Overview

The City of San Antonio is expected to grow by more than 1 million residents by 2040. In order to continue to deliver quality services to the residents of San Antonio, City Leadership, public transit providers, local business and community developers will need to work together to effectively plan for this growth. SA 2020, SA Tomorrow, VIA Vision 2040, Brooks Master Plan, and the Medical Center Master Plan are a few of the strategic plans created to address this growth. SmartSA will synthesize these strategic plans and ultimately provide the platform and innovative techniques as well as technology to make them a reality. We must first build relationships with our trusted SmartSA partners, provide a thoughtful and innovative approach to solving our community’s challenges and form a unified governance structure to oversee SmartSA initiatives.

SmartSA Partners

SmartSA is composed of the following key agencies:

- City of San Antonio
- CPS Energy
- San Antonio Water System
- VIA Metropolitan Transit
- San Antonio River Authority

SmartSA partners will provide a governance structure and leadership to share data and resources as agreed upon.
SmartSA Focus Areas

SmartSA impact areas can be broken down into three distinct areas. These areas are access to services, mobility, and sustainability. Within each impact area there are a number of challenges that have been identified.

1.1 Access to Services

Online access to services and information for residents is a key priority. The digital economy has grown tremendously and customer convenience is at the core. No longer are the days that one must drive to a location in order to conduct business. Day to day activities to include: paying bills, doing homework, applying for jobs, or watching City Council meetings can all be done online. Here are some of the challenges we face in making this a reality for all residents:

- **Digital Divide**: is an economic and social inequity that creates a gap between people who have the skills and access to fully embrace broadband, communications technology and services, and those who don’t. In San Antonio, 1 in 4 households don’t have access to the internet and the disparity is directly correlated with socioeconomic status; making the digital divide more prevalent in low income communities.
  - Digital Inclusion – is a movement to minimize the digital divide by identifying current and new resources/assets for connectivity, devices, sustainability and training. These elements are all necessary to have a more inclusive and digitally equitable San Antonio.
  - Municipal Broadband – Infrastructure, power, fiber, security, cyber; models to extend services into public facilities
  - Broadband Availability – Infrastructure, power, fiber, security, cyber; models to work with telecommunication providers to extend services and provide affordable options to all neighborhoods

- **Digitization of Services** – The City and Smart SA partners offer a multitude of public services to the residents of San Antonio. Our long term goal is to provide as many of these services online (through various digital channels) to our residents to save them time and costs.

- **Civic Engagement and Participation** – An engaged resident is an empowered resident. Not only do they understand what is happening in the community they are empowered to influence and change it. How do we get feedback and include residents digitally in public meetings? Below are several applications and data sources that are in development and/or released to our residents for use:
- **Open Data**
- **Social Media; Web 2.0**
  - **Digital Town Halls**: public meetings, citizens to be heard
- **Mobile Apps**: 311

- **Design Thinking** – What do our residents experience when they attempt to pay a bill online or reserve a park for a birthday? The resident experience is important to us and we want to ensure our online experience is user friendly and intuitive as possible.

- **One Stop Shopping** – A variety of online services already exist. How do we consolidate all of these great services into one stop online? Our long term goal is to develop a user interface that allows access to services from multiple agencies. We want to ensure a consistent and seamless experience through virtual agents, kiosks, etc.; enhancing the resident experience is the primary objective. Services should be available 24/7

- **Science, Technology, Engineering, Arts and Mathematics (STEAM)** – STEAM prepares our local students from an early age to get hands on experience with innovative technology. Ensuring that STEAM programming is provided and accessible throughout San Antonio will provide our youth an opportunity to excel in a STEAM based careers. STEAM drives economic development, entrepreneurship

The vision for access to services is that all of our residents have access to educational and career opportunities as well as online services. Our residents are well informed and civically engaged.

### 1.2 Mobility

When we make our daily commute to work or other destinations, how would we rate our mobility? Mobility is defined as, the ability to move or be moved freely and easily. Mobility has been and will continue to be a challenge as our community is accustomed to using their own car and San Antonio is very vast covering more than 450 square miles. According to a local survey, 86% of respondents use their car to get to their destination and about 60% travel more than 10 miles to get to work every day; making their commute time 20 minutes or more. The VIA Vision 2040 predicts that by 2040 there will be a staggering 1.3 million more cars on the road than there was in 2010. We do have an opportunity to change this prediction as 47% of respondents would prefer to use alternate modes of transportation. In order to enhance mobility we must look at the following:

- **Multimodal Transit** – Refers to the ability to utilize various forms of transportation when commuting. Walking, biking, taking a bus, electric scooters and driving are some of the various forms of transit. Our goal is to increase the various methods of multimodal transit throughout the City.
What Are My Options? – There are many options for multimodal transit. How do you know which options are available to you? Are there opportunities to enhance current interfaces (Google Maps, VIA goMobile, etc.) so that residents have inclusive and accurate information about all options available to them in a specific area to help promote the use of different types of transportation?

First mile/last mile, multi-model hubs, one-city mobility planning app

Intelligent Traffic Planning and Systems – It’s Sunday morning and there’s no one on the road. You are stopped at a light and what should be a brief momentary stop turns into 5 minutes. Intelligent traffic planning and systems dives into the following categories:

- Dynamic Traffic Management – Traffic system monitoring, intake and updating timing of signals based on flow of traffic; traffic modeling, big data; pedestrian safety
- Lane Management – Lane management is a strategy to minimize congestion by incentivizing use of mass public transit, HOV (high occupancy vehicles), reversible lanes, toll lanes, etc...
- Parking – On-street, City garages, payments, trip planning, etc.
- Alert Systems – Using data of current environment to help notify residents of flood areas, air quality, etc.

Regional Centers – Regional centers are areas geographically within San Antonio that are frequently visited and have become places to, “live, work and play”. Within regional centers there are also opportunities to reduce vehicle miles traveled (VMT) by implementing complete streets that enable all modes of travel. All modes of travel include, but are not limited to pedestrians, bicycles, cars and busses. Regional centers encourage residents to live close to their place of employment and provide opportunity to utilize multimodal transit.

Semi–Autonomous and Autonomous Vehicles – Semi-autonomous and autonomous vehicles are here and their numbers will continue to grow. Taking advantage of this technology can lead to decreased traffic accidents in designated areas and corridors.

Cargo Transit Zones - Designate specific zones and traffic corridors to store and distribute goods

The vision for Mobility is that our residents enjoy the various modes of transit that are available to them.
1.3 Sustainability

Sustainability refers to being able to provide resources while growing. It is an impact area that encompasses a wide variety of challenges that are noted below:

- **Energy Conservation, Alternate and Renewable Energy Sources** – Can our current electrical power generation keep up with the increased demand of a growing population? What if we could decrease this demand by reducing energy consumption and utilizing alternative energy, like renewables?
  - Green Buildings – Reducing the energy footprint and waste output when constructing, maintaining and operating buildings
    - Efficient Cooling and Heating Systems
    - Automated Lighting and Power Systems – Utilizing automated lighting and power systems allows for reduction of energy when spaces are not being utilized
  - Solar Power – Utilization of solar cell technology to supplement use of energy transmitted via power lines
  - Wind Energy – Mechanical power generated by utilizing wind energy

- **Water Conservation** – Reducing the amount of water used unnecessarily
  - Soil Moisture Sensors – deployment of sensors that monitor soil moisture and operate based on need and not a preset cycle

- **Water Quality** – We must sustain a high level of water quality for resident consumption. Monitoring and protecting our water sources is and will continue to be integral to our City’s successful growth in the future.

- **Air Quality** – The quality of our City’s air is a vital component to sustaining a healthy City. How do we continue to ensure that our air is clean and breathable with increased emissions that come from more cars on the road from our population growth?

- **Telecommuting** – Telecommuting provides the ability for employees to work remotely from home or an office-like environment. The traditional requirement of an employee having to report to a specific jobsite is no longer necessary. What technologies can we effectively leverage to enhance this capability?

- **Police and Fire** – Our Public Safety team will need to grow as the City expands. An increased population will require an increased presence of Fire and Police. What technologies can be
utilized to help inform our Public Safety team of “Events” that require their assistance? First responders, citizen alerting, pedestrian and crowd safety; video surveillance and tracking

- **Electric Vehicles (EV)** – Electric vehicles reduce harmful vehicle emissions. The technology to support electric vehicles is continually improving. The current challenges that we face with electric vehicles are, the wide spread deployment of charging stations, the time it takes to charge electric vehicles and price of entry to own and operate an EV.

- **Waste Recycling** – The City of San Antonio maintains its vigilance in redirecting solid waste from landfills to recycling plants. A “Pathway to Zero Waste” is the City’s approved plan to achieve a 60% recycling rate in which solid waste is redirected to recycling plants. As we embark to achieve this goal, innovative technologies will be needed to help automate, optimize and redefine our current processes.

The vision for sustainability is that our residents are active participants in City-wide initiatives to conserve and reuse. The residents feel safe and that an adequate level of services and resources are provided for them to live comfortably.

### 1.4 Innovation Zones

Defined geographical areas in San Antonio have been identified as innovation zones. These zones will provide SmartSA partners the opportunity to pilot ideas and technologies that are designed specifically to address our City’s biggest challenges. Our goal is to scale the successful pilots to benefit the City at large. The designated innovation zones are:

- Downtown San Antonio
- Brooks (previously Brooks City Base)
- Medical Center

### 1.5 Conclusion

The goal of the City is to continue to provide quality services to our residents. In order to achieve this goal we must effectively work together to utilize resources and knowledge. SmartSA is the partnership that will help us achieve this goal. By working with our local businesses, transit providers and developers we will provide the platforms, innovative techniques and technology to make SmartSA a reality.