**Observations – Gaps/Holes**

* Asad – don’t have anything specific on motorcycles, no projects on seatbelt use/non-use, helmets
* Steve – Systems approach to these issues – problem is not seatbelt use or helmet – BUT WHY? Should not be trying to plug holes in dike, look at the dike itself, look at the systems as a whole
* Vulnerable populations – lower income, environment these folks are in, environmental cause for these safety problems – this gets back to the larger system

**Goal 1: Objective 1-1**

**1-1-1 (R):** Develop system maps for specific safety issues, such as impairment (from alcohol, opioids, Rx), distraction, and speed; consider how these systems will change with future demographic and technology shifts

* Value to separate the 2nd part of this, might have value to explicitly tries to project how these systems will change
* Steve – quick start systems mapping support service, any of the quick start projects could have had support from systems mappers, systems maps is just a big diagram/sketch of how systems relate to one another
* Realistically to work, it has to be focused around a specific activity or issue – have the biggest mileage on the impact of technology and how will they use them – will they use them to just get places faster
* Needs to be focused around 111 to have
* National CDC group – National Peer Learning Team, a lot of public health people skeptical about technology – esp. the mixed fleet period – how is that going to play out
* Technology – means transition towards AV/CV
* Nice theme to frame it – shared mobility
* Not sure if the demographic aspect is the most compelling
* There is this last part of Goal 2 – emerging road safety issues, it might also fall under goal 2
* Might also fall under Goal 2 – method for understand an emerging issue in thinking about a safe systems approach
* As its evolving focusing on future technology and future issues
*

**1-1-2 (R):** Understand barriers to safe systems implementation and competing elements (e.g., mobility/delay, etc.)

**1-1-3 (R):** Examine a systems approach to improving post-crash care, including looking at the current state of post-crash response in different areas and identify opportunities and effectiveness of systems approaches

* Not submitted by a researcher, it came out of Advisory Board
* Noreen – it seems a whole if we don’t have something that addresses post-crash
* In R4 Quick Start, looking at post-crash
* Understanding is one thing, and proving it is another thing
* Do we have anyone on this team with that knowledge
* Understanding the improvement part is one thing
* Might need to bring on more friends from the emergency medicine part of the university
* Ragland – expert panel on this also looked at location of trauma centers
	+ Model statewide EMS system to model optimal – what are ways to mitigate or deal with this time issue
	+ Telemedicine – have ways to send images to ER doctors and have them help on the scene

**1-1-4 (R):** Develop a systematic safety-based architecture/framework, including terminology and components

* Krista – thinks this should be a higher priority
* How does this relate to the Quick Start projects
	+ Good opportunity to connect CMFs with specific strategies to have safety practices that are implemented in the field
	+ Where is data coming from, where is it going,
	+ Physical system – built environment
	+ Thoughtfully provide framework/structure that city and other agencies can use to implement safe systems

**1-1-5 (R/PD):** Develop tools to support Safe System implementation

* Text mining studies taking the countermeasures from, tools such as modeling and simulation can help us the on the research side
	+ How we can take a document and analyze the content
	+ Use for meta-analysis
	+ Techniques – EX – 10 places something has been implemented, look at the studies and combine effects to come up with the effect
	+ Synthesis and meta-analysis of those studies
* Practitioners give us
* Innovating safe systems, not many cases for implementation
* Calculated risks for what other people have done
* Charlie – has value in a way to get
* Asad – can send examples, the idea is to have practitioners use these tools
* Focus is to give them a structure for using CMFs, and knowledge that we have over time
* More structured way of thinking

**1-1-6 (PD):** Develop a “highway safety manual for public health” or technical package on Safe Systems; consider similar “public” or layman facing info for website and elsewhere

* Krista – Thinks this should be higher priority
* Does this tie into Safe Systems Maps – or is it a truly separate idea
* With the undertaking of Highway Safety Manual – took decades and millions of dollars to develop – be careful to

**1-1-7 (R):** Develop a richer understanding of the “traffic safety cultures” in a select group of “positively deviating” mid-sized cities

* Inspired by Berkeley media studies group – looked at the way traffic incidents were framed in the media
* Field of linguistics – how it influences how people talk about safety
* Positive deviance – cities who have done a good job, how they
* Culture – both inter-organizational culture
* Traffic safety culture – is there a difference between the cities that have done well versus those that have not from a cultural approach
* There is a lot of discussion on traffic safety culture – but not a lot of research in this area
* Has not been well defined, approach/attempt to define
* Jill – just finished a survey, used language from Nick Ward, surveyed subset of marijuana use, and they have a broader sense of traffic safety
* Culture and subsets of culture – if we use this approach

**1-1-8 (R):** Examine the role of shared mobility services in safe systems, and the role of private companies

**Goal 1: Other Objectives**

***1-2***

**1-2-1 (PD):** Develop/deliver RSA 201/202 training courses for practitioners on transformational topics (Safe Systems, Planning for Safety, Technology and Safety integration).

* How do we get the word our through PD or through other organizations and institutions and networks and think about starting to work with Cities

**1-2-2 (PD):** Educate the public (and decision-makers) on the impact of technology on road safety (suggested by Duke).

* Stemming from misinformation
* Legislative brown bag
* Outreach
* Panel MC on in Dec
* Duke can arrange lunch brown bags with Congress (most likely their staff) – have a Panel or series of Panels to educate decision-makers
* They are open to the public
* Timing wise – if had the material, it could be set up very quickly, can be done within a month once we have materials
* Have to look at what is in session, and time it that way
* Work with the Duke in DC office
* Steve approved

**1-2-3 (PD):** Continue work planned/performed under PD4 (led by Jennifer Woody) and incorporate Duke’s work to CDC’s national peer-learning teams (on technology and safety).

***1-3***

**1-3-1 (PD):** Develop a strategic communication/partnership plan to engage institutions such as TRB, ITE, APHA, APA, SAVIR, etc. to identify opportunities to collaborate to advance safe systems thinking.

* Became clear that the way that Public Health speak about safe systems, and the way engineering and planning to develop a common language
* How you frame this for different people
* Need to have a definition, and case studies ,and examples

***1-4***

**1-4-1 (R):** Identify Safe System candidate agencies (suggested by several).

* Seems to be a logical next step
* Need to start identifying Cities that an adopt – need to start on this immediately
* The only thing you have to be careful with, you don’t know if you want to go in with Smart Cities, it gets confused and mixed in
* Better option might be to look for cities, willing but have not invested yet
* Opportunity to see the way they look at how they do business, and how that changes
* Need to start to identify cities
* Anyone working with Cities in their projects, collaborate on what

**1-4-2 (PD):** Engage with cities and states to facilitate (and measure or evaluate) adoption of Safe Systems approaches, or at the very least create demonstration or proof of concept projects and case studies showing the adoption of Safe Systems concepts, technology, etc.

**Goal 2: Objective 2-1**

Not a lot here looking at specifically on distraction – huge issue, pedestrians being distracted, VHB did some work for NHTSA.

 Duke doing some work on pedestrian warning

More work here to do

**Is there sequence? Is there overlap?**

**2-1-1 (R):** Examining the issue of speed (several)

**2-1-2 (R):** Create/improve a taxonomy of crashes to understand speed-related contributing factors

* Offer – speed, might be opportunity to have speed limit change with the time of day, but with technology, might have more ability to have these policy changes
* Perceptual issues – debunked of how much time is saved by speeding, which are more important and what can be studied -
* Libby has done some work in this area
* HSRC did a report for NHTSA
* Libby is interested in speed – would be happy to talk about them more
* Austria/Australia? – identify appropriate speed, and identify the outliers, then address those, rational for speed limits based on the appropriate operating behavior.
* Continue speed conversation offline

**2-1-3 (R):** Ways to integrate safety into planning in a better way, incorporate understanding of relationship of land use, density, mixed uses, access management, etc. to safety outcomes

* 2-1-3- and 2-1-4, these can be integrated
* How do we shed light on these decisions being made that were not made b/c of safety, but have an impact on safety

**2-1-4 (R):** Investigate urban, new urban, suburban residential, strip arterial, and suburban activity center configurations and crash outcomes

**2-1-5 (R):** Environmental correlates of crash patterns and behaviors, which can be used to prescribe design solutions

**2-1-6 (R):** Need to identify/address risk inherent in/of safe systems approach

**2-1-7 (R):** Examine the safety impacts of the introduction of light rail

**2-1-8 (R):** Assessing the influence of bus stop placement and configuration on crash frequency and severity in urban and suburban environments

* Placement of bus stops – pick up and drop offs are user entered and look a little more what that means
* What would safer p-u and d-o points do for ridership

**2-1-9 (R):** Safety effect of modal shift (e.g., study of safety before/after implementing fare free transit policy in Chapel Hill)

* This is something we could collaborate with FAU, all of these projects are looking at systemic mode shift and if that has an impact on safety
* It might be able to be collaborative in a single projects
* Eric winds up in a lot of discussion on that issue, and
* Modal shift and exposure problems?
	+ Both – how distribution of crash differ after the introduction
	+ Light rail cars running into vehicles
* What the problem is and what
* Durham is about to change their bus patterns – might be a good opportunity
* Chris Cherry – UT hired a new faculty member that may be able to contribute, looking at shared mobility and TNCs impacting safety
* Might be an opportunity to engage in other cities – and potentially study design aspects in more depths
* While it looks like 3 different projects – maybe it’s 2 – mode shift and who is impacted?
	+ 1) Mode shift of new transit being introduced
	+ 2) Design of transit and who is impact
* Policy shift, going fare free
* Look at relationships between them – population density and alcohol use
* If you do a mapping for one, might help you map it all
* Mapping for one project, which ever ones had a data component, build a model
* Land use – Asad and DanRod, neotraditional vs traditional community, did not focus on safety,
* Do a survey of neotraditional vs traditional neighborhoods this time looking at safety – look at travel patterns, safe behaviors

**2-1-10 (R):** Need for a systems approach to looking at urban freight issues

* AASHTO freight committee brought this up as one of their major issue
* Urban delivery, droids, relatively small share now, but anticipate increasing
* Heavily impacted by technology
* Little out there what safe systems means for urban freight
* Worker safety issues as well as
* Parking in bike lanes, treating bike lanes as delivery zones
* Look at cities that have reduced their delivery vehicles and if that has an impact on safety
* NACTO curb side management / ITE had this as a big issue in Toronto
* Need to be careful not to look at 4% numbers, and not think this is an issue, even if the occupant isn’t killed, this is still a safety issue
* Long Beach Port might be a

**2-1-11 (R):** Utilize Duke DIVE (immersive virtual environment/reality simulator) for VRUs – create simulations to observe ped/bike safety/roadside worker safety

* There is an opportunity here to study – they are always looking for ideas
* Send ideas them to Michael
* Might be a good idea to engage students
* Incorporating more real life elements, people would be more likely to respond, like spouse or close friends

**2-1-12 (R):** How do the safety benefits of vehicle based warning technologies affect the policies and practices of public agencies/safety practitioners OR Identify policies and practices of public agencies that would facilitate widespread implementation of vehicle technologies

**2-2**

**2-2-1 (R):** Create a central data clearinghouse for vulnerable road user data, including exposure, crash data, and facilities data

* Offer – helping CalTrans develop a repository
* Seth – have a couple cities interested

2-2-2 (R): Develop risk index/prediction for bike/ped crashes based on infrastructure elements.

* NCHRP doing a related study on SPFs

2-2-3 (R): Use NDS data to provide realistic data to micro simulation of vehicle flows.

2-2-4 (R): Examine and update CMFs which were derived from cross-sectional models.

**2-3**

2-3-1 (R): Develop a collaborative, multifaceted community effort to inform, encourage, and support families to put their teens in the safest vehicle the family can afford

* Teens tend to drive the older vehicles with less safety features
* Community based programs to change norm to choose the safest vehicle a family can afford for teens
* Making sure teens are driving safer vehicles
* Teen crashes not always preventable since they are not as experienced, getting them in safer vehicles
* Funded by IIHS slated to being early 2018, matching funds available
* How is safety of the vehicles determined? Frequency or outcomes?
* How is safety of vehicle being assessed?
	+ The features that are available on the vehicle
* Cherry - Exploring looking at crash data comparing crash severities among different types of cars – might be a way validate IIHS ratings, something they have talked about and might explore further
* Might be able to look at what vehicles the teens are driving, and
* One of the concerns of the project – equity concerns here, what is the potential of the project to increase disparity across social classes. Good if avg risk goes down but from systems perspective, if we increase disparity is that a good outcome
* Steve – wants to something in this project that addresses
* The project stresses – the safest vehicle the family can afford –
* The phrasing of that for those family might be awkward

**2-4**

None.

Integrate into research activities described in Objective 2-1? Would need to be much more explicit about the plans.

Consider a separate webinar series related to research findings/results and whether this would be separate or part of a practitioner-facing webinar series about Safe Systems

**Additional Discussion**

Who is going to write these? We will have small groups to work through the wants we want to move forward

The best projects are those that address Goal 1 and Goal 2

What sort of outreach projects are we going to fund? Guidance on 2-4, outreach and dissemination to practitioners