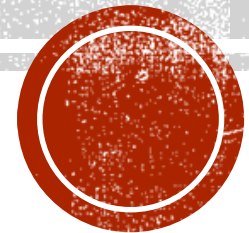# SAVVYCODERS CAPSTONE PROJECT

luvmyride.com (working title)

The future of car maintenance user experience

CARS ARE A VERY EXPENSIVE ASSET; MAINTENANCE = VALUE AND RELIABLE

- Neglect is expensive
- Over-care is expensive
- Getting it right is not easy!

- A car is the most expensive disposable good someone ever owns

- Maintenance records are difficult to keep

- Manufacturer's maintenance intervals are simplistic and hard to use

- Trust issues:
  - The Car tracks it
  - A windshield sticker tracks it
  - Mechanics then tell them what else to do - and hopefully are correct
  - When things break - newer cars give some advice - but it's too late for preventive maintenance

VISION FOR SIMPLICITY

Simplify knowing to do the right car maintenance at the right time, based on how you use your car and how well you want to maintain it

- **The future, make things simple:**
  - Identify target maintenance based on how and where the car is driven (AI/ML)
    - Tie into location services,
  - Simplify tracking services and location when maintenance is performed
    - Easy logging, with pictures of receipts – and future integration to major repair outlet systems
  - Encourage timely maintenance with user selected personas
    - Unique user-controlled AI/ML approach for coaching - from humor to drill sergeant to nagging parent
  - Automate Warranty tracking and required maintenance
  - Link to online expert advice and videos
  - Support vendor direct marketing to tie in discounts and coupons
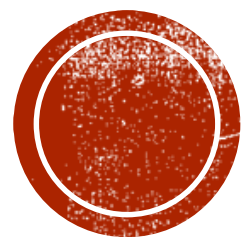
FEATURES BRAINSTORM

Prototype
- Support multiple cars (My Garage)
- Keep Google retailer and map info about shops
- Hassle-free tracking of receipts – use phone camera
- Graphically show progress towards next maintenance
- AI/ML to recommend timely maintenance based on driving habits and owner requested coaching Persona
- Easy to find maintenance standards (e.g. wiper blade size) based on car manufacturer records
- Sell marketing data
- Provide targeted promotions/discounts
- Track Warranty status and requirements
- Link to videos on maintenance

Future
- AI/ML to adjust maintenance based on driving history and owner's goal for maintenance
- Integrate with retail shop applications for electronic records (like a personal health record for vehicles)
- Integrate with car onboard computer, via USB & Bluetooth connections. Track mileage, driving pattern.
- CarFax style maintenance records to prove car was well maintained and increase value
- Trip preparation – what needs to be done for a long trip
- Compare owner to national trends for same scenarios

Partnerships with vested interests
- Auto Makers / warranty holders
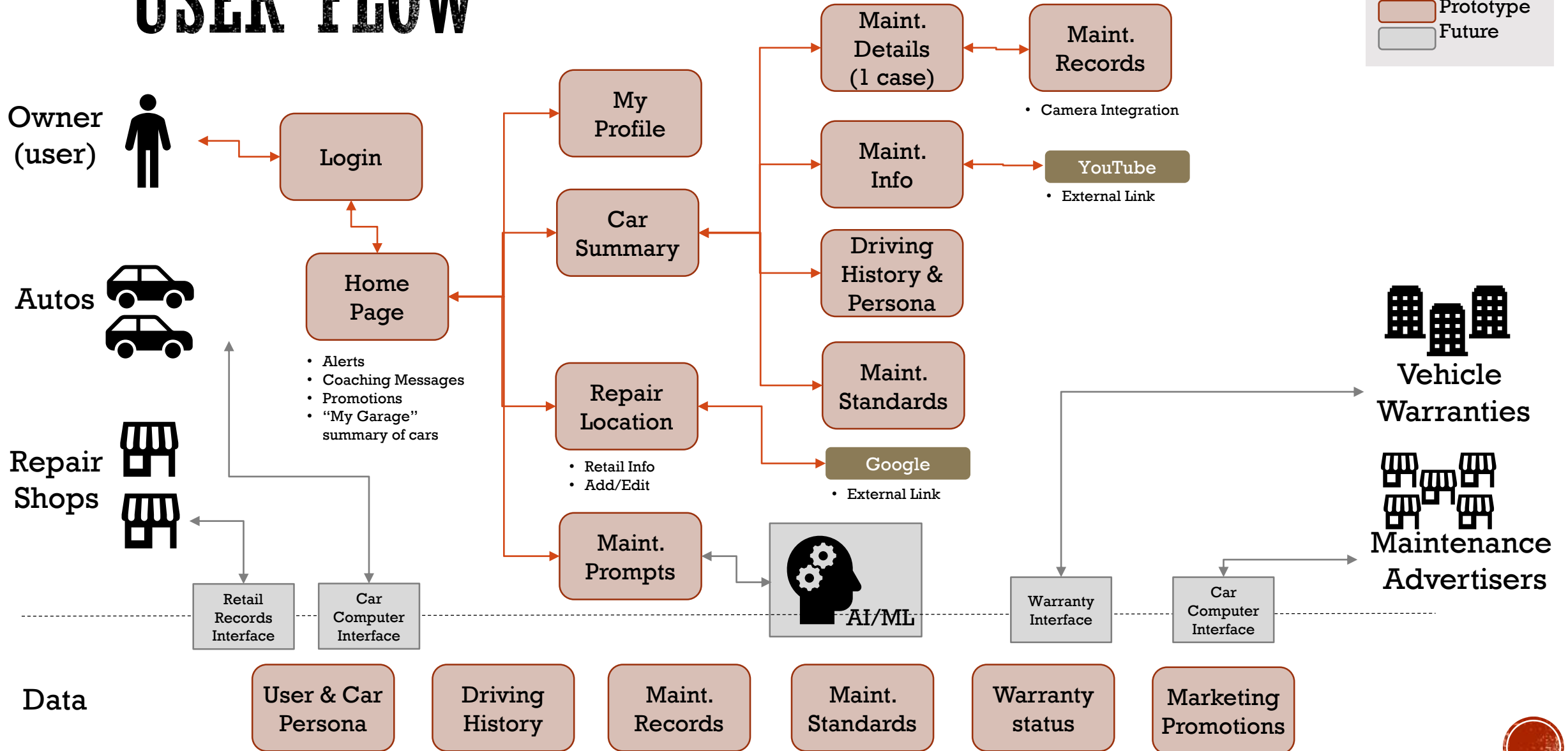- Leasing companies

Revenue sources
- Repair shops / Auto Dealers
- Tire companies
- Parts Dealers
- Parts Manufacturers

USER FLOW

Legend
- Prototype
- Future

Owner (user)

Autos

Repair Shops

Data

Login

Home Page
- Alerts
- Coaching Messages
- Promotions
- "My Garage" summary of cars

My Profile

Car Summary

Repair Location
- Retail Info
- Add/Edit

Maint. Prompts

Maint. Details (1 case)

Maint. Records
- Camera Integration

Maint. Info

YouTube
- External Link

Driving History & Persona

Maint. Standards

Google
- External Link

Retail Records Interface

Car Computer Interface

AI/ML

Warranty Interface

Car Computer Interface

Vehicle Warranties

Maintenance Advertisers

User & Car Persona

Driving History

Maint. Records

Maint. Standards

Warranty status

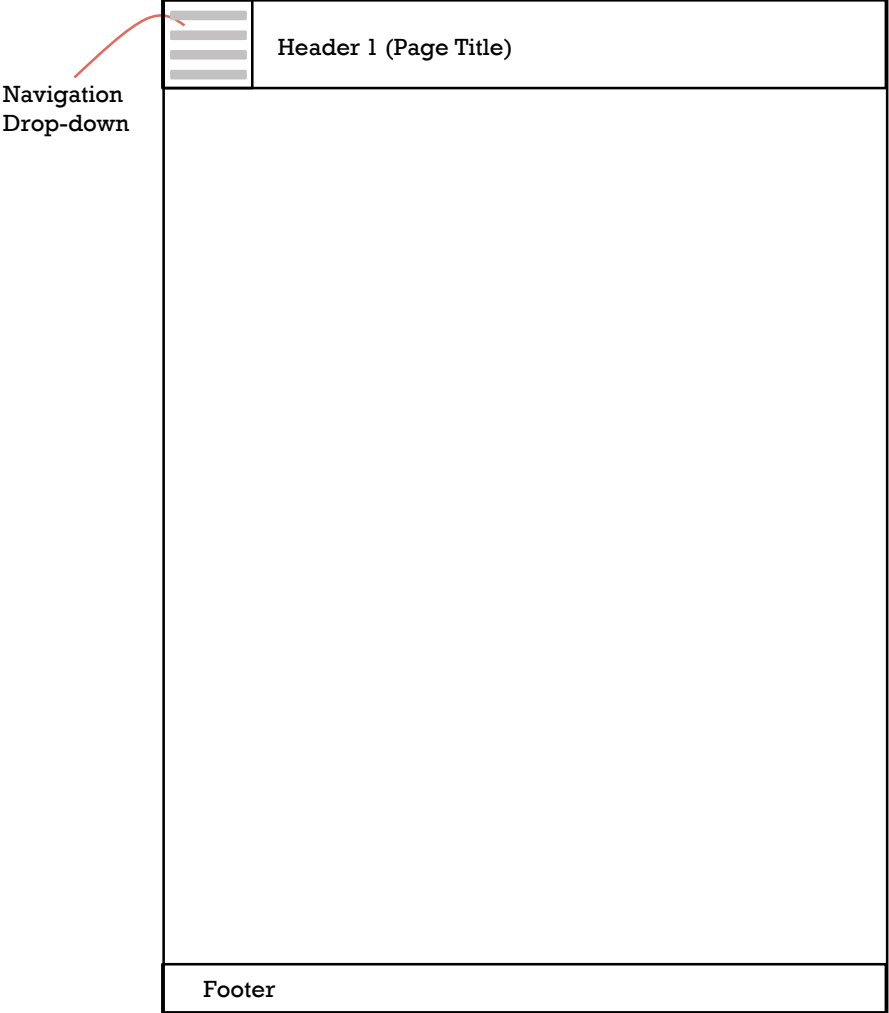Marketing Promotions

WIREFRAMES

UX Guiding Principals

- Mobile first design. Target is a phone App
  - Assume Portrait orientation for prototype design
  - Simplify with a Max width for computer browser

- Responsive Design approach
  - Overall layouts using Grids
  - Sections using Flexbox

- Navigation using dropdown box in top right
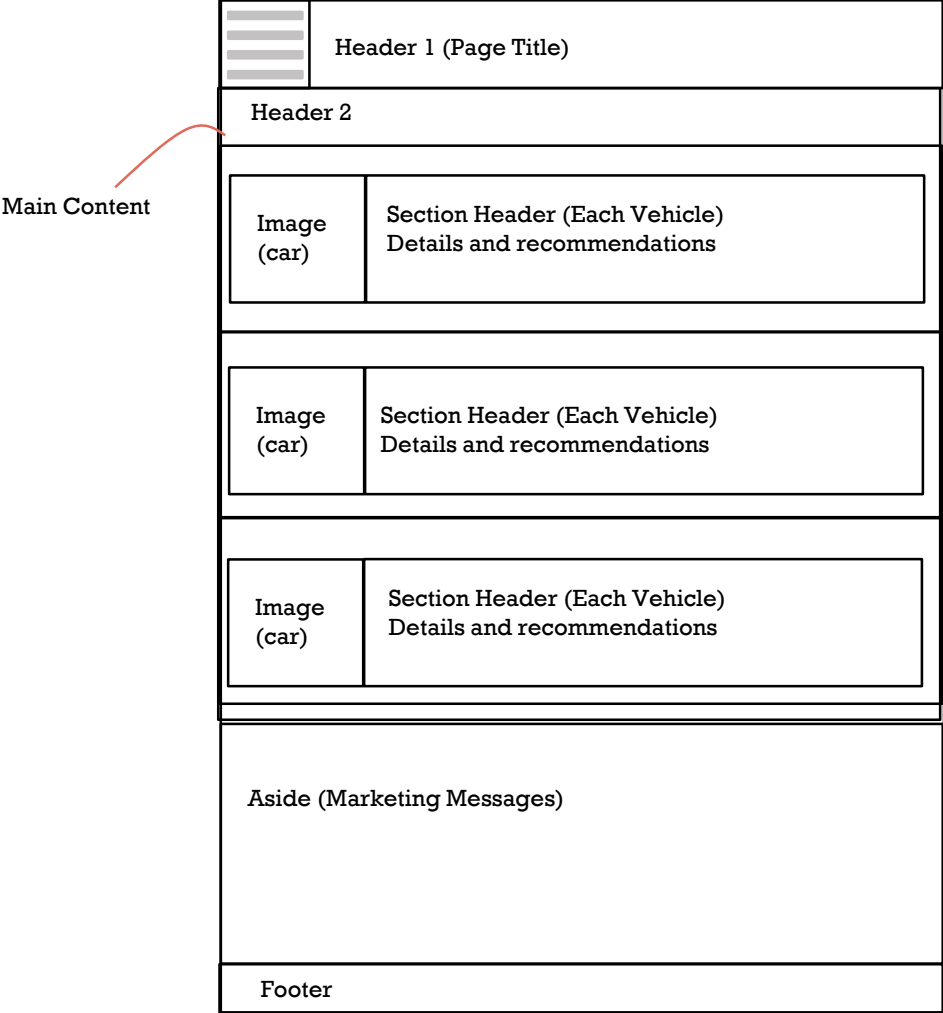
- Images with min and max sizing
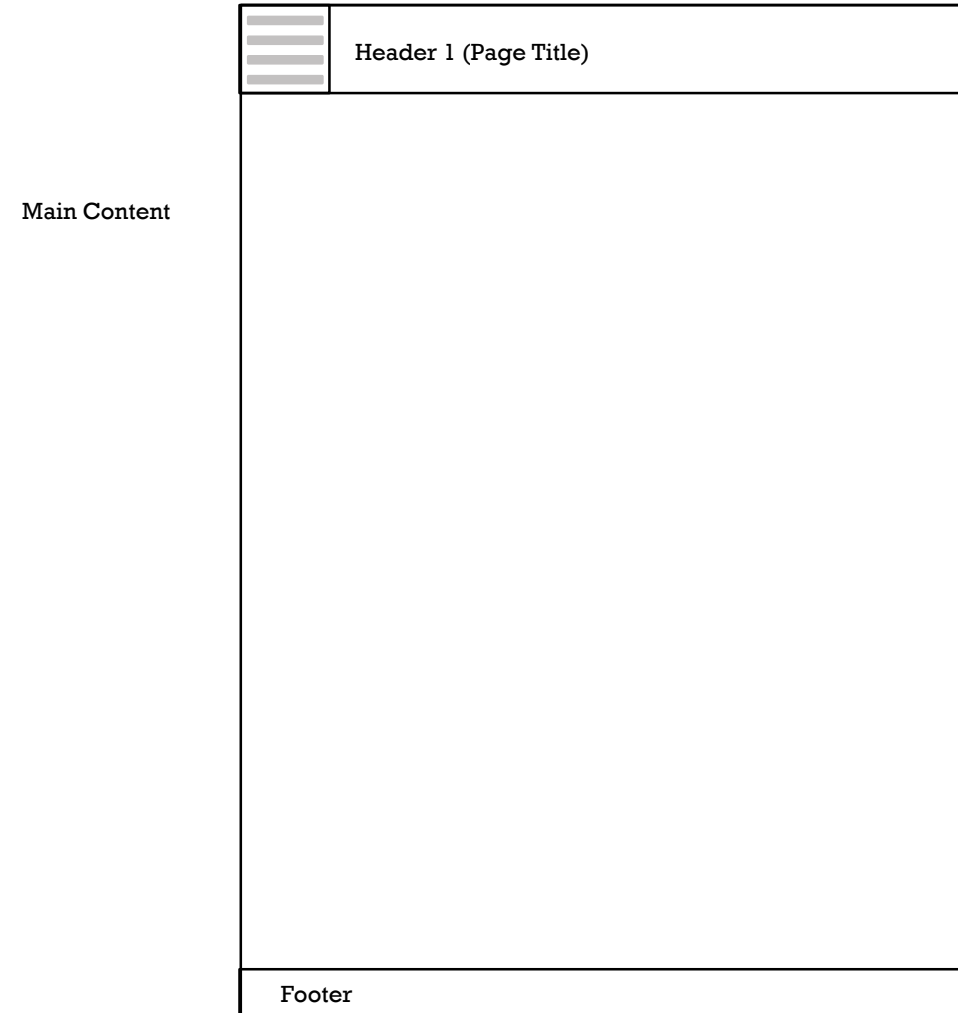
WIREFRAMES

All Pages

Navigation Drop-down

Header 1 (Page Title)

Footer

Home Page

Main Content

Header 1 (Page Title)

Header 2

Image (car)	Section Header (Each Vehicle) Details and recommendations

Image (car)	Section Header (Each Vehicle) Details and recommendations

Image (car)	Section Header (Each Vehicle) Details and recommendations

Aside (Marketing Messages)

Footer

WIREFRAMES

Car Summary Pages

Main Content

Header 1 (Page Title)	
Image (car)	Section Header (Each Vehicle) Details and recommendations

Sub-Section Header
Details and recommendations

Sub-Section Header
Details and recommendations

Sub-Section Header
Details and recommendations

Sub-Section Header
Details and recommendations

Aside (additional messages)

Footer

Main Content

Header 1 (Page Title)

Footer
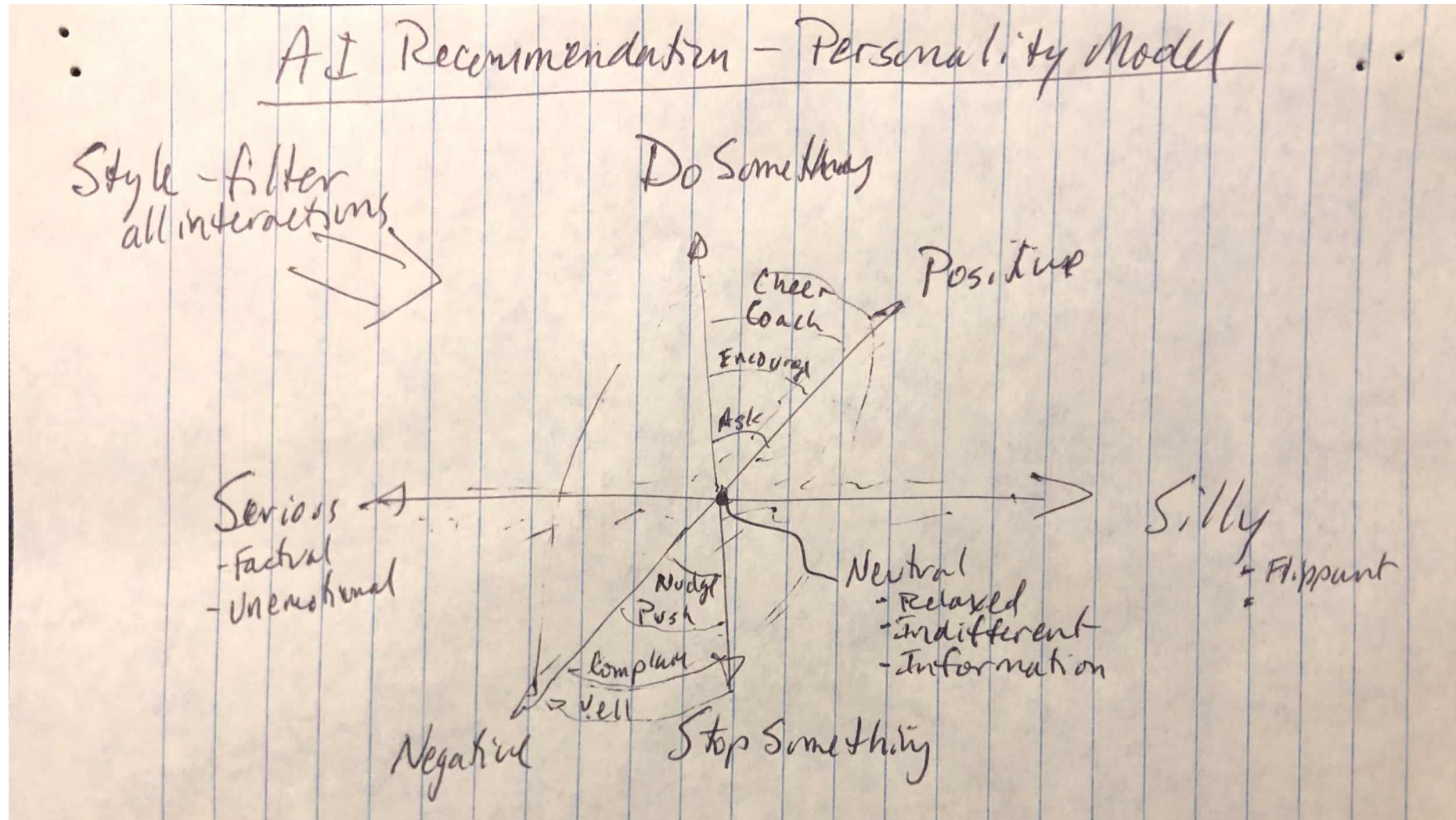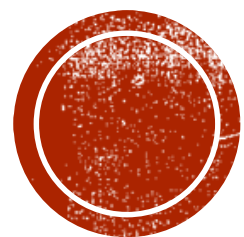
CONCEPT FOR AI COACHING PERSONAS
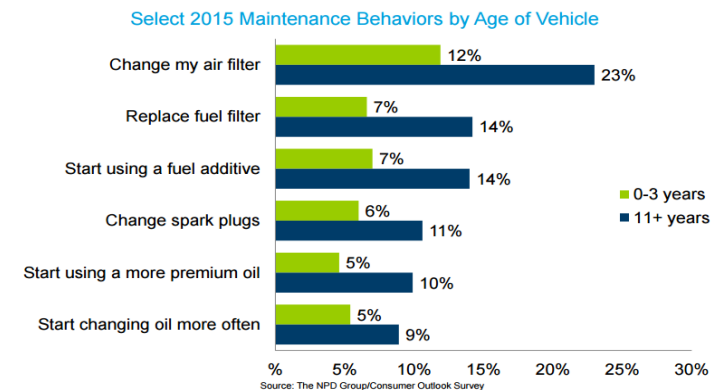
MARKET OPPORTUNITY

MARKET IS GROWING

- ADD PROJECTED NUMBER OF CARS/OWNERS

- The average age of U.S. vehicle fleet has increased 17% in the last ten years

- The average length of vehicle ownership for new and used vehicles has increased 60% in the last ten years

- Millennials have higher propensity to spend on maintenance, and car maintenance increases with age of cars (obvious)

- ADD $ VALUE OF MAINTENANCE MARKETPLACE

	Younger Millennials*	Older Millennials	Non-Millennials
Oil Change	57%	63%	68%
Tire Rotating or Balancing	22%	20%	20%
Brake Service	24%	19%	12%
Air Filter/Cabin Filter Replacement	15%	17%	13%
Tire Replacement/New Tires	21%	17%	11%
Car Wash/Car Detailing	17%	16%	10%
Vehicle Inspection/Emission Test	14%	12%	9%
Steering and Suspension/Tire Align	15%	12%	8%
Wiper Blade/Refill Installation	15%	13%	8%
Air Conditioning or Heating Service	16%	13%	6%

Older car owners exhibit desirable maintenance behaviors

Select 2015 Maintenance Behaviors by Age of Vehicle

Behavior	0-3 years	11+ years
Change my air filter	12%	23%
Replace fuel filter	7%	14%
Start using a fuel additive	7%	14%
Change spark plugs	6%	11%
Start using a more premium oil	5%	10%
Start changing oil more often	5%	9%

Source: The NPD Group/Consumer Outlook Survey

MARKETING IS CHANGING FOR LEADS, CONVERSION AND RETENTION

- 75% of aftermarket auto repair is performed by independent auto repair shops, while 25% of the business lives with dealerships

- Trend toward large franchise auto repair businesses, with smaller shops rolling up into them

- Marketing actively using Search Engine Optimization and Social Media

- ADD $ VALUE OF MARKETING EXPENSES AND RESULTS

- Generally segmented as:
  - automotive dealership,
  - locally owned repair shops,
  - general franchise repairs,
  - Tire shops, and others

Leading Service Share Transaction Indices – 12 ME June 2015

Dealerships	Quicklubes	Repair shops	Tire shops
• Tire rotating	• Air Filter	• Brakes	• New Tires
• Oil Change	• Oil Change	• Engine Repair	• Tire Repair
• Air Filter	• Wiper Blades	• Electrical/Ignition	• Rotating/balancing
• Car Wash		• Inspection	• Steering/Suspension/ Alignment
		• Cooling System	
		• AC/Heating	
		• Steering/Suspension/ Alignment	

Value Proposition for Industry

- Marketing benefits
  - Targeted marketing at right time – when maintenance is needed
  - Highly focused & individually personalized
    - Retention or Acquisition
    - Support Loyalty Programs

- Warranty Program Support
  - Encourage maintenance to reduce Warranty costs

- Resale valuations
  - Maintenance version of CarFax

VALUE PROPOSITION FOR INDUSTRY

- Marketing benefits
  - Targeted marketing at right time – when maintenance is needed
  - Highly focused & individually personalized
    - Retention or Acquisition
    - Support Loyalty Programs

- Warranty Program Support
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