e.g. victims). Digital security is a priority for the court.

### 3. Improved Law Enforcement Communication

With the many potential human and weather-related events impacting the system, efficient responses to all incidents are essential to keep staff and users safe and informed. Currently, there is no single system in place to directly contact local or state law enforcement in the event of an emergency situation. Implementing a comprehensive communication system would improve the efficient coordinated response with law enforcement and lifesaving entities. Rather than be routed through a 911 operator, calls would be sent directly to the nearest dispatch station nearest the courthouse, streamlining the reaction process.



# Operations Excellence

## Operations Excellence:

1. **Voice over IP (VoIP) Phone System**
2. **Energy Management System (control system & dashboards)**
3. **Enterprise Resource Planning**
4. **Employee Remote Access**
5. **Data Centers**
6. **Bandwidth**

Most of the emphasis for innovation to date has focused in the courtroom, but that is not the only place for modernization. To make the courtroom run smoothly there are numerous administrative functions that need to happen seamlessly. The court of today has the opportunity to improve the operations by increasing bandwidth across all court locations, implementing voice over IP (VoIP) phones system, developing modern data centers, implementing energy management systems, enabling employee remote access, and implementing enterprise resource planning (ERP) software.

### 1. Voice over Internet Protocol (VoIP) Phone System

Moving all court staff to VoIP with a centralized Interactive Voice Response (IVR) system will reduce the cost to maintain the phones, improve staff efficiency, and allow for security to better track threats made over the phone. Constituents will experience a more professional experience



once the court implements VoIP and IVR – one helpdesk line to call, more than one person who can answer the calls to the helpdesk, and easy transfer calls.

### 2. Energy Management Systems (EMS)

An Energy Management System (EMS) is used in 68% of state-owned court buildings. Closing the gap to include all state-owned court buildings will save a projected \$1M annually<sup>2</sup>.

### 3. Enterprise Resource Planning (ERP)

Today, many of the administrative functions in the court are managed via paper-based processes. This has led to data entry errors, long processing times, and frustration. We are proposing to

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<sup>2</sup> Ripples Analysis



# Operations Excellence

leverage administrative systems that are used throughout industries to help automate these

“Getting rid of HR paperwork that could be web-based into the MassHR system (leave requests and travel reimbursement), or at least scanned and stored electronically.” – Research Attorney

“We need to improve the connection between the LMS and HRCMS - new employees should have LMS accounts populated with the required new employee training on their first day.” – MassCourts Training Manager

Source: IT Capital Plan Survey 2018, The Ripples Group Analysis

processes. Everything from departmental budgeting to travel expenses, to recruiting and on-boarding new staff.

## 4. Employee Remote Access

Court staff have very limited access to work remotely. Employee Remote Access (VPN) access would allow court staff access to documents and email, for example, to work remotely, including from home. Court staff would no longer need to transport sensitive documents with them to work from home or between court locations. This would greatly improve data security.

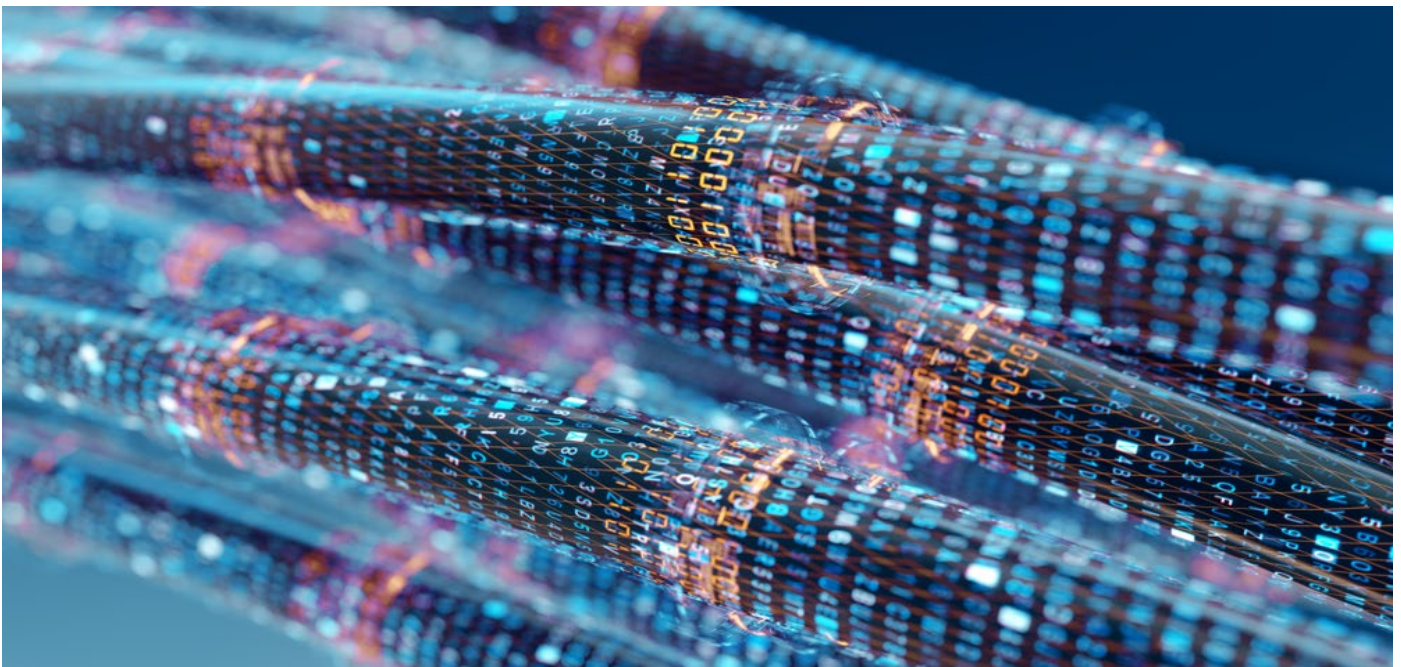
## 5. Data Centers

The current data centers are out of date and create high utility costs. They could be consolidated and the space could be repurposed for employee space or storage space. The use of spinning disks generates excessive heat, driving up cooling costs. New steady-state disks would be over five times as efficient as the current spinning disks. Moving data centers to the cloud would eliminate all heating and cooling costs. The new data centers will be easier to maintain and secure with the latest patches and upgrades.

## 6. Bandwidth

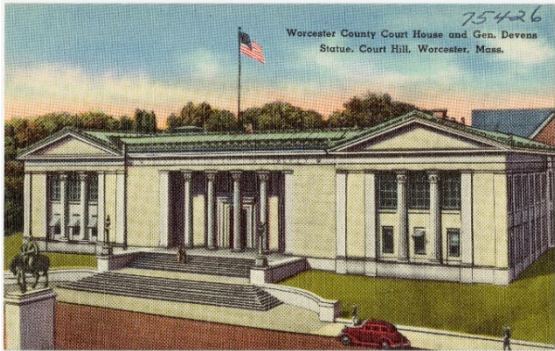
As the court moves to a digital practice, the bandwidth must be able to support stakeholder needs. The backbone to enabling the digital court transformation is access to a strong internet connection. To enable this, the court will need to increase the bandwidth going into all of the court locations.

The administrative components of running such a robust organization must keep pace. The initiatives outlined in this document help the court work towards improving the experience for court staff and constituents.





# Building on Past Investments



The Judiciary has advanced dramatically in its use of technology and systems over the past several decades. However, the court has been challenged to keep pace with the level of technology investment seen in other branches of government and the basic functionality that the public now expects.

While court users are comfortable using technology<sup>3</sup> at home, a visit to the courthouse today reveals a paper-laden process with each judge and clerk sitting next to a large stack of folders. Attorneys walking across Boston are easy to recognize with their large cases of paper next to office workers with slender portfolios.

Most court offices are still filled with stacks of paper neatly filed into extensive boxes and cabinets.<sup>4</sup>

The courts' reliance on paper slows processing time, increases time spent filing and retrieving



<sup>3</sup> (American Bankers Association (ABA) Bank Marketing, 2017) (Pew Research Center, 2013)



information, and reduces the availability and access to case information. Recent surveys revealed both internal staff and external stakeholders seek to improve access to information beyond what the current technology can provide.

The results of the 2017 Access and Fairness Survey identified need for further attention to efficient processing and useful and accessible resources and information to court users.

Sources: The Report on the 2017 Access and Fairness Survey Massachusetts Trial Court, Massachusetts

In the last few years, the courts have realized that to meet the needs of constituents and staff alike, the information technology (IT) systems and associated business processes need to be updated. With this understanding, Judiciary leadership has focused on becoming “not your grandfather’s court system”, which is to say the courts have been prioritizing modernization initiatives. As with most industries, the modernization efforts have capitalized on IT to better serve constituents. There is great

**Access to Justice (A2J)** is a Trial Court initiative to address attorney access, self-representation, language access, disability assistance, and self-help information.

<sup>4</sup> Images provided by Massachusetts Probation Service, 2019

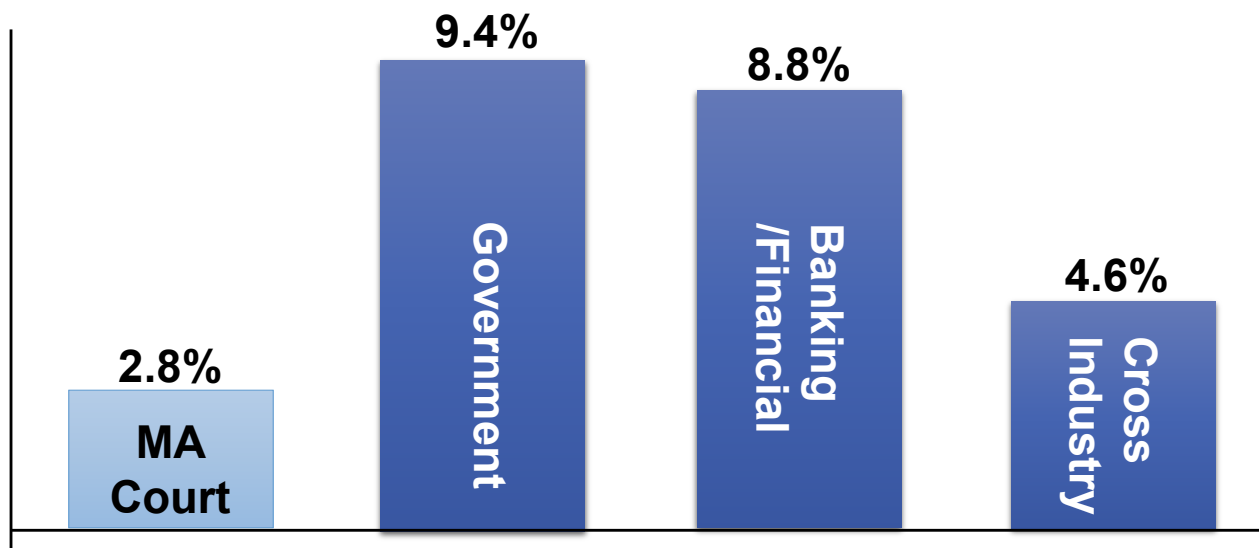
# Building on Past Investments

opportunity for improving constituent and staff experiences with the court system due to an historic underinvestment in IT.

The courts have historically spent only a small percentage of the operating budget on IT related initiatives. The spending has mostly gone to maintenance of existing systems with some funds available for pilots and limited system rollouts. In comparison to other governments and industries, this IT spending is well below average. In FY 2017, for example, 2.8% of the Trial Court's operating budget went to IT related expenses. For comparison, across all industries, the average IT spend is 4.6% of operating budget<sup>5</sup>. For government and banking/financial services, this climbs to over 9% and 8% respectively<sup>6</sup>.

Remarkably, even with a relatively small budget, the courts have been able to pilot some advanced technologies including e-filing and e-payment while consistently investing in Access to Justice and security initiatives. In addition to functional needs, to fully rollout these projects to all court departments and courthouses, the backbone infrastructure supporting these systems and processes must be enhanced, and in some cases replaced.

## Sustained underinvestment in IT



Sources: Deloitte Insights (2017, November 28) Technology budgets: From value preservation to value creation. <https://www2.deloitte.com/insights/us/en/focus/cio-insider-business-insights/technology-investments-value-creation.html> Court UU Expenses 2015-2019, Trial Court Historical Spending [http://budget.digital.mass.gov/bb/h1/fy18h1/brec\\_18/dpt\\_18/hotrc.htm](http://budget.digital.mass.gov/bb/h1/fy18h1/brec_18/dpt_18/hotrc.htm)

<sup>5</sup> (Deloitte, 2017)

<sup>6</sup> (Deloitte, 2017)

# Implementing the Change

## How do we get there?

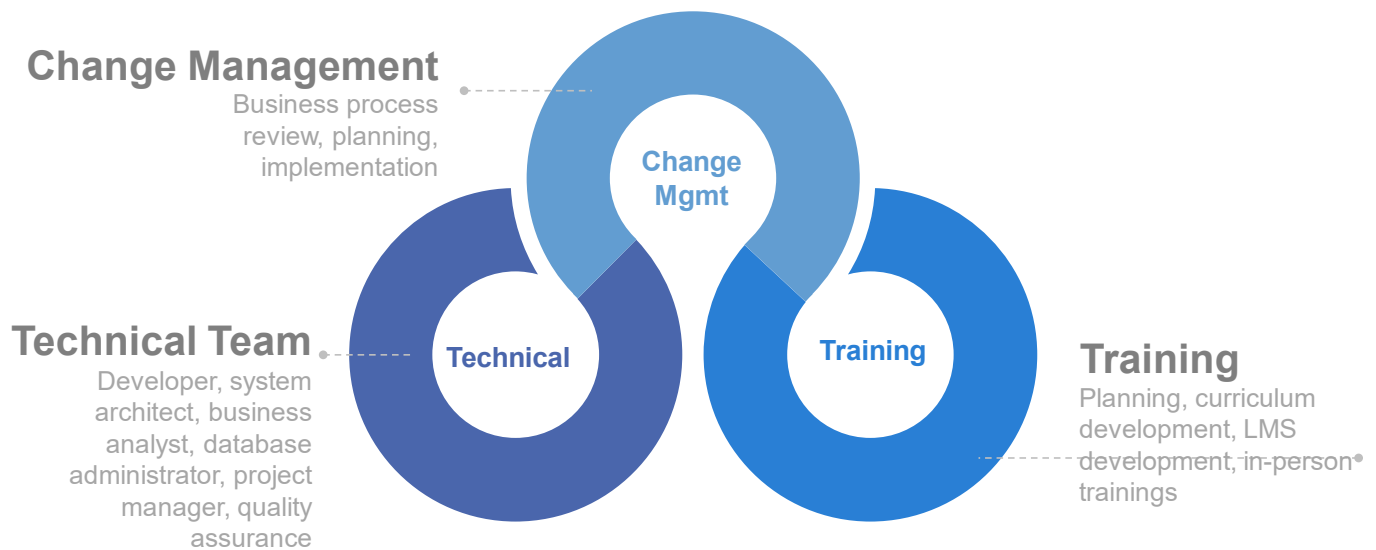
To fulfil the vision of the court of the future, Judiciary leadership has planned to develop teams of IT technical, change management, and training resources. The vision is for all of these roles to be filled with contract employees and consultants, allowing the court to adapt quickly to the short-term need for these resources.

The change management team will complete business process reviews for all court processes in preparation for contracting for software and hardware solutions. This is a laborious task, that addresses any differences in operating procedures for each court location and court department.

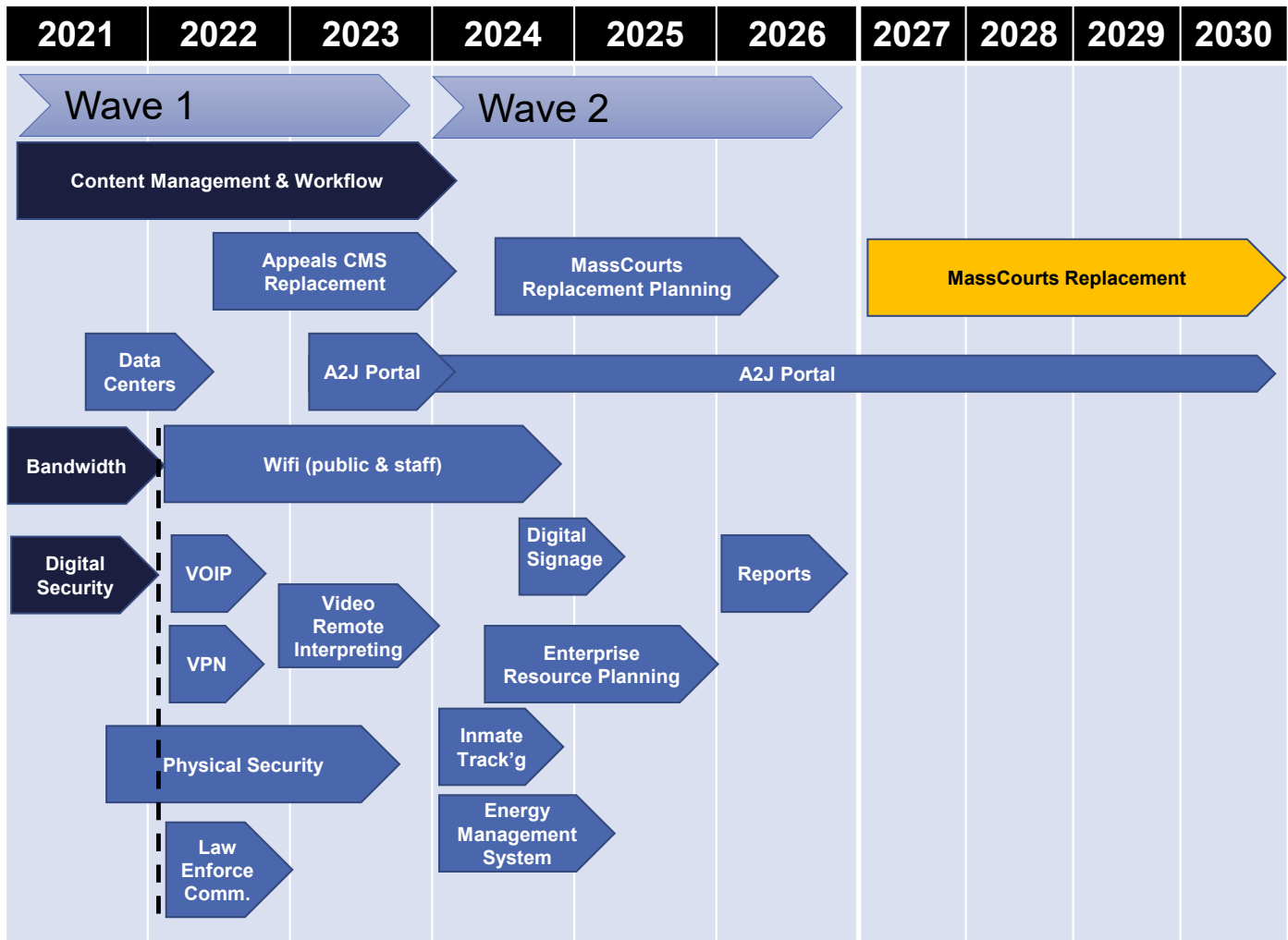
Once contracts are in place with the software and hardware vendors, the change management team

will continue to work with the project manager and technical team to work inclusively with business leads – these are your clerks, registers, cashiers, court officers, judicial secretaries, to name but a few – to develop and refine the new business processes for the digital courthouse and courtroom. The technical team will specialize in integrating the new systems with the existing systems.

During the final phases of the implementation, the training team will develop the curriculum and train staff to ensure that the transition to paperless goes as smoothly as possible. Training will mostly focus on the new business processes.



# Implementation Timeline (FY)





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