Kansas City, Missouri is located in the middle of the continental United States with a population of roughly 500,000 residents. Kansas City has seen marked growth and development in recent years, including the addition of world-class attractions such as the World War I Museum and the Kauffman Center for the Performing Arts.

Regrettably, Kansas City continues to be burdened with a chronic violent crime problem.

Using the SARA Model as a guide, this presentation will describe steps the KCPD and its partners took to both *reduce* and *prevent* violent street crime throughout the city using Risk-Based Policing (RBP).

# What we'll cover today…

- Use the SARA Model as a guide to share how KCPD deployed RBP
- Take a Look Inside the KCPD's RBP Strategy
- First Year Results
- Lessons Learned/Share Next Steps

Scanning

As touched on above, Kansas City has been challenged by violent crime for years. FBI data show Kansas City's homicide rate consistently ranks in the top 15 for cities with populations greater than 250,000[1]. In fact, Kansas City's average annual homicide rate was more than twice the national average the decade leading up to Chief of Police Richard Smith taking office in 2017.

**Average National Homicide Rate for Cities >250,000 from 2007 - 2016: 10.42 per 100,000**



**Kansas City's Average Homicide Rate from 2007 - 2016:  22.83 per 100,000**
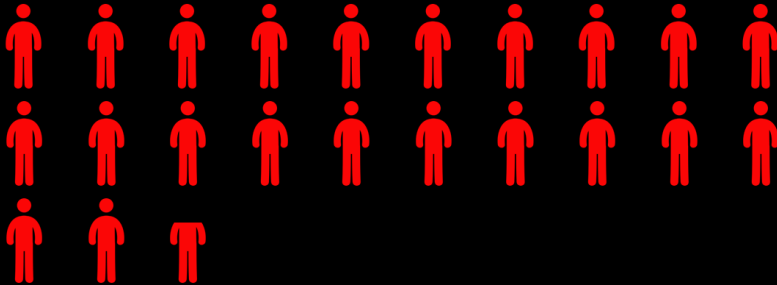
Chief Smith listened to the concerns of the community and local government by declaring violent street crime a top priority for the KCPD. Other crime-reduction strategies had been deployed in Kansas City in recent years, some more formal than others. Unfortunately, initial promise was replaced by surges in the very crimes reduced just a year or two prior.

A search therefore began for a new strategy to complement existing efforts. The Chief wanted the strategy to meet the following requirements:
• Have a strong evidence base
• Be capable of short-term impacts, yet sustainable
• Strike a balance between crime prevention and traditional response
• Place priority on community engagement

Analysis

With the Scanning step complete and the problem selected, a strategic analyst assigned to the Chief's Office began to dig deeper into Kansas City's violent crime problem.

Analyzing internal data was the first step taken to paint a more complete picture of the city's violence.
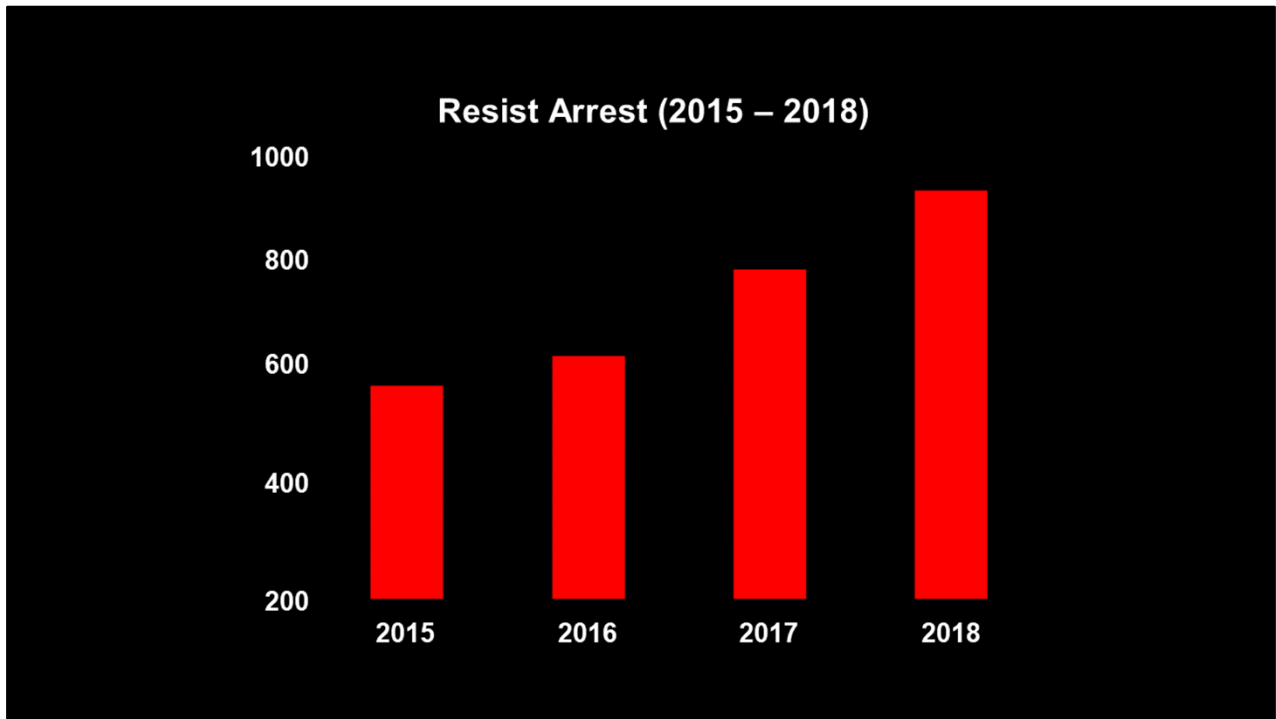
**Violent Crime by Year (2015 – 2018)**
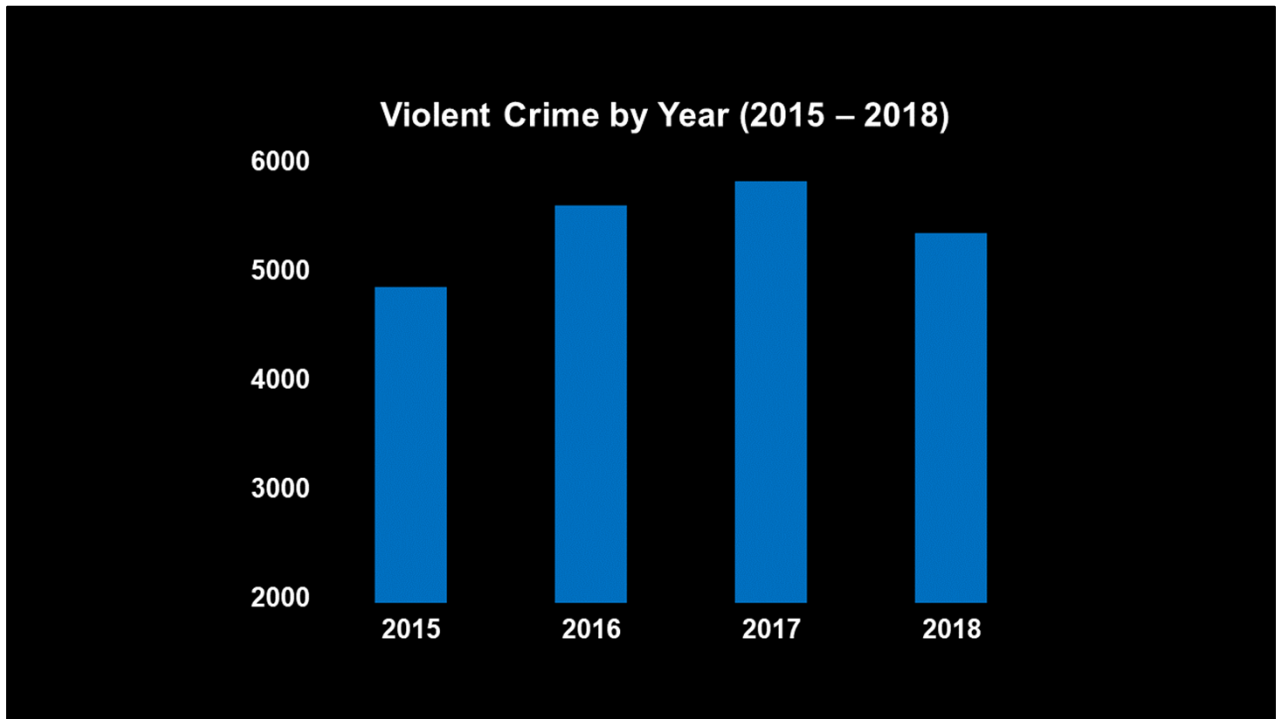
The chart shown here provides violent crime totals for all of Kansas City for four years prior to the RBP project being initiated.
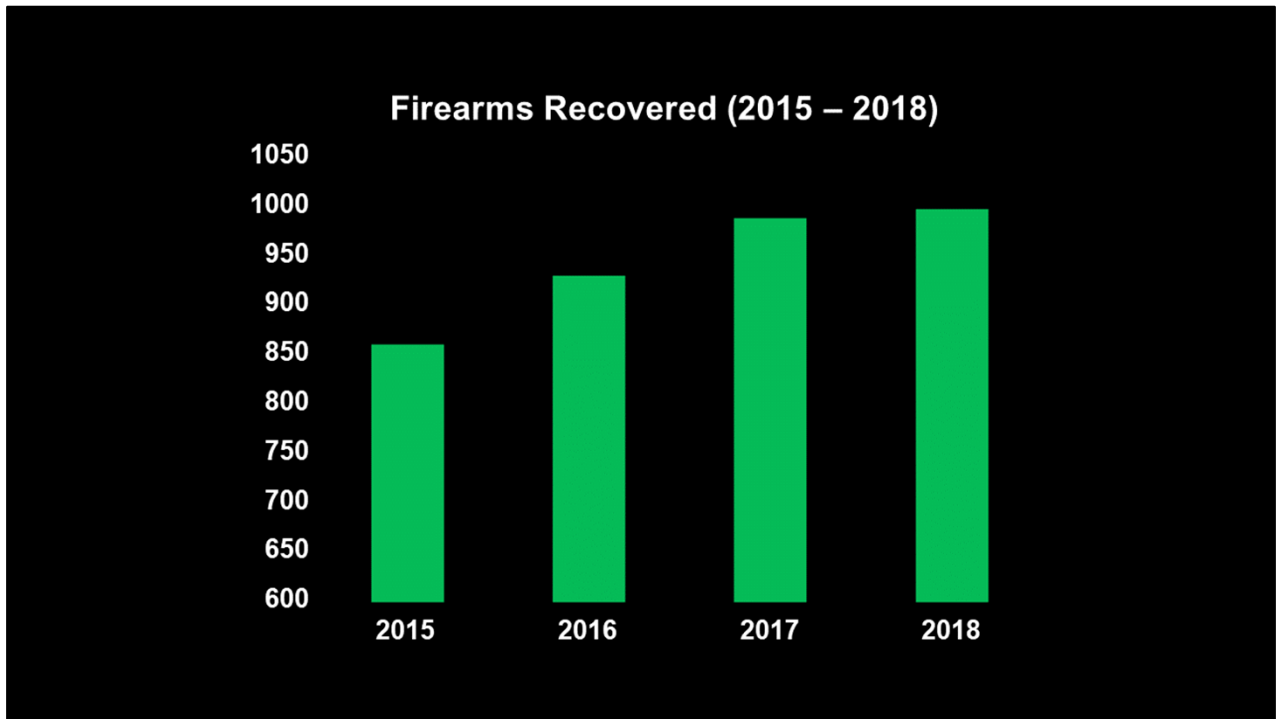
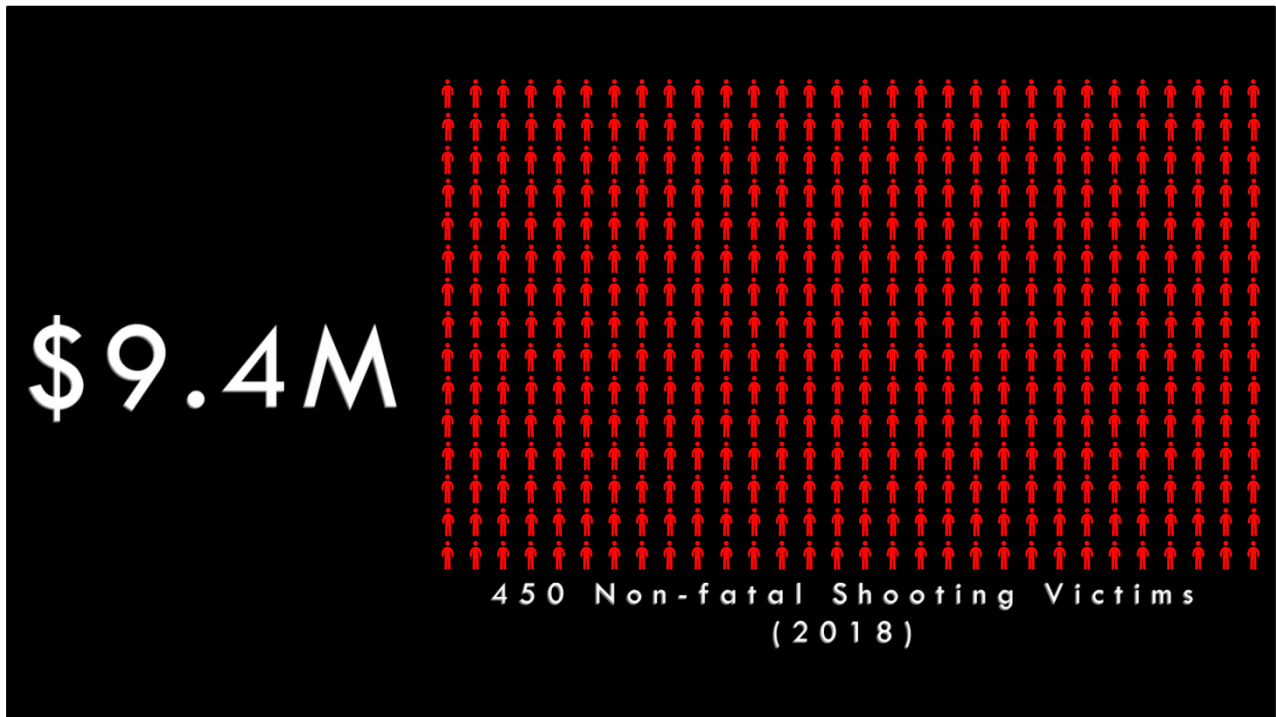Firearms Recovery data was gathered for the same date range…

**Resist Arrest (2015 – 2018)**

as were data concerning when individuals actively resisted arrest when encountered by KCPD members.

In all, the scope of the problem showed Kansas City was becoming increasingly violent for citizens and officers alike.

**$9.4M**

450 Non-fatal Shooting Victims
(2018)

Other negative outcomes, both internal and external to the KCPD, were identified during the analysis of Kansas City's violence.

In terms of time, KCPD patrol officers spent **1,858 hours** responding to target violent crimes in 2018, the equivalent of **over 77 days**. Note this figure does not account for investigative elements or CSI responding to crime scenes. Moreover, a conservative estimate of only 30 minutes per incident was used.

Looking outside the KCPD, we also estimate Kansas City's local health care costs approached **$9.4 million** to treat the 450 non-fatal shooting victims from 2018[2].

Response

While the search for a new crime strategy continued, the Chief's Office analyst stumbled across an article about how the Atlantic City, New Jersey Police Department successfully deployed RBP in partnership with Rutgers University (https://pressofatlanticcity.com/news/crime/atlantic-citys-violent-crime-decreases-with-risk-based-policing-initiative/article_2ff881b0-46c6-59c8-afa8-4534ca34751b.html).

The KCPD and Rutgers team joined forces and designed an RBP intervention from the ground up, with Chief Smith ultimately bringing RBP to Kansas City in March, 2019.
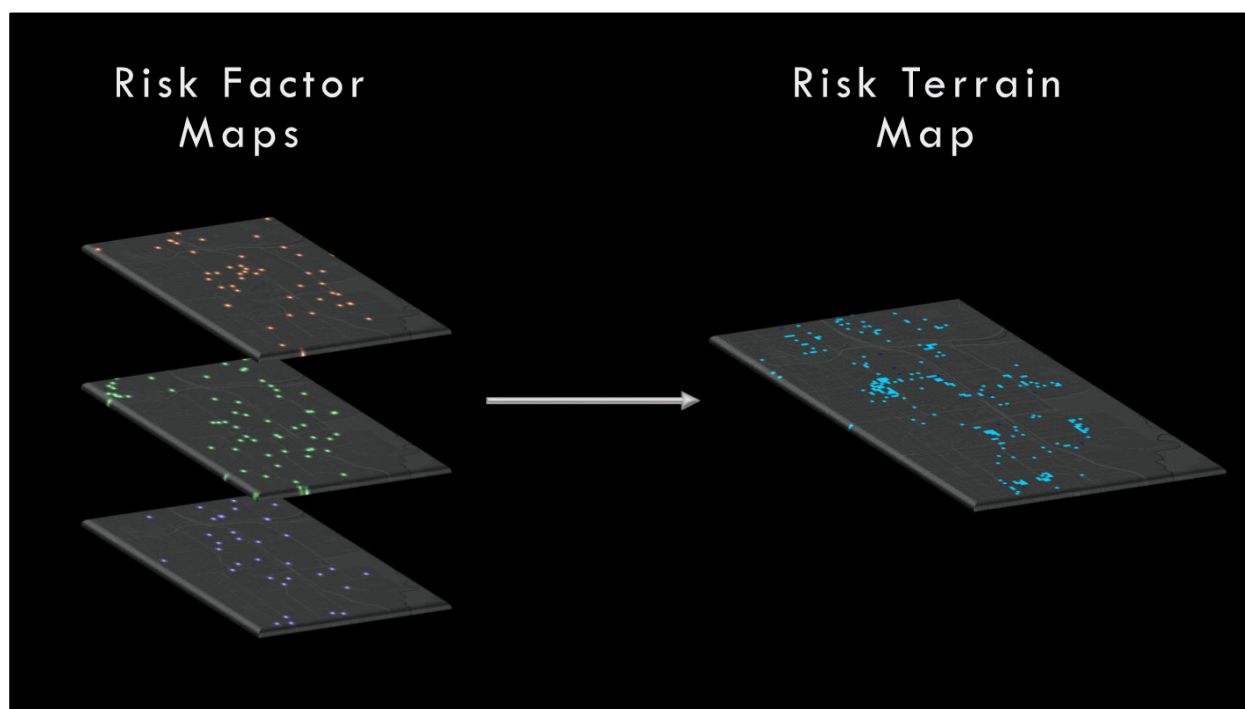
*So What is Risk-Based Policing, Exactly?*

Simply stated, RBP is a public safety strategy based on a spatial analysis technique called Risk Terrain Modeling (RTM). RTM diagnoses environmental features that attract or generate crime in a given area. Known as "risk factors", these features should receive the focus of resources deployed by those elements involved in an RBP initiative.  RTM works by first identifying and mapping various risk factors for your problem.  The strength of an RTM analysis is it allows police and their partners to be far more proactive in addressing crime *before* it occurs.  This is due to RTM illustrating areas of highest risk while also providing the much-needed "why" behind what is driving crime.

To quickly visualize how RTM works, let's assume we want to create an RTM model to address armed robberies.  For example's sake, let's say convenience stores, bus stops, and abandoned buildings are all related to this particular problem.  We can then map convenience stores, bus stops, and abandoned buildings, as shown here by each of the three layers.  The next step is to combine all of these risk factor maps into a single composite RTM map, as shown on the right side of the slide.

Just as the individual maps showed concentrations of each risk factor, the RTM map shows a combined concentration of all three risk factors.  It is these "hotspots of risk" that serve

as a means to diagnose where resources should be deployed to address existing crime as well as prevent future crimes.

That is still a bit of an abstract way of thinking about things…consider a park such as Kansas City's own Penguin Park shown here. Children are much more likely to want to play here because of the attractive features, such as swings, jungle gyms, and the landmark penguin. But what would happen if you started to remove those attractive features? Maybe we take out one playset first; perhaps the same number of children will continue to play at the park. But if we continue removing other features, such as the playset in the foreground and the penguin, chances are families and children may stop coming to the park. Even fewer families would come to the park if the number of features continues to dwindle.

Similarly, if we attack crime-fighting in a similar way we will identify and remove environmental features that are attractive to causing crime. The more environmental risks we identify and eliminate, or at minimum, reduce, the greater impact we will have in crime reduction and prevention. RTM has a lengthy track record of success using this very approach.

Before moving forward, I wish to quickly emphasize RTM and RBP are more like a meteorologist trying to predict a thunderstorm as opposed to a crystal ball telling us exactly when, where, and who will commit a crime. Just as meteorology can make reasonable forecasts based on risks of bad weather, so too does RTM look at the physical environment to isolate risky features that generate crime. In turn, resources can be collectively deployed by police and their partners to areas of high risk identified in the RTM model.

When applying RBP to the Problem Triangle, we see the majority of risk-reduction activities clearly apply to the **Place** portion of the triangle. It is all but impossible to separate people from problem-solving, however, so there is a lot of interaction with **Targets/Victims**, too.

In turn, this means KCPD members were asked to work with a variety of **Managers** and **Guardians** while deploying RBP, including business owners, representatives from municipal departments, or individual citizens.

# Deploying RBP

The KCPD deployed its RBP strategy in spring of 2019. Significant planning and training was put in place prior to the strategy officially starting. For example, KCPD hosted the Rutgers University team to provide two training sessions, one for KCPD command staff and the other for KCPD's crime analysts. Chief Smith wanted to deploy more of a top-down approach to RBP with the idea of other simultaneous efforts addressing training needs for the rank-and-file, such as a roll call training video and in-service training as time passed.

In addition to training, KCPD enacted practices to ensure accurate, timely collection of data related to the project due to the desire to conduct a formal evaluation with partners at Rutgers University. The KCPD created a custom CAD code, **RTM**, for officers to use when performing risk-reduction activities. Instead of writing additional reports, a couple sentences in CAD are all that were needed to notify partners for follow-up. Officers captured activities and tasks related to the RBP strategy in CAD, after which the data was easily gathered and able to be analyzed.

The Chief also integrated RBP into weekly crime meetings akin to CompStat. This was done to ensure the strategy was embedded into the Department's daily operations. Data taken from the aforementioned report capturing officers' RBP activities were used to gauge progress in Focus Areas and identify follow-up needs from within and outside the police department.

RTM PRIORITY AREA FOR GUN VIOLENCE – 35TH ST & PROSPECT AVE
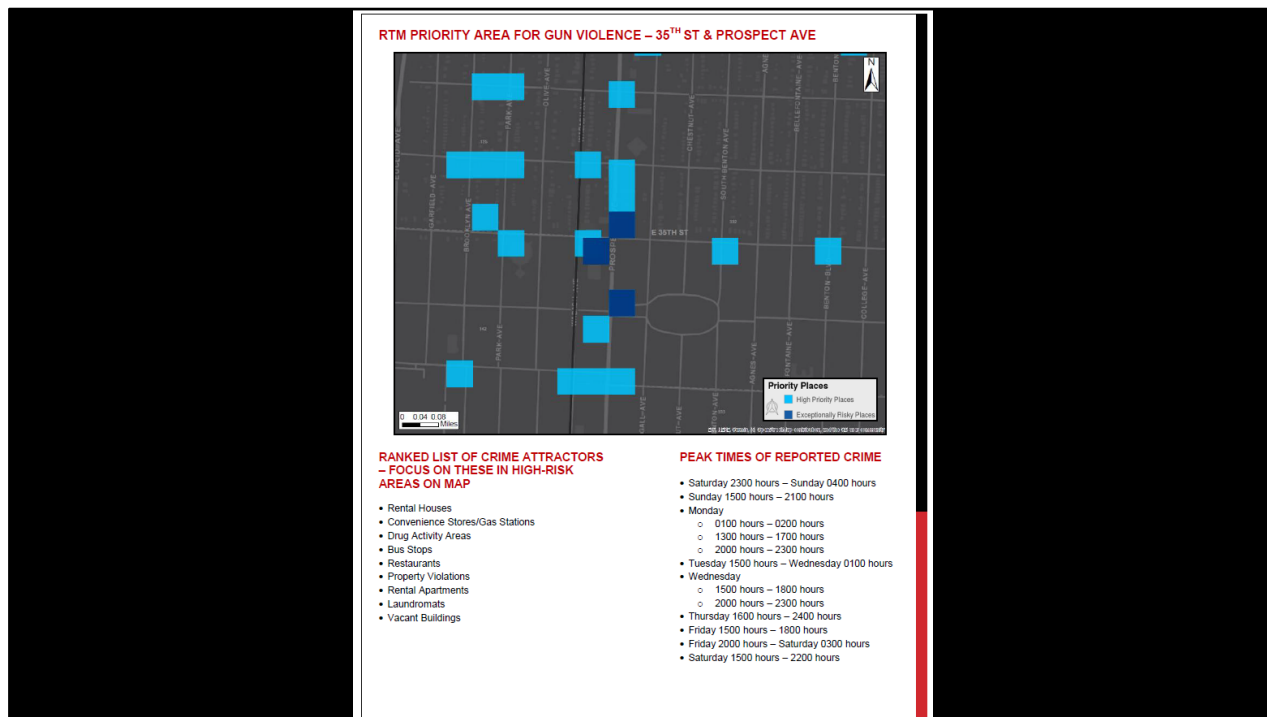
RBP was fully operational in March, 2019. Patrol division commanders were given autonomy to determine their own Focus Areas for the RBP strategy.  Rank-and-file members were given far more than mere marching orders "to do RBP", however. Numerous meetings with patrol teams, Community Interaction Officers (CIOs), and KCPD social workers took place. A roll call training video was created and RBP-themed posters and updates were placed across department facilities to routinely remind members about the strategy, its core principles, and outcomes.

Officers were given Focus Area reports such as the one shown here to guide their preventive work in the field. The map of the Focus Area is provided at the top, a ranked list of Risk Factors to address (or refer to the appropriate element to address), and peak days/times of reported crimes.  Keeping with Chief Smith's direction to avoid overloading officers with paperwork or other demands, this report provides everything officers (or commanders!) need to know in a single page.

Put in more practical terms, here is how that information is brought to life. This map shows one of our Focus Areas in part of Central Patrol Division.  Note most police tactics to address these crimes would be reactive in scope and likely focused on offender apprehension or identifying of suspects.  This is admittedly a good thing and certainly part of police work.  However, it does little to solve the root cause of why these crimes occurred and clustered in this area.

When we apply the RTM model to the same crime data and the local environment, we get a much more helpful context of what may have helped generate those crimes in the first place. The RTM model (as shown by the blue-colored squares) clearly illustrates how risk factors in this area create a risk narrative and generate crime.  In turn, RTM immediately changes the context for viable, long-term solutions to the problem at hand, shifting to a more preventive mindset.

Of note is all information KCPD used for creating RTM models was geographically- or environmentally-based.  KCPD intentionally excluded data sets such as arrests or probation/parole data to avoid any unintended biases in the RTM models.  Enforcement of laws may be appropriate in certain contexts but doing little more than saturating areas in efforts to blunt crime through increased stops or arrests will serve little more to "keep hotspots hot."  In contrast, RTM and Risk-Based Policing focus on places, not people, to prevent crime…after all, the absence of crime and disorder is one of the true measures of public safety.

Returning to the Problem Triangle, we can then share and use RTM data with various partners to reduce risk, ultimately making communities safer.

Here is a sample of municipal departments with whom the KCPD has partnered thus far...however, partnering with municipal groups is just the beginning. *Anyone* with a dedicated interest in public safety can join the RBP strategy.
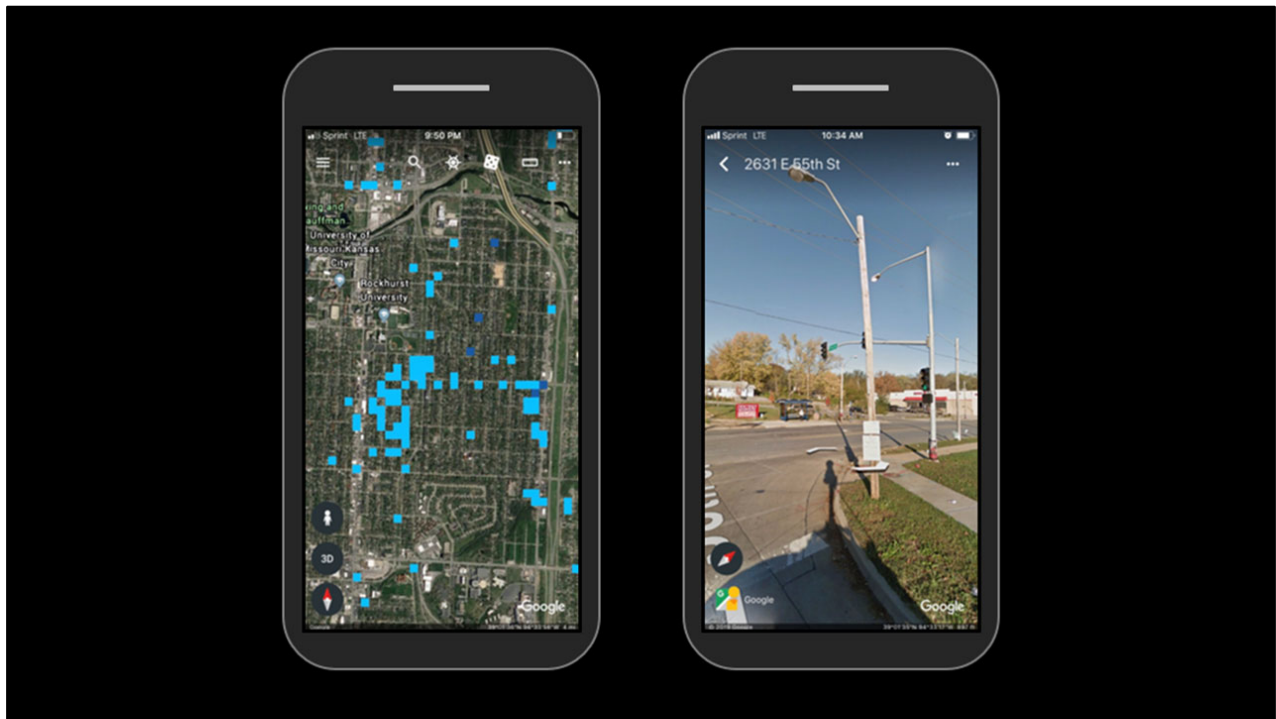
Another advantage of RBP is how easy-to-share the data can be. RTM models are easily accessed and shared by PCs or smartphones.

This allows for effective planning within and outside the police department, such as during roll calls, monthly meetings with City Hall, or ongoing dialog with the community. More on this shortly...

The KCPD is very pleased with the outcomes of its first year deploying RBP. Key findings are provided below but more detailed information can be found here:

https://journals.sagepub.com/doi/abs/10.1177/10986111211003205

**22% REDUCTION**
*in Focus Areas' violent crime*

**57% REDUCTION**
*in SIA resulting in enforcement in Focus Areas*

As shown here, target violent crimes decreased significantly, by 22%; Focus Areas also outperformed Control Areas by nearly 23%.

We also learned officers' self-initiated proactive activity in Focus Areas resulting in any enforcement decreased substantially alongside crime, nearly 60%.

These findings are exactly what the RBP strategy wanted to achieve, namely decreasing violent crime while focusing on prevention. Put another way, such outcomes strongly support the notion meaningful crime reduction can occur without relying solely on punitive measures or worse, over-policing. To be clear, the percentage change for SIA reflects changes in self-initiated activity as opposed to arrests generated by a citizen's 911 call, for example.

In addition to these results, we also looked at the top 1% highest-risk locations of our RTM model and compared them to locations of all homicides and non-fatal shootings from 2019.

50% of homicides and 58% of non-fatal shootings were within roughly two to three blocks of the RTM model's top 1% highest-risk cells, making the KCPD feel confident in the RTM model and believing resources were being devoted to the right places. Of note is the RTM model in question was created in spring of 2019 but used throughout the RBP initiative, meaning it accurately diagnosed where crimes were likely to occur months after it was first created.

*What Did the Public Think?*

We briefly mentioned how RTM data and models are transparent and can easily be shared with anyone, including municipal departments, community groups, and individual citizens. Despite all the strengths RBP brings to the table, it is imperative to learn what the public thinks about how they are policed. Community engagement was (and still is) one of Chief Smith's priorities for the KCPD's crime-fighting efforts, after all.

RBP was shared with community groups as the strategy was rolling out, in addition to the ongoing day-to-day contacts created as officers went to work in the Focus Areas. Time and again community members showed their appreciation about how RBP works due to its preventive approach, as well as how it ***focuses on places, not people***.

Local elected officials and news media have also been supportive when it comes to how the KCPD is using RBP to forge relationships among many sectors of the community to prevent crime.

This further illustrates RBP goes beyond its name and is far more than just a policing strategy. Rather, it encompasses a multi-faceted approach to public safety everyone can understand, appreciate, and embrace.

So What's Next?

Although the KCPD is pleased with the results of its RBP effort there are nevertheless areas of improvement to consider as the strategy evolves:
• Embed municipal departments further into the strategy
• Expand the list of partners beyond local government, to include non-profits or NGOs
• Continue to change certain perspectives within police culture, such as "just catching bad guys"
• Implement more dynamic resource deployment and community engagement
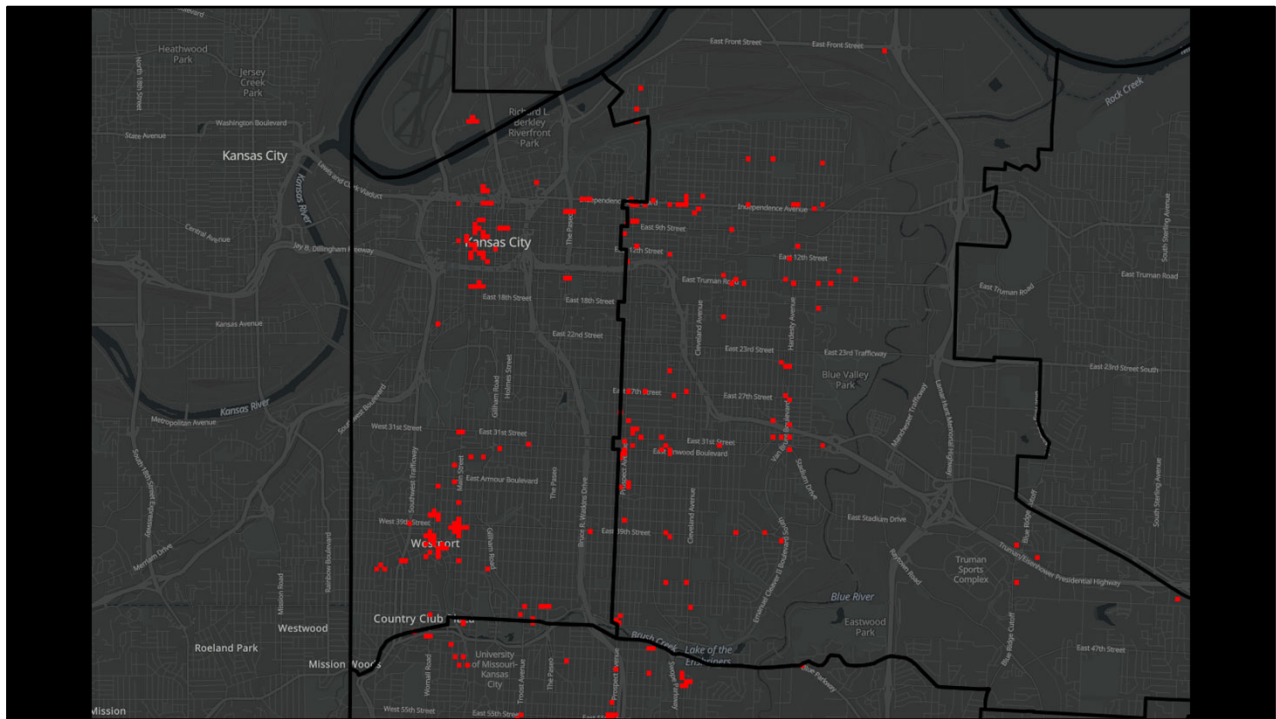
One way the KCPD is evolving its RBP strategy is to shift from long-term, pre-defined Focus Areas to quarterly review of the Top 100 highest-risk cells in each Patrol Division.

The shift away from pre-defined geographic Focus Areas will help us maintain diligent deployment of resources in areas of highest-risk in a more dynamic manner.

In addition, new RTM models will be created and shared on a more frequent, quarterly basis.  As with shifting away from pre-defined geographic areas, more timely RTM models will help the KCPD and their partners address crime issues while staying abreast of how environmental risk may be changing as a result of the RBP initiative.  Ideally, environmental risk (including the specific risk factors that generate that risk) should shift spatially as the KCPD and their partners deploy RBP.  Frequently-refreshed RTM models can help the KCPD and its partners stay "ahead of the curve" by knowing where to adjust resources based on RTM models' outputs.
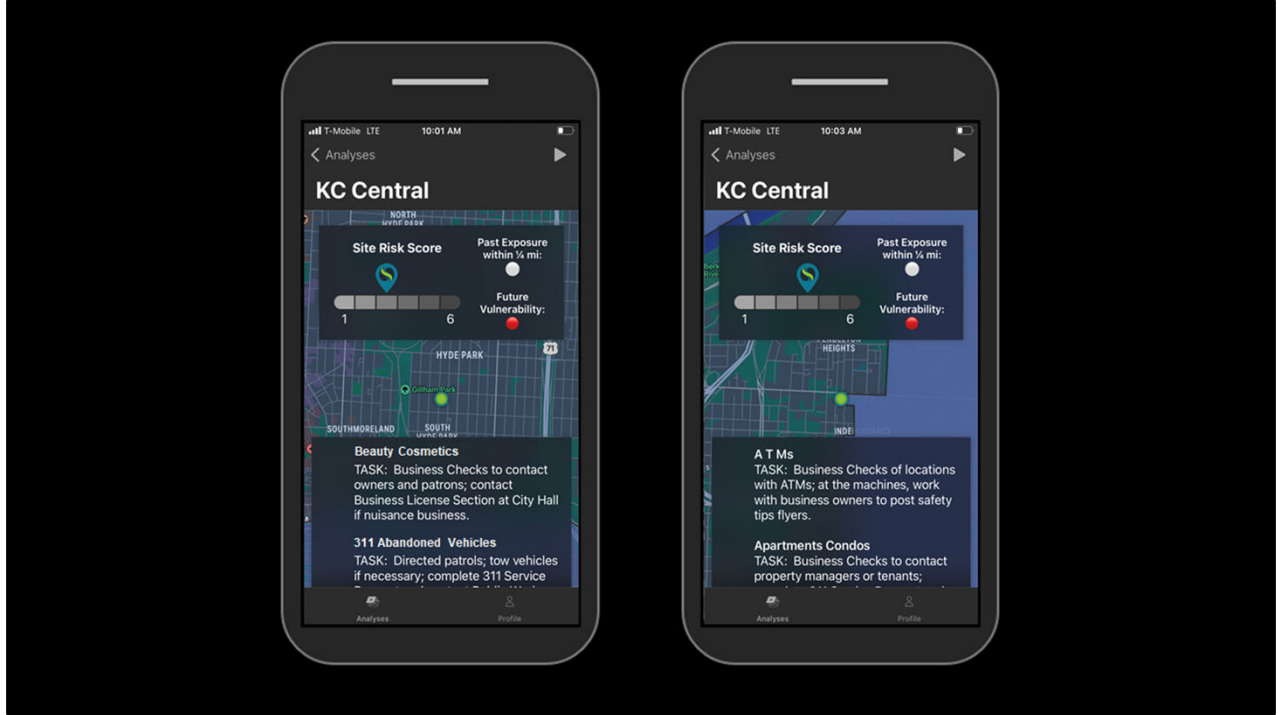
Another exciting development is a dedicated smartphone app that brings RTM information to officers' fingertips. The app allows officers to view significant risk factors based on their location at a given time.

In turn, officers can use this information as a tool to have dialogue with citizens about risks identified in the model. Other community outreach and even report writing can be improved upon, as well.

| Risk-Based Policing focuses on... | instead of: |
|---|---|
| Places and environmental features | People or person-based data |
| Transparency | "Black box" algorithms |
| Data-informed engagement | Over-policing & sole reliance on enforcement |
| Evidence-based decision-making | Institutional habits or hunches |

As shown on this slide, RBP focuses on places, not people.  KCPD included no person-based data or other demographic information in its model.  This was done to keep RBP and its preventive activities dedicated on situational crime prevention, not enforcement.

RBP is also very transparent in the way data is gathered and used, to include how it can be shared within and outside the police department.  No confidential or even "law enforcement only" data is used, nor are there any secret, "black box" algorithms being used.

Instead of relying primarily on enforcement-based tactics (or worse, over-policing), RBP promotes the idea of using data as a means to engage stakeholders and partners, only one of which is a police department.  Using objective, environmentally-focused data allows everyone to know where, how, and why resources are being deployed.

Last, RBP (and its RTM foundation) are grounded in years of empirically proven research in the field.  Contrasted with institutional habits or "how we've always done it", RBP provides a reliable evidence-based approach to improve public safety.

In conclusion, the RBP effort boils down to three simple steps. We make Risk Terrain maps, work with our partners to direct resources to those challenged areas, and we continually evaluate our progress.

This allows us to Diagnose, Deploy, and Prevent while being as proactive and responsible as possible with our limited resources. Working in concert using RTM data as a guidepost will make our efforts successful and, more importantly, our city safer for all.

Credit to the team for making our RBP strategy such a success!

Chief of Police Richard Smith – KCPD

Dr. Joel Caplan – Rutgers Center on Public Security

Dr. Leslie Kennedy – Rutgers Center on Public Security

Dr. Grant Drawve – Rutgers Center on Public Security

Captain Jonas Baughman – KCPD

Thank You!

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