

Costs of a RUC Program

*Nate Bryer –
VP -RUC Practice Lead*





The Quick Math & an Important Question

	California	Arkansas
• Average Annual Mileage	• 12,524	• 17,224
• Average Annual MPG	• 31.1	• 24.2
• Gas tax per gallon (state)	• \$0.779	• \$0.22
• Avg revenue from fuel tax	• \$313.70	• \$156.58

If a RUC program needs to have an administrative fee threshold of 10%, can a RUC program be run for \$15.66 to \$31.37 per vehicle per year? (or \$1.30 to \$2.61 per month)

Examples of other IoT/connected services and their monthly costs

- Netflix	\$6.99 - \$22.99
- Amazon	\$14.99
- Smartphone	\$25 - \$75
- Connected Vehicle (OnStar)	\$29.99 - \$49.99
- Fleet management	\$20 - \$35
- Verizon Hum	\$10 - \$20

Hidden Functions of a RUC Vendor



What Agencies and customers see

RUC Account management platform / Technology
Communications / Marketing
Customer support
Operations
Compliance

All the functions and processes that are not readily visible

Requirements for supporting core functions

People



Product



Support



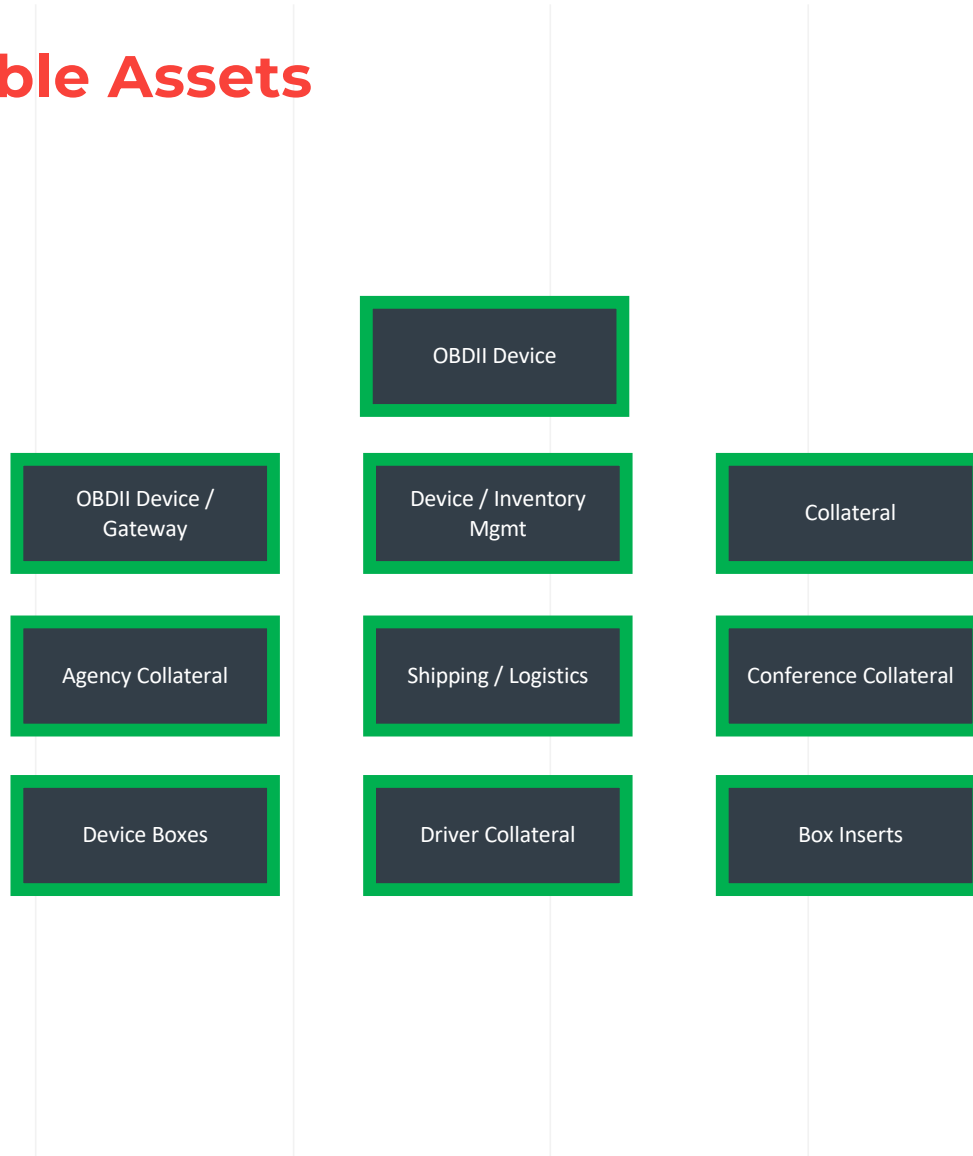
Disciplines and Skills

General Manager / Lead	Business Development	HR
Sales / Outreach	Contracts	Finance / Controller
Compliance / SOC 2	Communications	Product Design
Project Pursuit	Logistics	UI/UX
Customer Support	Testing	Project Management
Marketing	Account Management	Operations
Engineering	QA	Content Development



People

Tangible Assets



Product

Software & Services

Hosting Service

Database

ID Mgmt System

Coding Language

Message Queuing
Service

Mapping Service

Customer Support
Mgmt System

Developer Task Mgmt

Connected Vehicle Data

Payment Processing

User Story Mgmt

SMS Service

Wireframe Tool

Wireless Plan Mgmt

Email Mgmt Service

Business Intelligence
Tool

DevOps / monitoring
Systems

VIN Lookup Service

Road Diff. Service

SOC 2 Vendor / Svc

Security / Intrusion
detection



Support

All of these have associated costs

People



Product



Support



People costs

Category	Frequency	Program size	
		1 – 30k	1MM+
		FTEs (Low)	FTEs (High)
General Manager	Annual	.50	1
Sales / Outreach	Annual	.25	1
Business Development	Annual	.25	1
Contracts / Legal	Annual	.25	1
Compliance	Annual	.25	2
HR	Annual	.1	1
Finance / Controller	Annual	.1	2
Marketing	Annual	.1	1
Communications	Annual	.5	3
Content Development	Annual	.25	1
Product Design / Management	Annual	.1	1
UI/UX	Annual	.1	1
Project Pursuit	Annual	.1	1
Operations	Annual	.5	4
Account Management	Annual	.5	4
Customer Support	Annual	2	50
Wireless plan management	Annual	.25	1
Handling (Warehousing, Device Management, Receiving, Collateral Management)	Annual	1	5
Project Management	Annual	2	6
Engineering / Development	Annual	5	20
QA	Annual	2	8
Testing	Annual	2	4
DevOps	Annual	1	4
TOTAL		19.1	127



People costs:

\$1.9MM (low volume)

to

\$11.1MM (high volume)

Tangible Asset Costs

Category	Frequency	Low	High
Device	1x	\$37.00	\$125.00
SIM	1x	\$0.50	\$1.00
Data Plan Activation	1x	\$0	\$30.00
Wireless data plan	Per device monthly	\$0.045	\$1.00
Refurbishment	Per device per RMA	\$2.50	\$4.50
Shipping	Per device per shipment	\$3.80	\$7.90
Packaging	Per device per shipment	\$0.24	\$6.50
Labels	Per device per shipment	\$0.032	\$0.040
Collateral	Per device per shipment	\$0.002	\$3.25



Tangible costs:

1x = \$99.30 (per vehicle)

+

\$0.45 per month

Software & Services costs

Category	Frequency	Low Volume	High Volume
Gateway (if outsourced)	Annual Base + Per device	\$17.6K + \$2.50 p/d	\$30K + \$4.50 p/d
Gateway (if handled in-house)	1x + annual	\$250,000 p/y	\$400,000 p/y
Hosting – raw data	Monthly	\$0.025 per GB	\$0.021 per GB
Hosting – processed data	Monthly	\$0.027 per GB	\$0.025 per GB
Processing data	Monthly per credit	\$4.10	\$2.50
IDE	Annual	Free (mostly)	Free (mostly)
Database	Per GB	\$0.005	\$0.0005
Message Queue Service	Per million messages	\$0.40	\$0.24
ID Mgmt Service	Volume	Free	\$600+
Mapping Service	Volume	\$5.60 per 1,000	\$1.60 per 1,000
Cust Suppt Mgmt System	Annual	\$25 per seat p/m	\$165 per seat p/m
Payment processing	Volume	2.9% + 30c p/trans	2.9% + 30c p/trans
Developer Task Mgmt	Annual	Free	\$12.48 per seat p/m
Wireframing / User Story tool	Annual	Free	\$75 per seat p/m
DevOps Monitoring	Annual	Free	\$5.76 per host p/m
SMS Service	Volume	\$0.0079 p/msg	\$0.0069 p/msg
Email Mgmt Service	Volume	Free	\$1099 p/m
Road Diff. Service	Volume	\$0.83 per 1,000	\$0.66 per 1,000
Security/ Intrusion Det.	Annual	\$6,999	\$39,999+
Business Intelligence	Annual	Free	\$20 per seat p/m
VIN Lookup Service	Volume	\$700 per 10,000	\$500 per 10,000
Wireless Plan Mgmt Svc	Annual	\$29 per seat p/m	\$59 per seat p/m
SOC 2 Services	Annual	\$15,000 p/y	\$50,000 p/y
Office Suite / productivity tools	Annual	\$12 per seat p/m	\$12 per seat p/m



Software costs (per month):

~\$35,000 (low volumes)

and

~\$130,000 (high volumes)

Ok, what are the costs per vehicle?

**People costs (per mo/
per vehicle):**

\$5.20 (low volume)

to

\$0.92 (high volume)

Data costs (per mo/ per vehicle):

\$3.20

(device amortized over 3 years)

**Software costs (per mo/ per
vehicle):**

~\$1.16 (low volume)

to

~\$0.13 (high volume)

With a device

- At low volume (30,000 or less) per vehicle per month costs are around \$9.56 which is **30%** to **61%** of the revenue collected
- At high volume (1,000,000 or more) – per vehicle per month costs are around \$4.25 which is **13.5%** to **27%** of the revenue collected

Without a device

- At low volume (30,000 or less) per vehicle per month costs are around \$6.36 which is **20%** to **41%** of the revenue collected
- At high volume (1,000,000 or more) – per vehicle per month costs are around \$1.05 which is **3.3%** to **6.7%** of the revenue collected

So now what? How do we get to 10% (or less) admin costs?

Top ways to get to 10% (or less) in admin costs (combination of the below items)

- Don't use Cellular enabled aftermarket devices
- Don't mess around with voluntary programs, go for a full mandate (volume is your friend)(incent enrollment by increasing non-participation fees)
- Must find a good source of cheap (free if possible) data (Smartphone, Annual inspections, V2X, Mandate on OEMs, self reporting)
- Don't have RUC as a single trick pony – partner with smart cities, congestion pricing, tolling and other mobility services that need connected vehicle data
- Set the per mile fee high enough to cover admin costs (e.g \$0.06)
- Work with a technology vendor where RUC is not their only business (spread the resource & system costs around)

Thanks

Nate Bryer

VP, RUC Practice Lead

nate.bryer@wsp.com