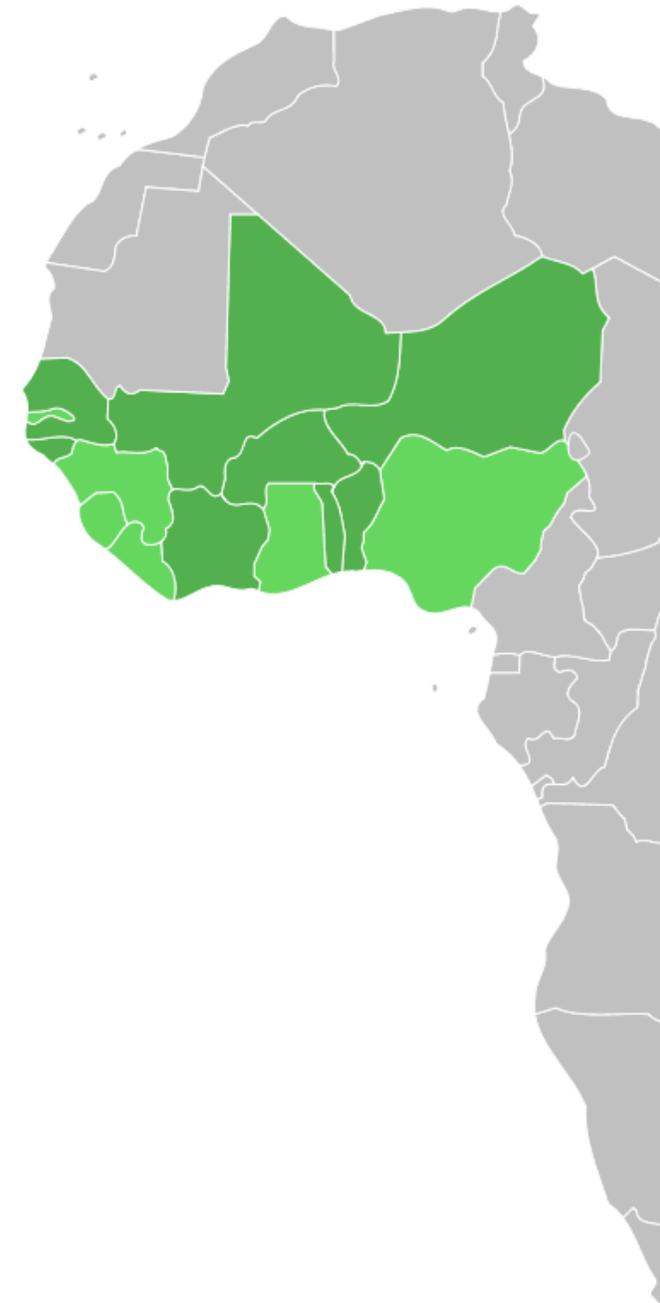


West African Automotive Value Chain

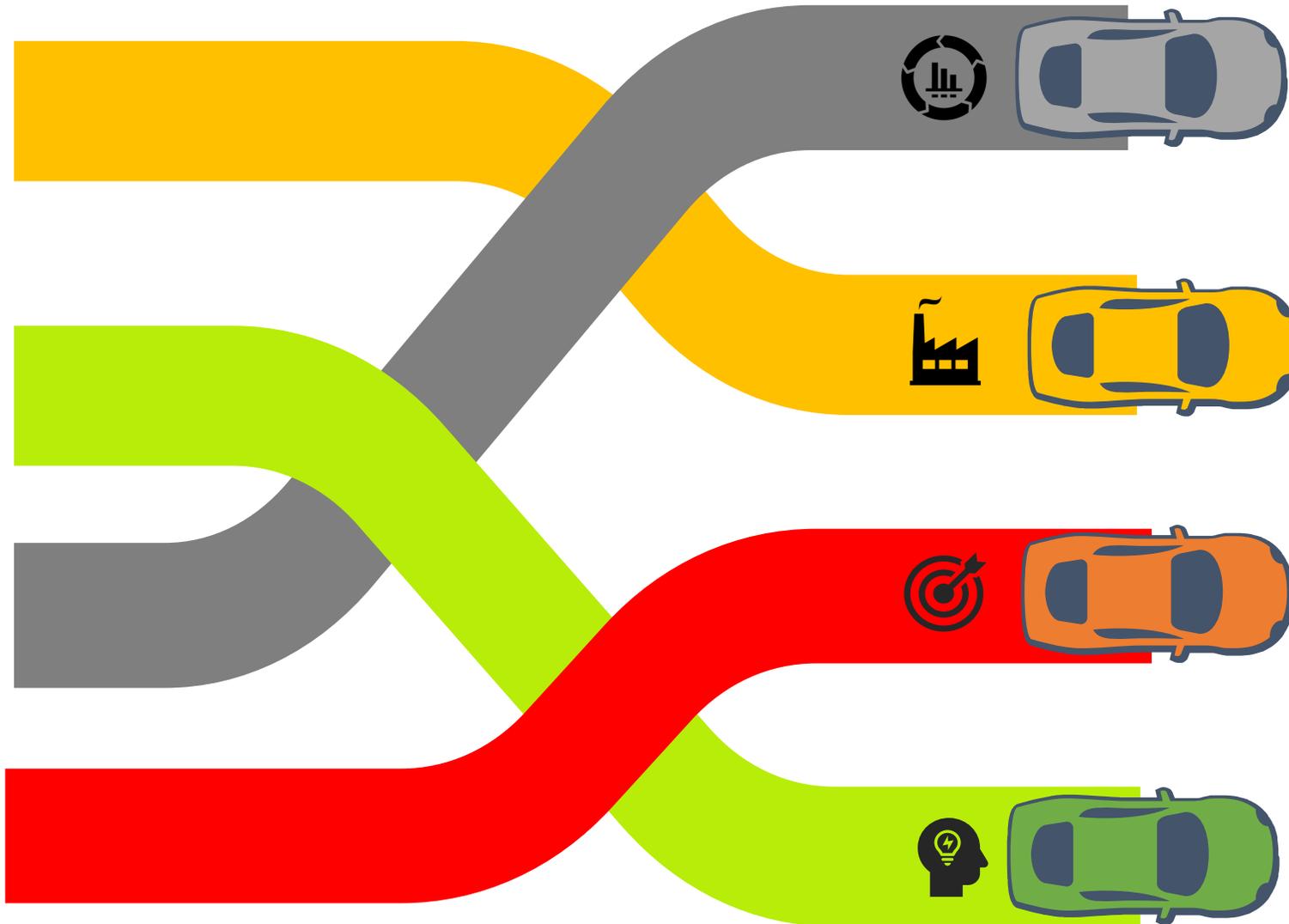


West African Automotive Value Chain

- Determine the **manufacturing opportunity of automotive components** in the ECOWAS region:
 - Develop a comprehensive **value chain map of automotive components**, from raw material to the final automotive component
 - Identify manufacturing opportunities based on country **comparative advantage** and global **competitiveness**
 - Consider supply to:
 - the **aftermarket**
 - local **OEM assemblers**
 - **global OEM value chains** where a country or regional competitive advantage will enable this.
 - Consider the operational and planned **assembly hubs in the ECOWAS region**



Approach



Value Chains

- Raw materials
- Processes
- Industries
- Supporting services

Industries

- Products
- Processes
- Machinery
- Location
- Other regions

Demand

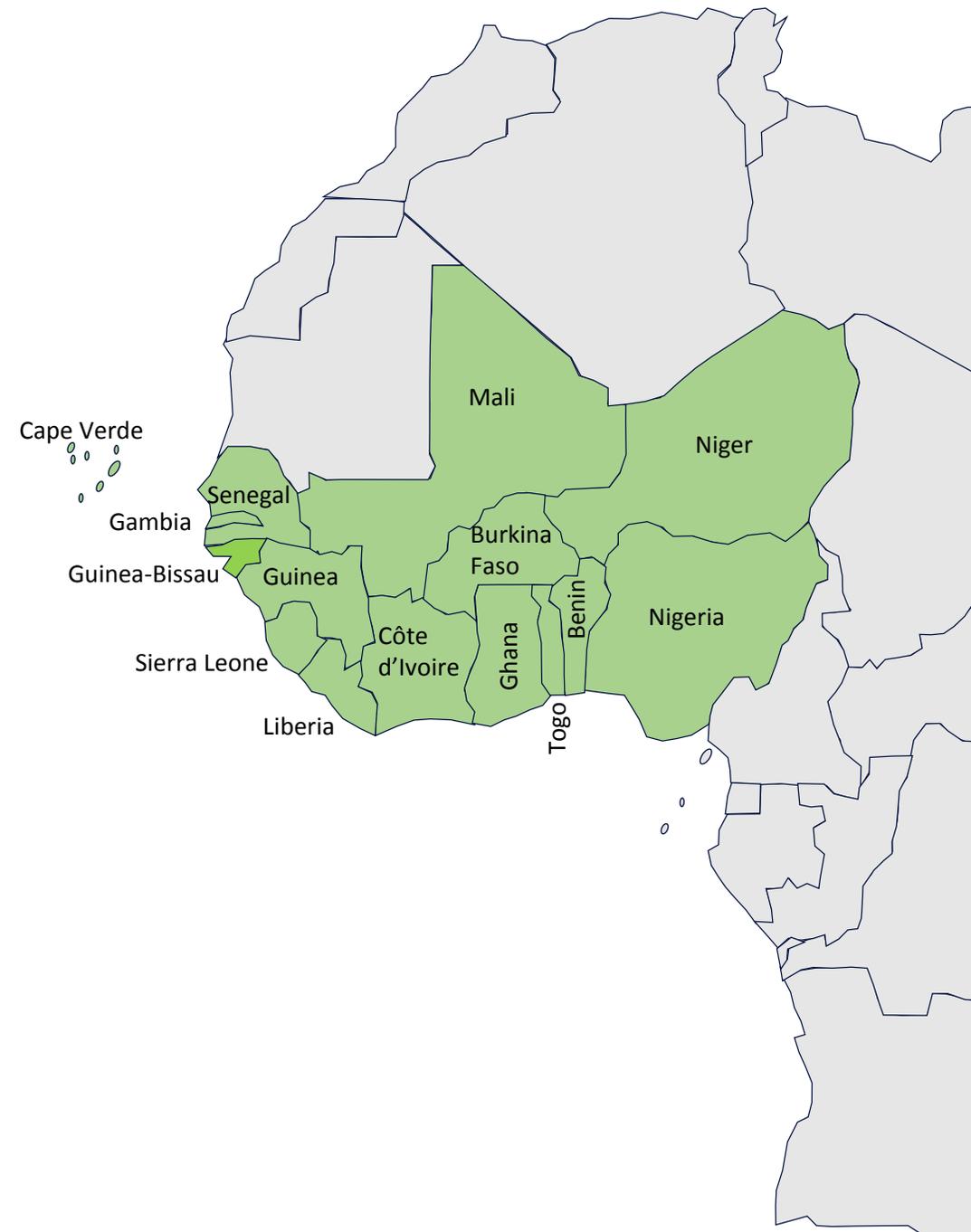
- Market
- GDP per capita
- Vehicle fleet
- Vehicle ownership

Companies

- Desktop research
- Industry engagement
- Survey monkey
- On site visits

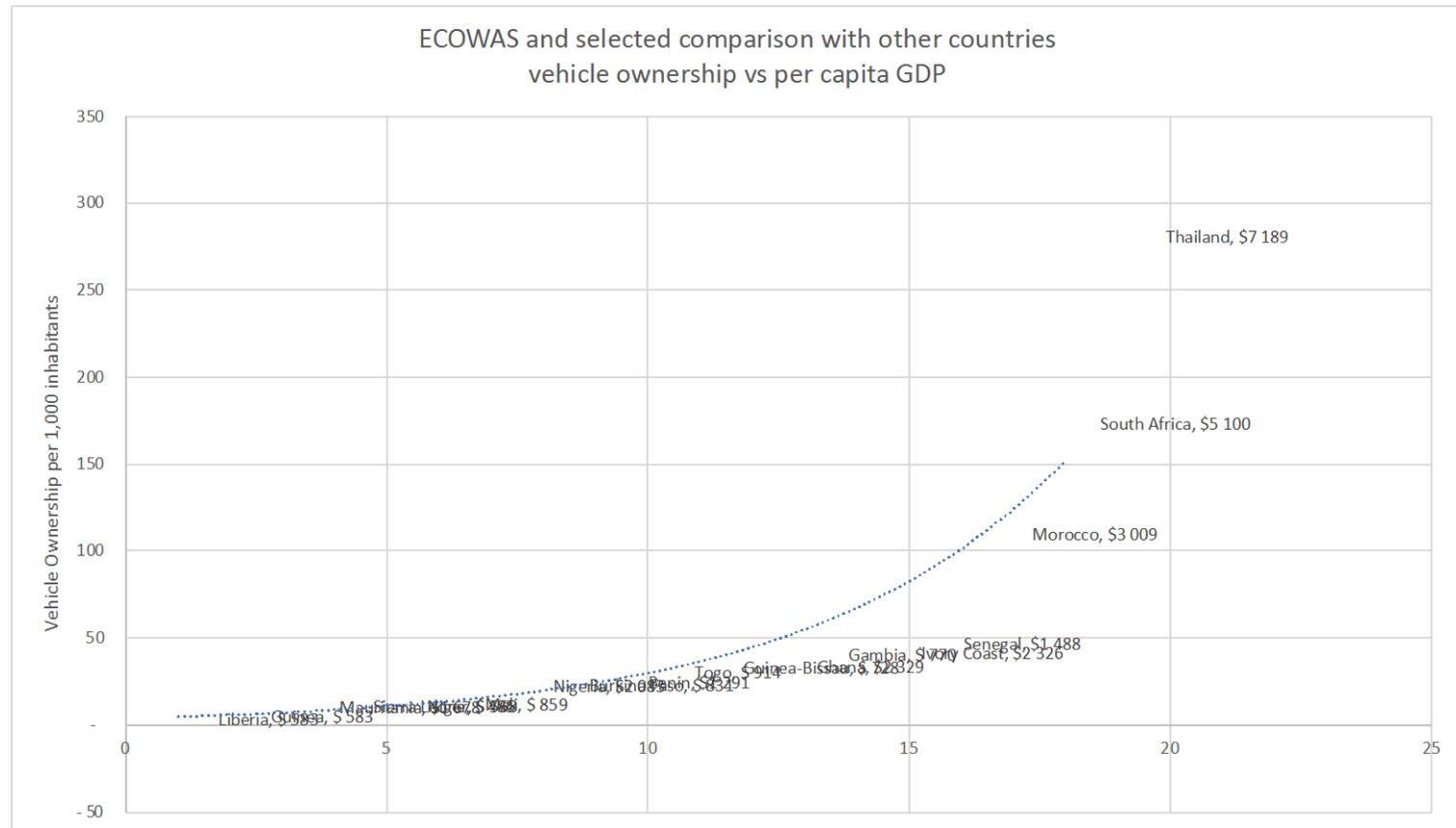
ECOWAS at a Glance

- 15 Member states
- Population (2020)
 - Nigeria 201 million
 - Cape Verde 550 thousand
- GDP per Capita:
 - Cape Verde \$ 3,064
 - Guinea & Liberia \$ 583
- GDP Growth projections
 - 2021 2,8%
 - 2022 3,9%
- Vehicle ownership (2020)
 - Cape Verde 105 per 1000
 - Senegal 47 per 1000
 - Liberia 4 per 1000



Vehicle Ownership in ECOWAS

Country	Population 2020	Vehicle ownership (/1000)	Vehicle fleet 2020	Per capita GDP (US\$)
Cape Verde	556 000	105	58 380	3 064
Ghana	31 919 641	34	1 070 000	2 329
Ivory Coast	25 720 000	42	1 077 000	2 326
Nigeria	201 000 000	23	4 562 000	2 083
Mauritania	4 813 853	10	49 000	1 678
Senegal	17 334 294	47	822 000	1 488
Benin	12 577 004	25	313 000	1 291
Togo	8 538 439	31	265 000	914
Mali	21 044 405	12	253 000	859
Burkina Faso	20 900 000	23	486 000	831
Gambia	2 417 000	41	99 097	770
Guinea-Bissau	1 900 000	33	62 700	728
Guinea	12 400 000	5	62 000	583
Liberia	19 100 000	4	71 000	583
Niger	25 384 000	11	279 224	568
Sierra Leone	7 764 750	11	85 412	485
TOTAL ECOWAS	413 367 366	23	9 612 793	2 191



AUTO INDUSTRY DRIVERS

Enabling Environment

Support for Assembly of vehicles and component manufacture

- Special Economic Zones/Automotive Industrial Parks
- Centralized Paint Shops
- Other centralized services e.g. Logistics, incubation and training
- Finance for Industrial Development

Industry Development

Industry Development

- Develop component manufacturers
- Exhausts, seats, interior trim, batteries, shock absorbers, tyres, bumpers, harnesses.
- Funding for industrial development.

Economic Recovery

Business Climate Reforms to support automotive industry:

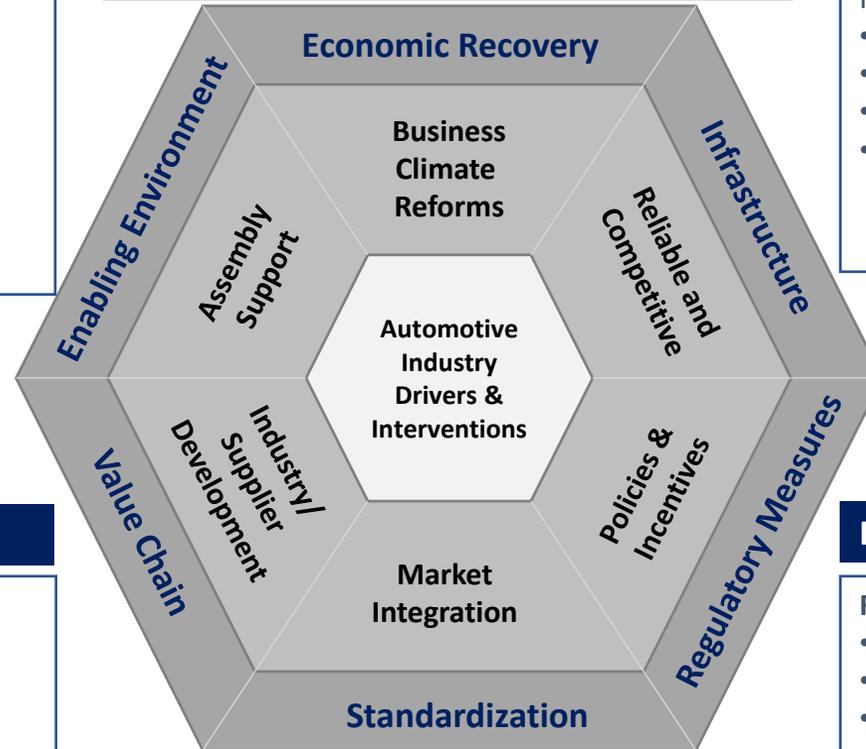
- Large common market 1million units
- Affordability and end user finance
- Improved retail network and after sales services

Infrastructure Development

Enabling Infrastructure

Improve transport & reduce logistics costs:

- Port infrastructure
- Road infrastructure
- Reliable electricity supply/renewable energy
- ICT



Standardization

Standards

- Use International Standards e.g. EU
- Harmonised throughout ECOWAS
- Vehicle registration facilities (VIN) – test & certify imported vehicles
- Test/homologation centers

Regulation

Regulation and Enforcement

- Protecting the local automotive industry
- Implementation Agency to drive regulation.
- Harmonized CET: Import duties: used vehicles, new vehicles, local assembled vehicles.
- Prevent smuggling and import of 'grey' vehicles.

Automotive Value Chain - Components

Exterior Trim & H.O.P: 10%

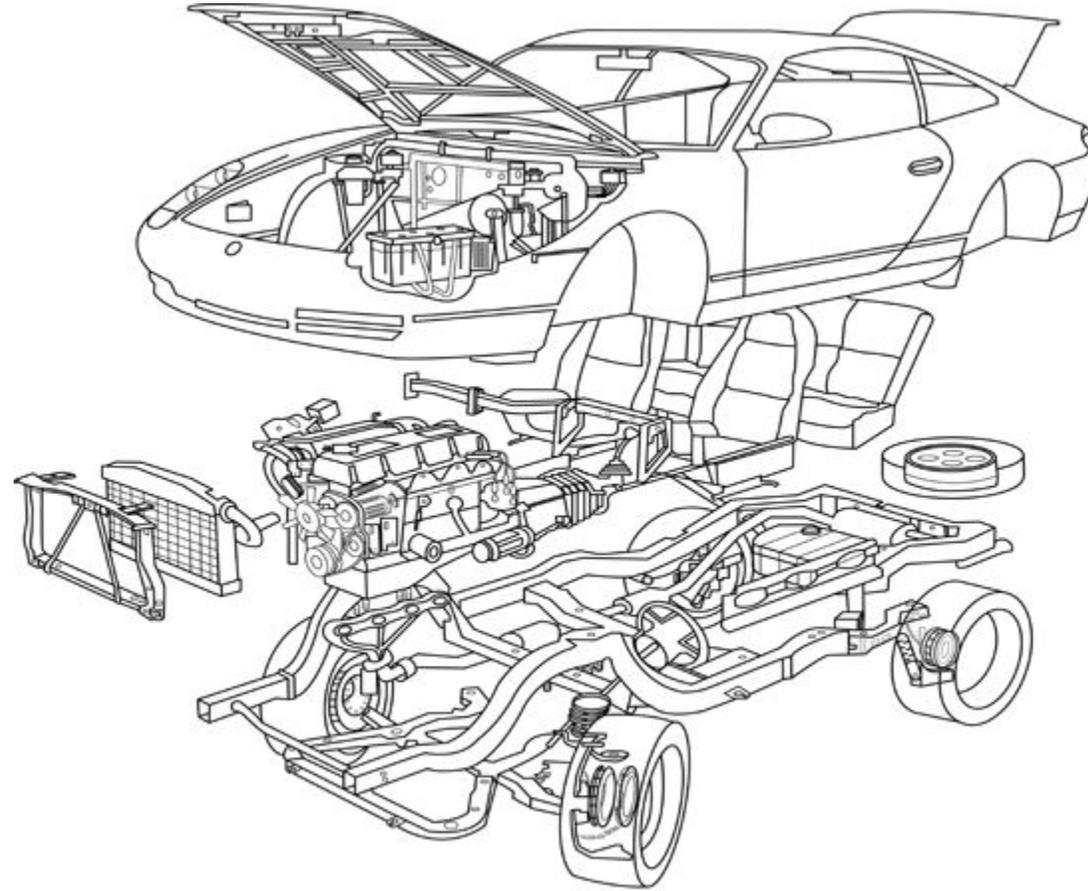
- Mirrors
- Door Handles
- Lights
- Badges
- Windshield & Windows
- Wipers
- Moulded Bumpers
- Grilles
- Wheel Arches
- Locks
- Mechanical cables
- Towbars, bull bars

Drivetrain: 33%

- Engine Block
- Pistons
- Crankshaft
- Manifold
- Gaskets & Seals
- Radiator
- Gearbox
- Exhaust line
- Driveshaft
- Bearings
- Filters
- Rubber hoses

Chassis:

- Frame
- Mounts
- Springs
- Axles
- Steering Components
- Fuel Tank
- Tyres
- Rims
- Shock Absorbers
- Break pads



Body: 15%

- Underbody
- Doors
- Side Structures
- Roof
- Cross Members

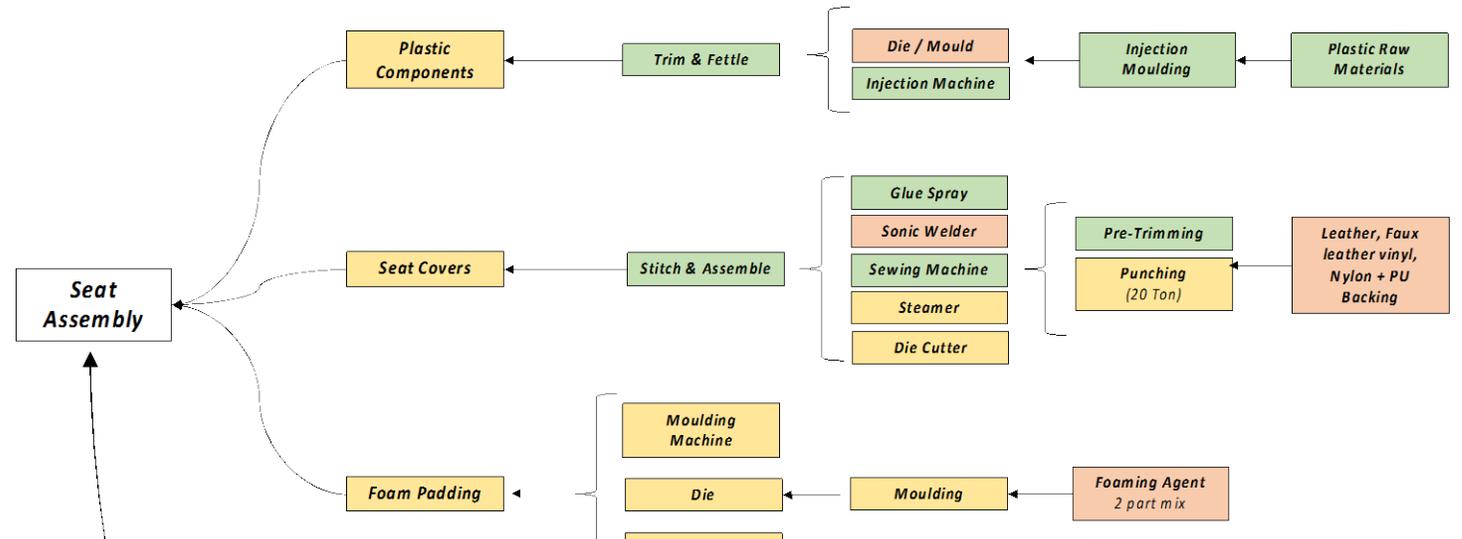
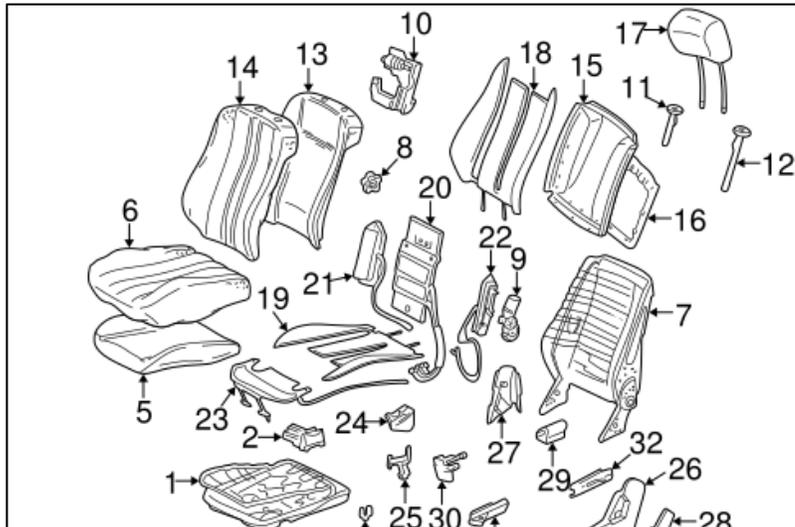
Interior Trim: 23%

- Seats
- Door Trim
- Centre Console
- Airbags
- Safety Belts
- Carpets
- Air Vents
- Headliner
- Dashboard / I.P.

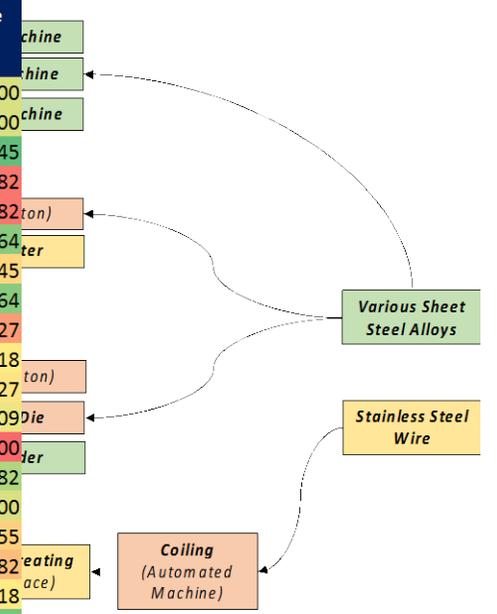
Electrical: 19%

- Harnesses
- Starter Motors
- Alternators
- Lead Acid Battery
- Wiper Systems
- HVAC System
- EV System

Mapping Process

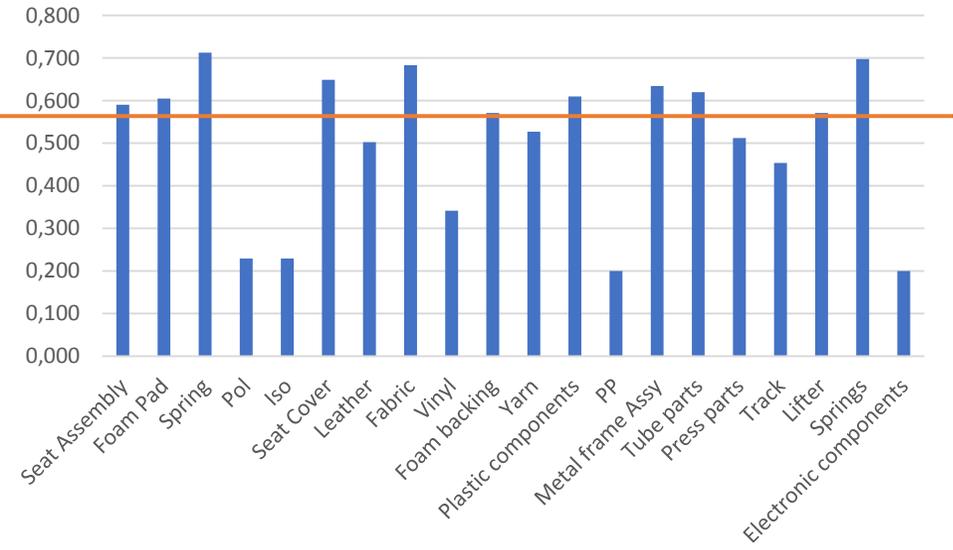
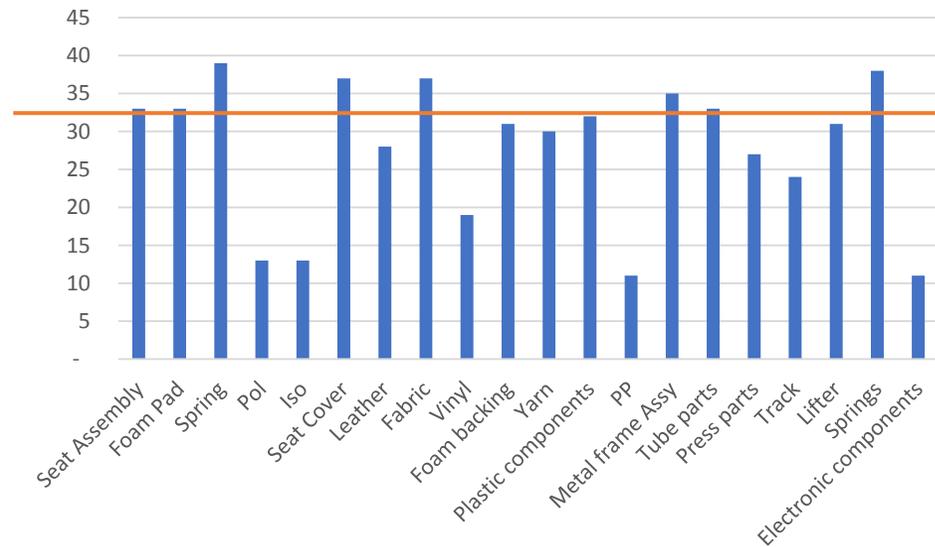


Level	Components	Complexity	Current capability	Investment required	Suitable for Aftermarket	Suitable for SKD	Suitable for CKD	Short term Volume/ Demand	Synergy with other industry	Input material Available	OEM Support	SA Partners	Total Score	Average Score
0	Seat Assembly	4	3	3	3	4	1	3	4	3	4	1	33	3,000
1	Foam Pad	4	4	2	3	4	1	3	4	3	3	2	33	3,000
1.1	Spring	4	4	3	3	3	2	3	4	4	4	5	39	3,545
1.2	Pol	1	1	1	1	1	1	1	3	1	1	1	13	1,182
1.3	Iso	1	1	1	1	1	1	1	3	1	1	1	13	1,182
2	Seat Cover	5	4	4	4	3	2	3	4	3	4	1	37	3,364
2.1	Leather	2	3	3	3	2	2	2	3	3	4	1	28	2,545
2.2	Fabric	3	4	3	4	4	2	3	4	4	4	2	37	3,364
2.3	Vinyl	1	1	1	3	1	2	2	2	1	4	1	19	1,727
2.4	Foam backing	3	3	3	3	4	1	3	3	3	4	1	31	2,818
2.5	Yarn	4	3	3	3	2	1	3	3	3	4	1	30	2,727
3	Plastic components	2	4	1	4	3	2	3	4	2	4	3	32	2,909
3.1	PP	1	1	1	1	1	1	1	1	1	1	1	11	1,000
4	Metal frame Assy	4	4	4	3	4	1	3	4	3	4	1	35	3,182
4.1	Tube parts	3	4	3	3	3	1	3	3	3	4	3	33	3,000
4.2	Press parts	3	3	1	3	3	1	3	3	1	3	3	27	2,455
4.3	Track	3	2	2	2	3	1	3	3	1	1	3	24	2,182
4.4	Lifter	3	3	3	2	3	1	3	3	3	4	3	31	2,818
4.5	Springs	4	4	3	3	3	2	3	4	3	4	5	38	3,455
5	Electronic componen	1	1	1	1	1	1	1	1	1	1	1	11	1,000



Mapping Process

Level	Components	Complexity	Current capability	Investment required	Suitable for Aftermarket	Suitable for SKD	Suitable for CKD	Short term Volume/ Demand	Synergy with other industry	Input material Available	OEM Support	SA Partners	Total Score	Ranking	total	average
0	Seat Assembly	4	3	3	3	4	1	3	4	3	4	1	121	0,590	33	3
1	Foam Pad	4	4	2	3	4	1	3	4	3	3	2	124	0,605	33	3
1.1	Spring	4	4	3	3	3	2	3	4	4	4	5	146	0,712	39	4
1.2	Pol	1	1	1	1	1	1	1	3	1	1	1	47	0,229	13	1
1.3	Iso	1	1	1	1	1	1	1	3	1	1	1	47	0,229	13	1
2	Seat Cover	5	4	4	4	3	2	3	4	3	4	1	133	0,649	37	3
2.1	Leather	2	3	3	3	2	2	2	3	3	4	1	103	0,502	28	3
2.2	Fabric	3	4	3	4	4	2	3	4	4	4	2	140	0,683	37	3
2.3	Vinyl	1	1	1	3	1	2	2	2	1	4	1	70	0,341	19	2
2.4	Foam backing	3	3	3	3	4	1	3	3	3	4	1	117	0,571	31	3
2.5	Yarn	4	3	3	3	2	1	3	3	3	4	1	108	0,527	30	3
3	Plastic components	2	4	1	4	3	2	3	4	2	4	3	125	0,610	32	3
3.1	PP	1	1	1	1	1	1	1	1	1	1	1	41	0,200	11	1
4	Metal frame Assy	4	4	4	3	4	1	3	4	3	4	1	130	0,634	35	3
4.1	Tube parts	3	4	3	3	3	1	3	3	3	4	3	127	0,620	33	3
4.2	Press parts	3	3	1	3	3	1	3	3	1	3	3	105	0,512	27	2
4.3	Track	3	2	2	2	3	1	3	3	1	1	3	93	0,454	24	2
4.4	Lifter	3	3	3	2	3	1	3	3	3	4	3	117	0,571	31	3
4.5	Springs	4	4	3	3	3	2	3	4	3	4	5	143	0,698	38	3
5	Electronic components	1	1	1	1	1	1	1	1	1	1	1	41	0,200	11	1
		5	5	5	5	5	5	5	5	5	5	5	205	1,000	55	5
	Relative importance	1,00	5,00	4,00	5,00	5,00	2,00	5,00	3,00	3,00	3,00	5,00				
	In terms of the market, industry etc to ultimately make it happen:															
	ie. Level of complexity is important so, it is, say 90%															
	ie investment required is less important to influence whether it can be done or not. After all Afreximbank stands ready to support via funding.															



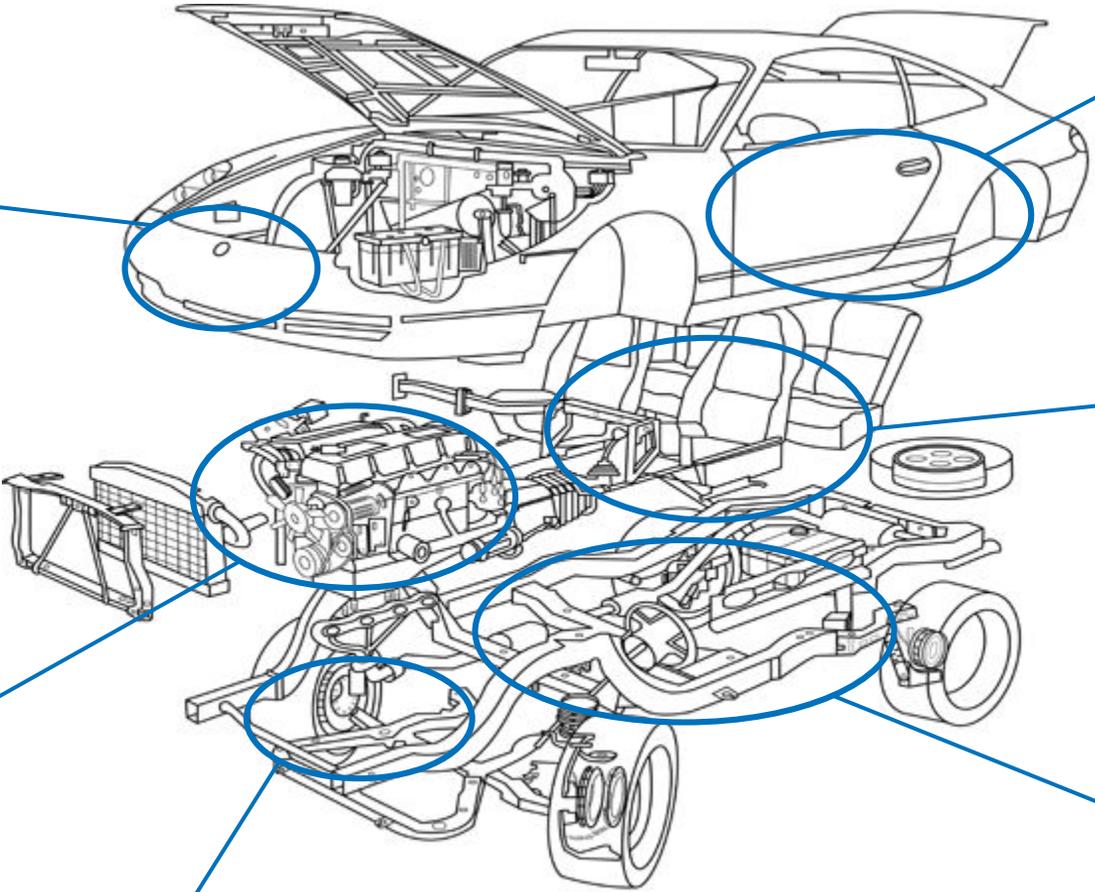
Automotive Value Chain - Components

Exterior Trim & H.O.P:

- **Mirrors**
- **Door Handles**
- **Lights**
- **Badges**
- **Windshield & Windows**
- **Wipers**
- **Moulded Bumpers**
- **Grilles**
- **Wheel Arches**
- **Locks**
- **Mechanical cables**
- **Towbars, bull bars**

Drivetrain:

- **Engine Block**
- **Pistons**
- **Crankshaft**
- **Manifold**
- **Gaskets & Seals**
- **Radiator**
- **Gearbox**
- **Exhaust line**
- **Driveshaft**
- **Bearings**
- **Filters**
- **Rubber hoses**
- **CV joints**



Body:

- **Underbody**
- **Doors**
- **Side Structures**
- **Roof**
- **Cross Members**

Interior Trim:

- **Seats**
- **Door Trim**
- **Centre Console**
- **Airbags**
- **Safety Belts**
- **Carpets**
- **Air Vents**
- **Headliner**
- **Dashboard / I.P.**

Chassis:

- **Frame**
- **Mounts**
- **Springs**
- **Axles**
- **Steering Components**
- **Fuel Tank**
- **Tyres**
- **Rims**
- **Shock Absorbers**
- **Break pads**

Electrical:

- **Harnesses**
- **Starter Motors**
- **Alternators**
- **Lead Acid Battery**
- **Wiper Systems**
- **HVAC System**
- **EV System**

High Potential Products for ECOWAS

The Gambia

- Gaskets

Benin

- Injection moulding (CMCP)
- Tyres (ETS)
- Rolled & Sheet Steel (SIAB)
- Press & weld (SIAB)
- Radiators (AZ Froid)
- Wire (SIAB)
- Seat and seat components
- Foam
- Steering tie rod ends
- Ball and CV joints
- Quality Systems (HCA)

Burkina Faso

- Filters (CdC)

Liberia

- Rubber Hoses
- Tyres
- Wipers

Mali

- Filters

Niger

- Foam
- Injection moulded parts
- Seat Covers
- Seat Assembly

Togo

- Injection moulding (Nosito)
- Steel rims (Diwa)
- Seat Covers
- Foam
- Seat Assembly
- Steering Tie Rod ends
- Ball Joints
- CV Joints

Côte d'Ivoire

- Wipers
- Rubber products e.g. boots
- Metal Pressings
- CV Joints
- Rims
- Glass
- Radiators (ENR)

Sierra Leone

- Batteries
- Engine parts
- Break pads

Ghana

- Forming, casting, moulding (Katanka)
- Tyres (2 x Co's)
- Shock Absorbers
- Springs

Nigeria

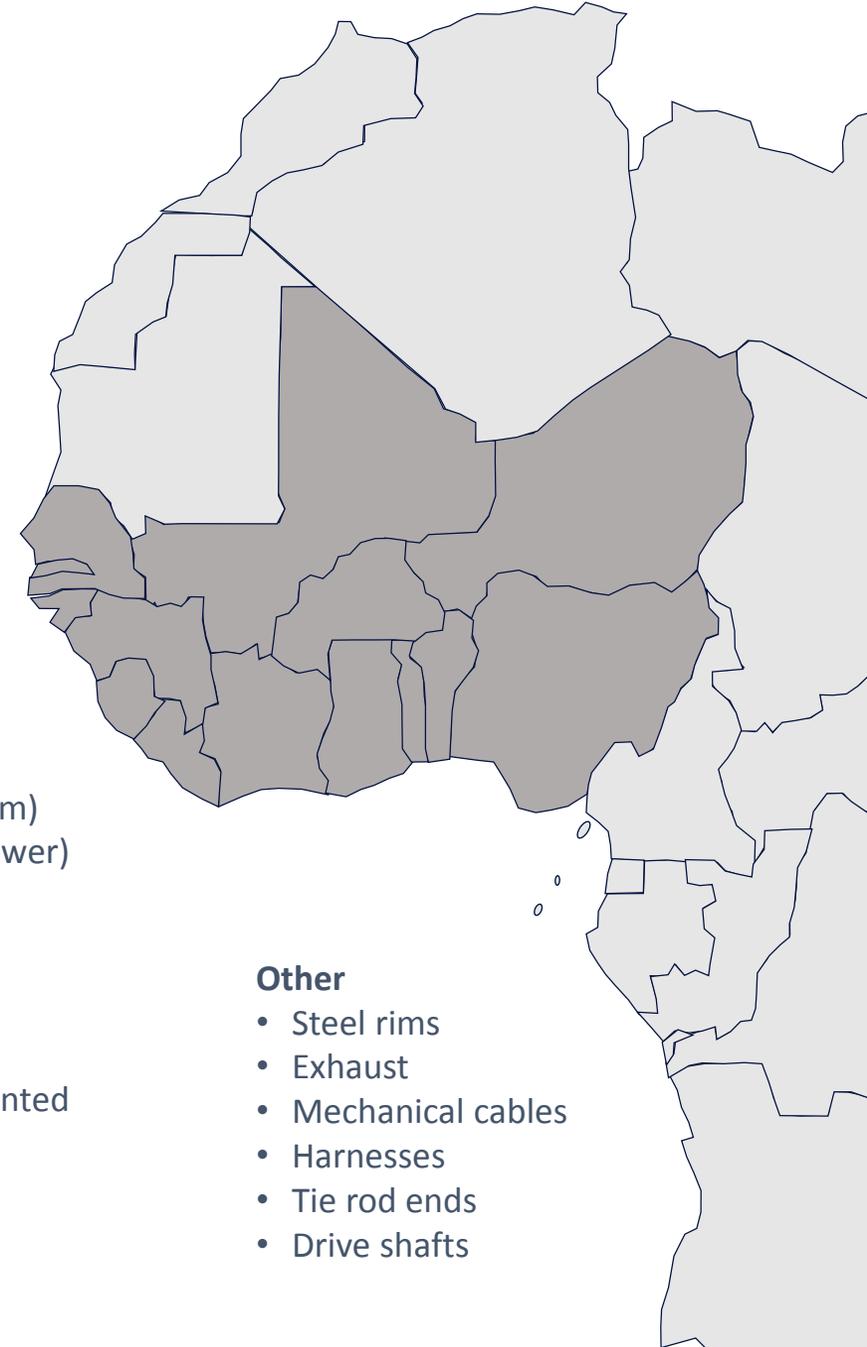
- Electric cables (Wahum)
- Aluminium Panels (Tower)
- Glass
- Shock Absorbers
- Steel Industry

Senegal

- Metal Pressings & painted parts (4 Co's)
- Plastic parts (5 Co's)
- Textiles (2 Co's)

Other

- Steel rims
- Exhaust
- Mechanical cables
- Harnesses
- Tie rod ends
- Drive shafts



Next Steps

Deepen research

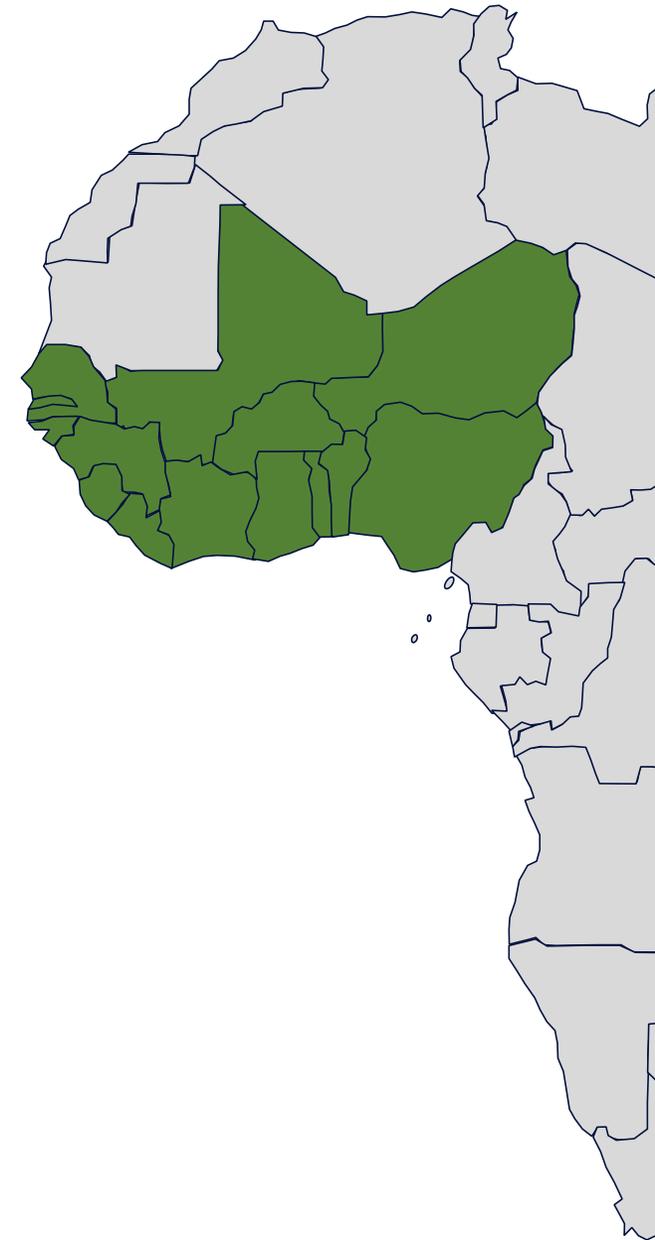
- Leads from session/interaction with attendees
- Further groundwork in countries
- Engage ECOWAS commission representatives
- UNECE engagement to solicit support from used car dealers/importers for local replacement part manufacture

Engage key players

- OEM engagement to confirm selection of products and solicit support to engage component manufacturers (NAACAM) and others in e.g. MOROCCO
- Engage suppliers with similar technology / products to 'partner' with identified companies in ECOWAS
- FINAL selection of components paired with manufacturers and partners

Compile scope of opportunities / cases and supporting / enabling requirements:

- Develop business scope of opportunity in terms of investment and potential volumes
- Develop implementation roadmap and need for detailed business plans.
- Identify automotive and industrial policies that need to support local component manufacture in ECOWAS





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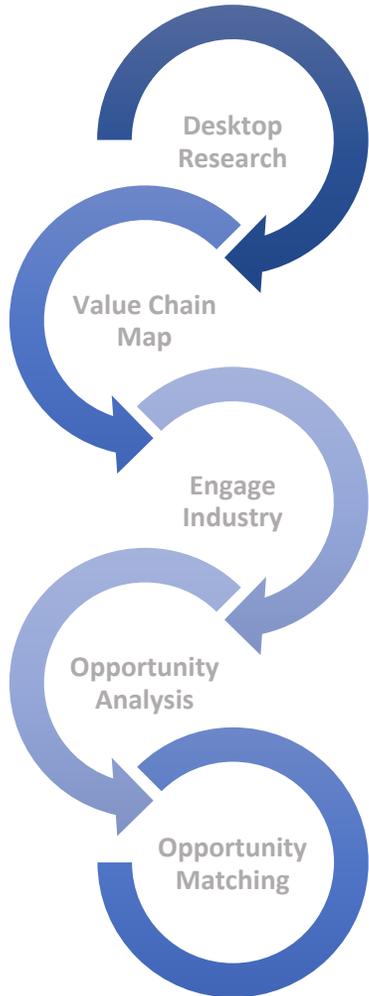
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Mesto
PSC: 811 01



Approach



- Desktop Research
 - Regional **Economic** review
 - Review of ECOWAS **automotive industry**
 - Identify **existing companies** in ECOWAS automotive value chain
 - **Other sectors**, e.g., textiles and leather, steel engineering, plastic products, paints, batteries, brake pads, filters, iron, steel, aluminium foundries, rolling mills, tube manufacture
 - Current **import and export** data
 - **Benchmark** other countries
- Developed automotive components **value chains**
 - Natural resources, processes, services
- **Engage Industry**
 - Chambers of commerce, engineering and technical institutions and associations
 - Survey Monkey
 - Identify and engage **potential manufacturers** (and local partners)
- Evaluate and select **potential manufacturing opportunities**
 - Existing local competencies
 - Market size and proximity to markets
 - Proximity to critical infrastructure
 - Availability of raw materials
 - Cost of labour
 - Skill level required
 - Investment required
- Match **opportunities** with **potential manufacturers**

High Potential products in

Benin

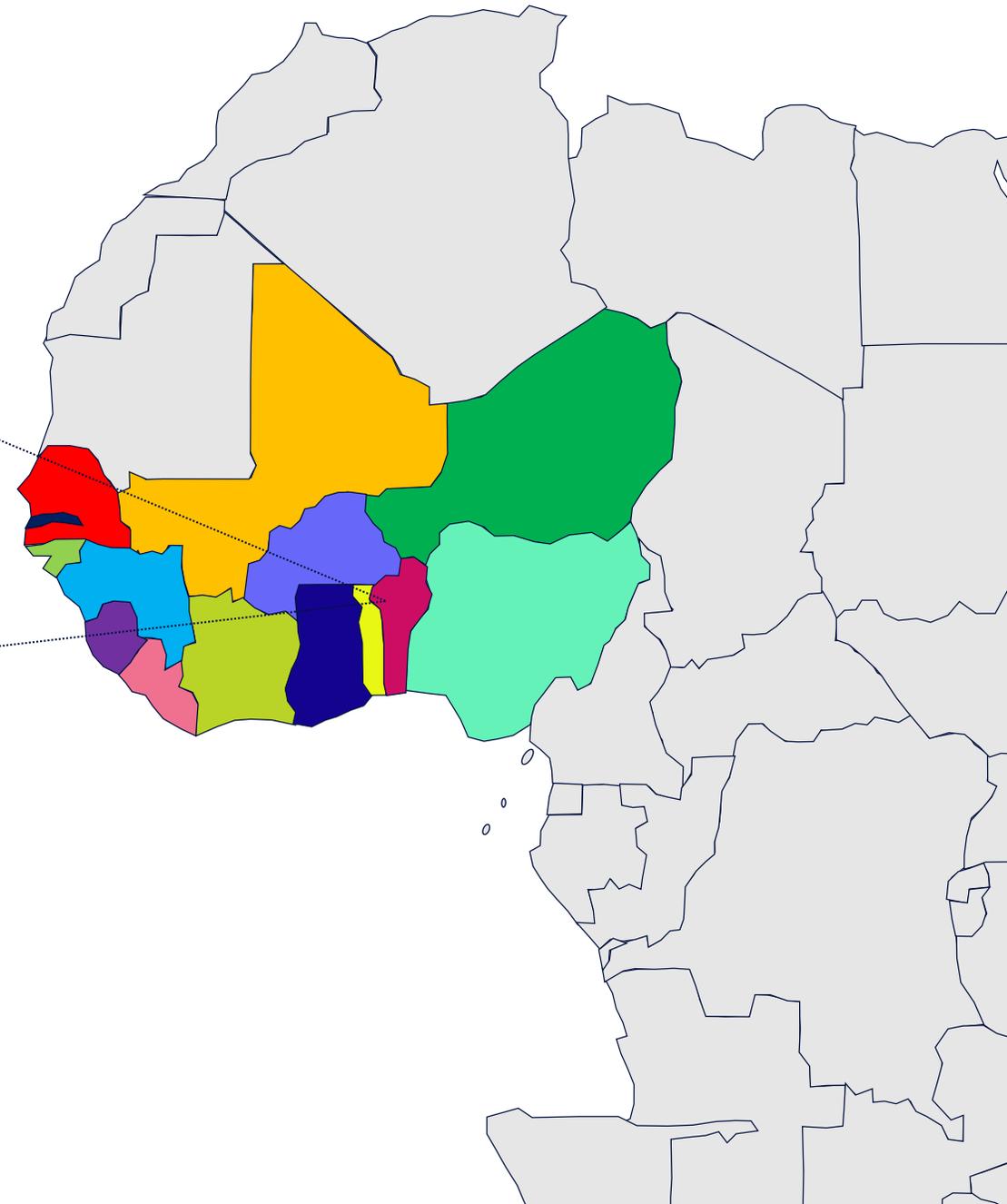
Components:

Seats (excl. frame)

- Foam
- Inj. moulded parts
- Seat Covers
- Assembly
- Steel rims
- Steering tie rod ends
- Ball joints
- CV joints

Reasons:

- Existing capabilities for some components
- Relatively inexpensive to establish
- Manual assembly possible
- Strong aftermarket potential
- Raw materials readily available
- Existing steel rolling industries
- Low equipment investment



High Potential products in

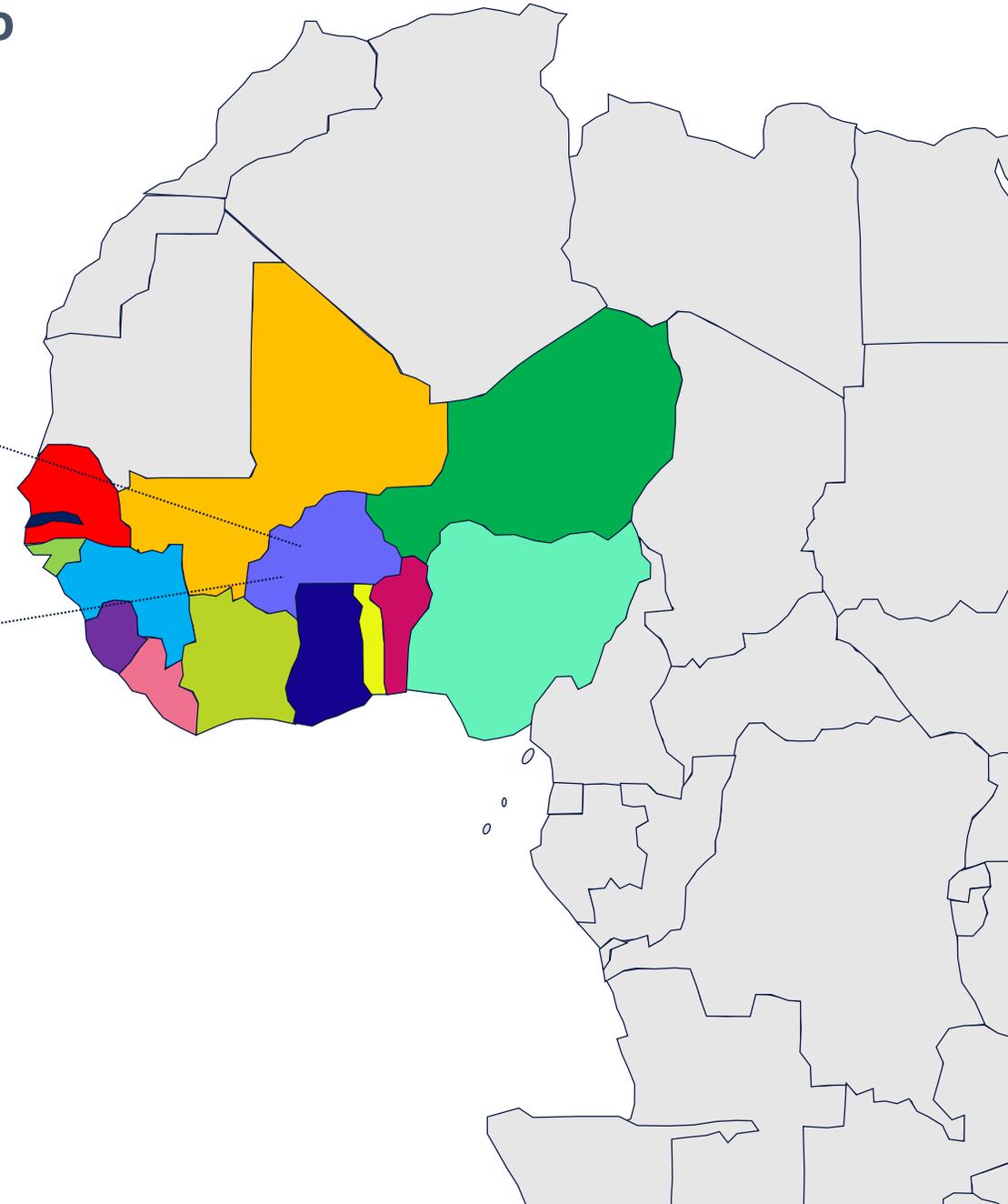
Burkina Faso

Components:

Filters

Reasons:

- Inexpensive
- Simple processes
- High volumes
- They have cotton that can be used in the filters.



High Potential products in

Côte d'Ivoire

Components:

1. Wipers

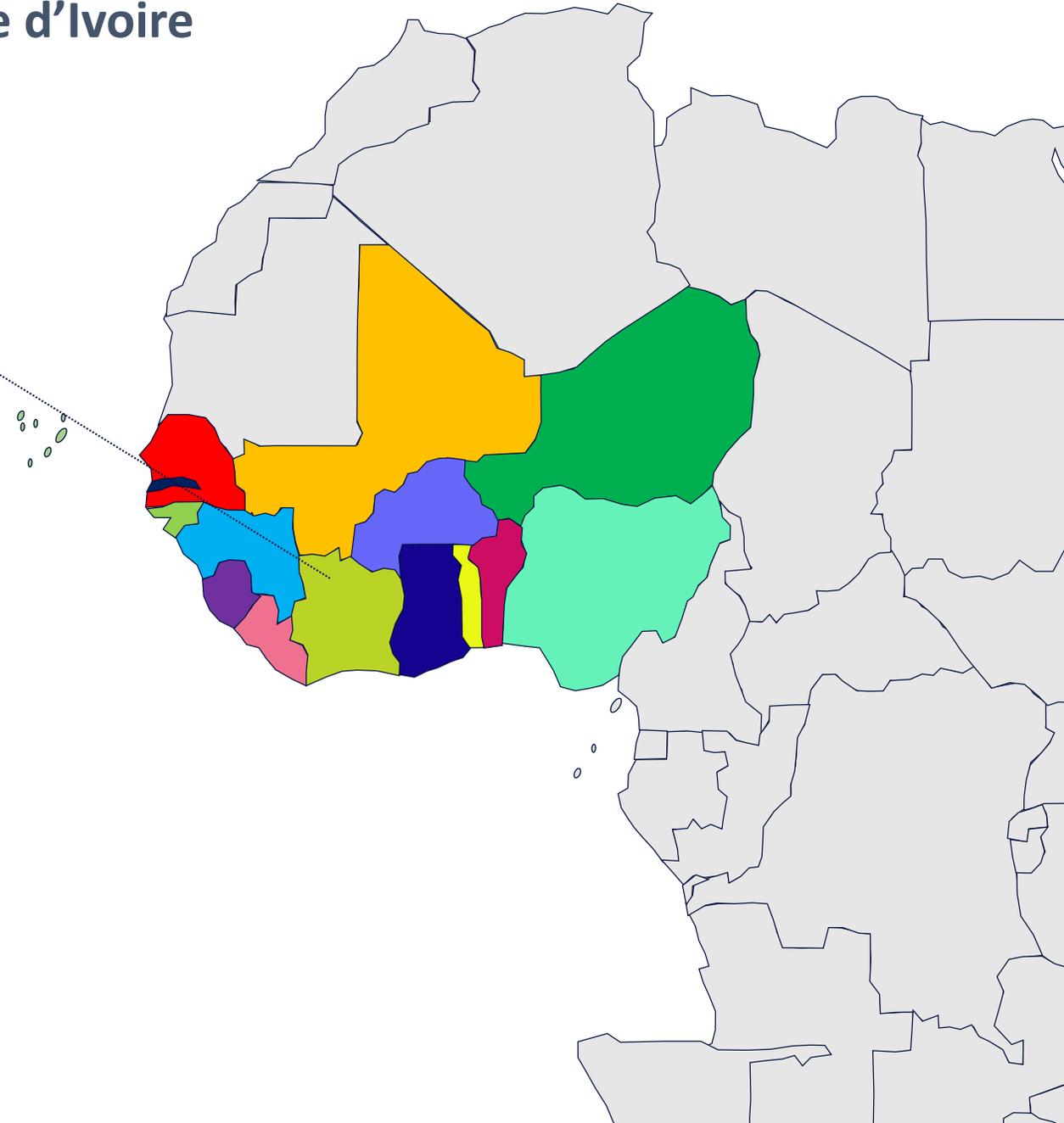
- Rubber Blades
- Metal Pressings
- CV Joints
- CV Joint Boots

Reasons:

- Strong aftermarket potential
- Raw materials readily available
- Simple manufacturing processes
- High volume parts

2. Tyres

- Abundance of natural rubber
- High demand
- High volume parts



High Potential products in

Ghana

Components:

1. Cast Engine Components

- Engine Block
- Camshaft
- Piston assemblies

Reasons:

- High value products
- Relatively simple processes

2. Tyres

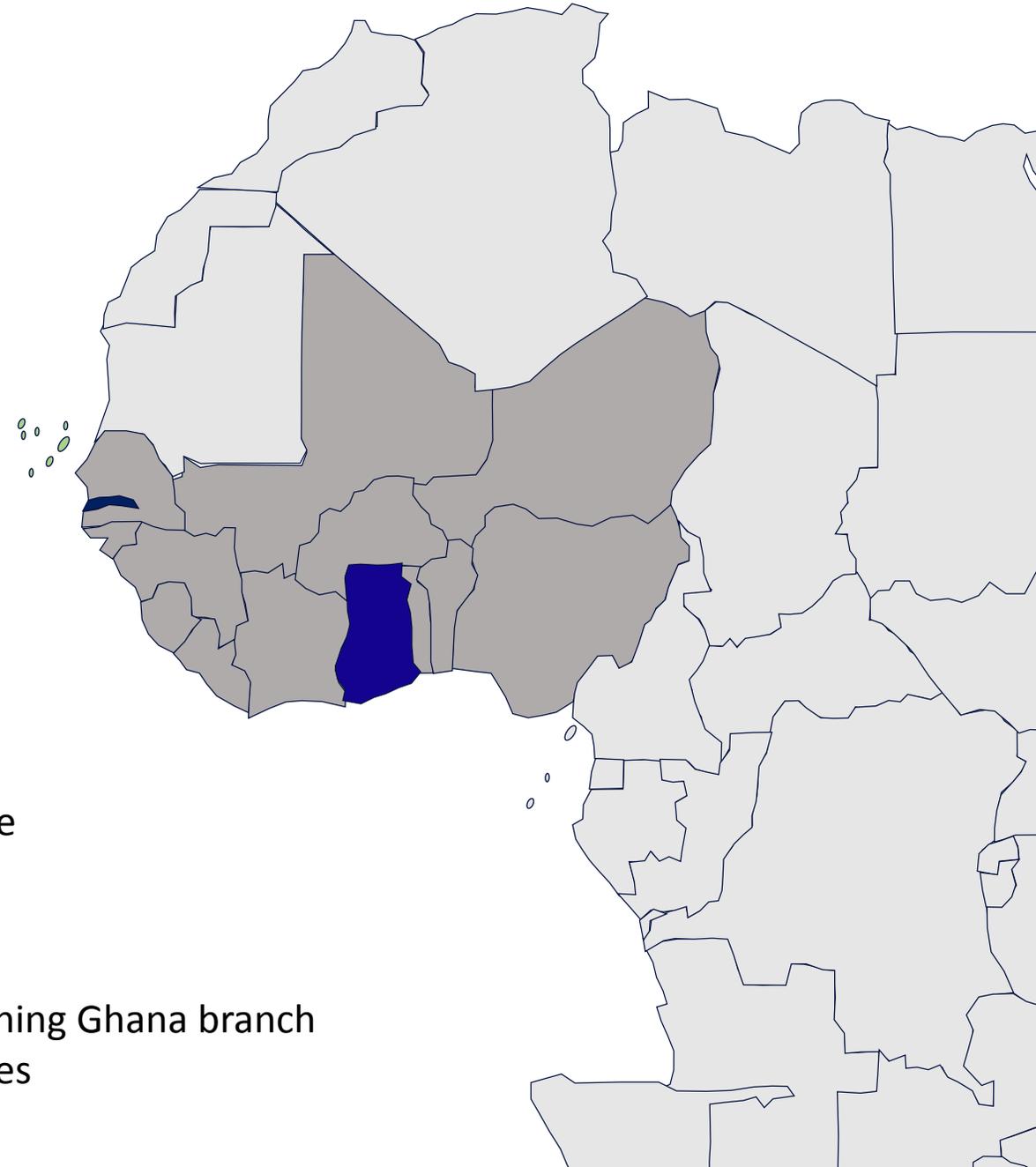
- Abundance of natural rubber
- Kantanka is investigating tyre production
- High demand
- High volume parts

3. Shock Absorbers

- Not too complex to manufacture
- Materials availability

4. Springs

- Supreme Springs busy establishing Ghana branch
- Simple manufacturing processes
- High volumes



High Potential products in

Liberia

Components:

1. Rubber Hoses

Reasons:

- Strong aftermarket potential
- Raw materials readily available
- Simple manufacturing processes
- High volume parts
- Inexpensive to establish

2. Tyres

- Abundance of natural rubber
- High demand
- High volume parts

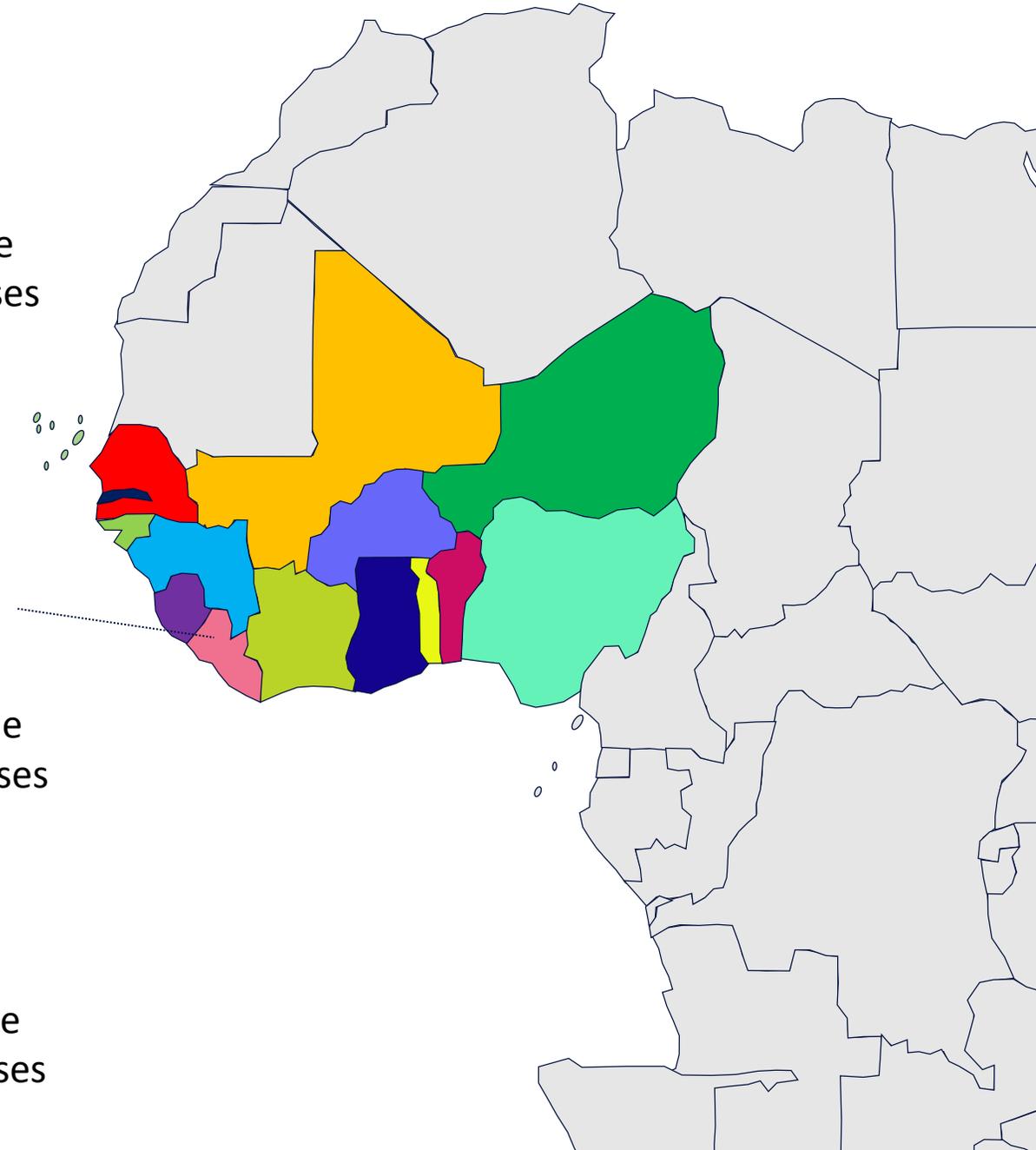
3. Gaskets

- Strong aftermarket potential
- Raw materials readily available
- Simple manufacturing processes
- High volume parts
- Inexpensive to establish

4. Wipers

- Rubber Blades
- Metal Pressings

- Strong aftermarket potential
- Raw materials readily available
- Simple manufacturing processes
- High volume parts



High Potential products in

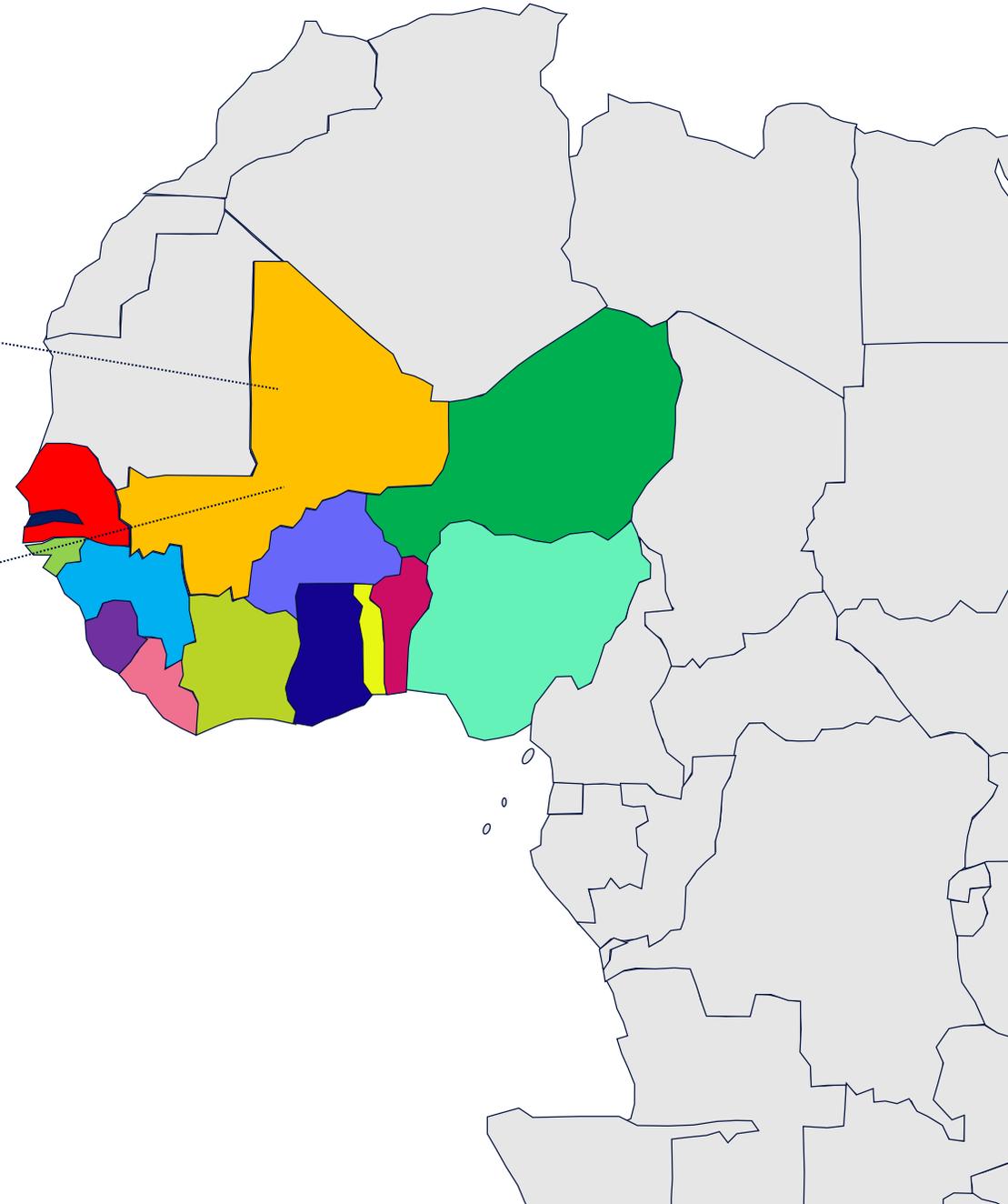
Mali

Components:

Filters

Reasons:

- Inexpensive
- Simple processes
- High volumes
- They have cotton that can be used in the filters.



High Potential products in

Niger

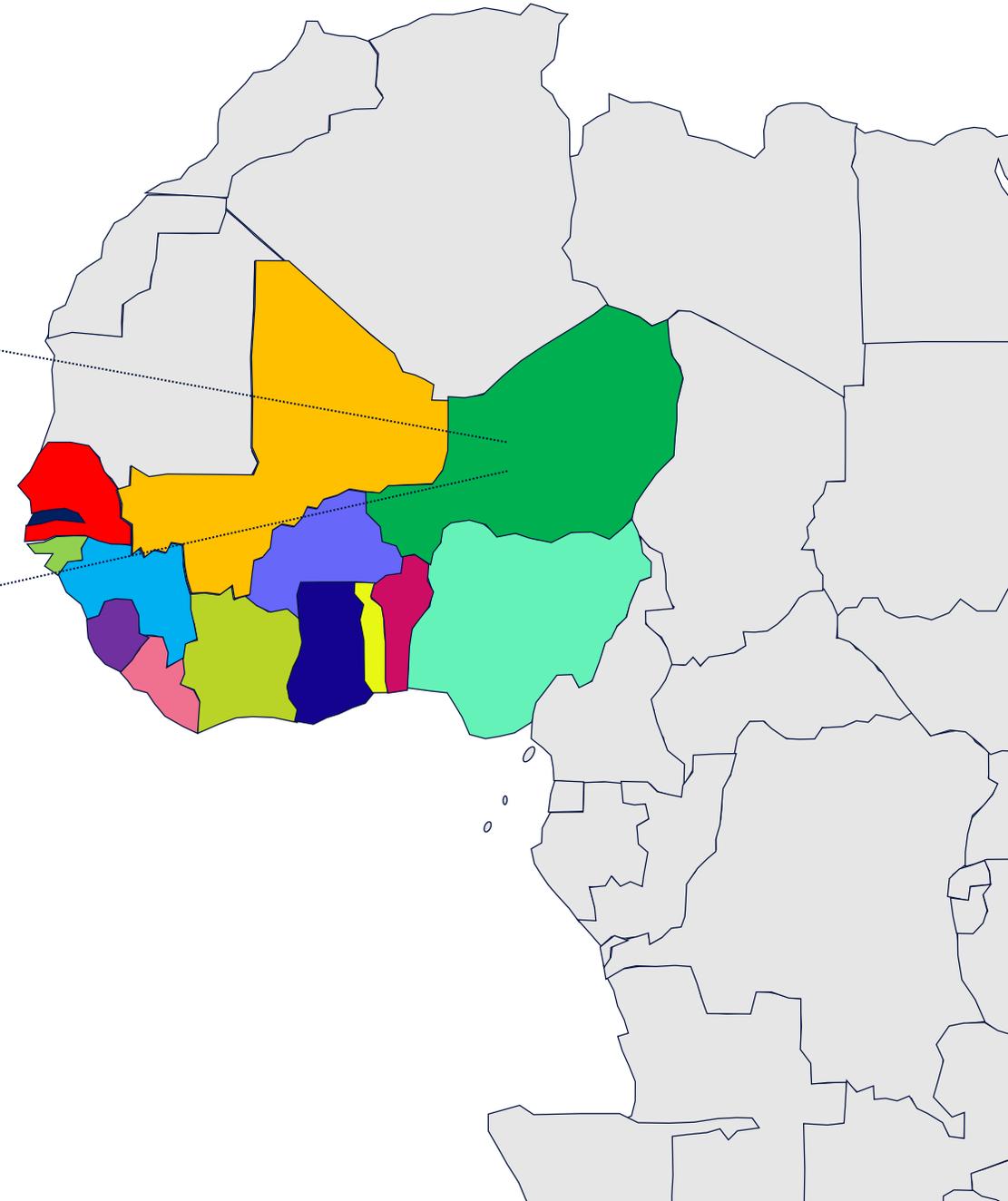
Components:

Seats (excl. frame)

- Foam
- Inj. moulded parts
- Seat Covers
- Assembly

Reasons:

- Existing capabilities for some components
- Relatively inexpensive to establish
- Manual assembly possible
- Strong aftermarket potential
- Raw materials readily available



High Potential products in

Nigeria

Components:

1. Glass

- Windshields
- Windows

Reasons:

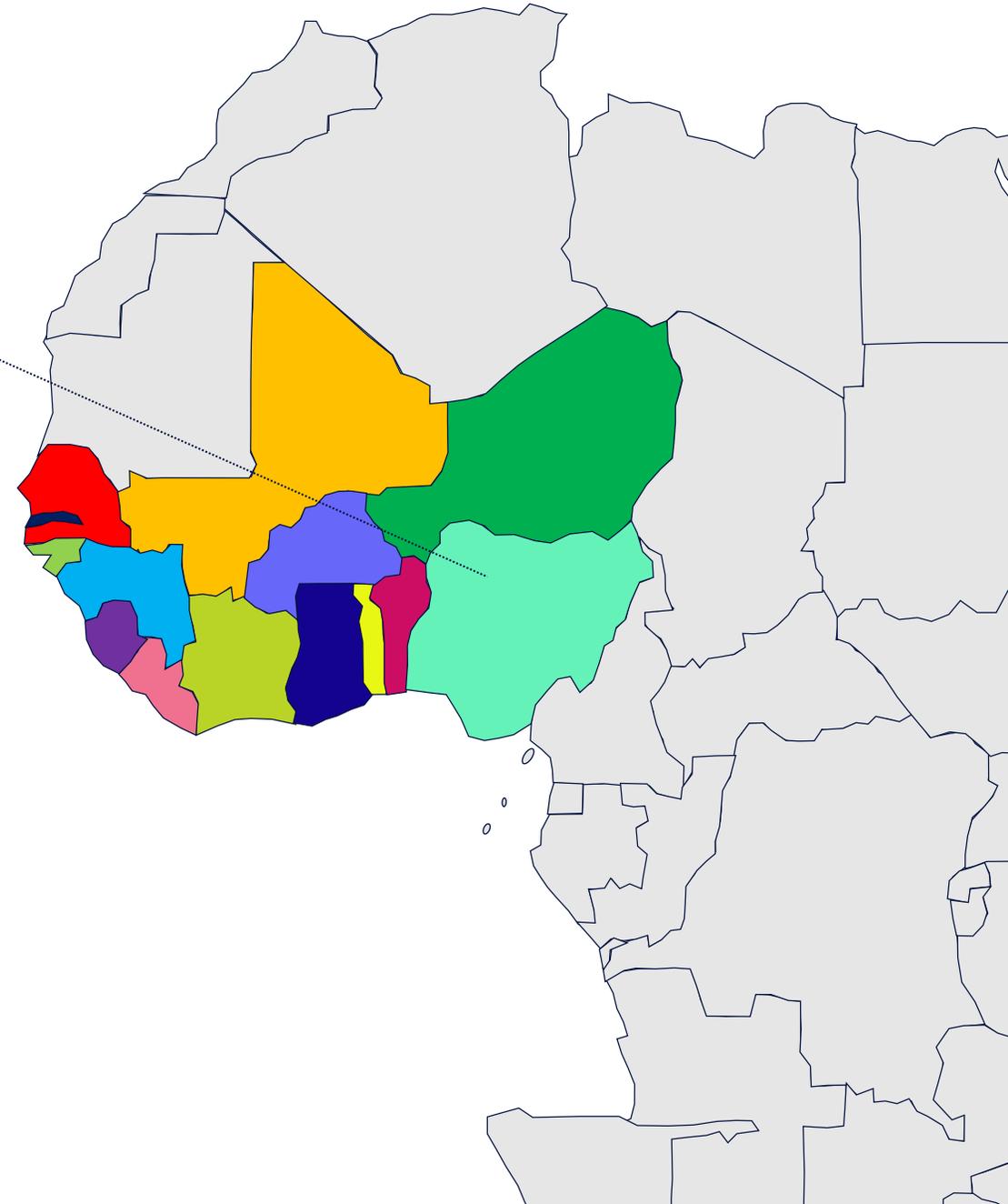
- Floated glass companies already present
- Relatively simple processes

2. Badges

- Simple
- High volumes

3. Shock Absorbers

- Not too complex to manufacture
- Materials availability



High Potential products in

Togo

Components:

1. Seats (excl. frame)

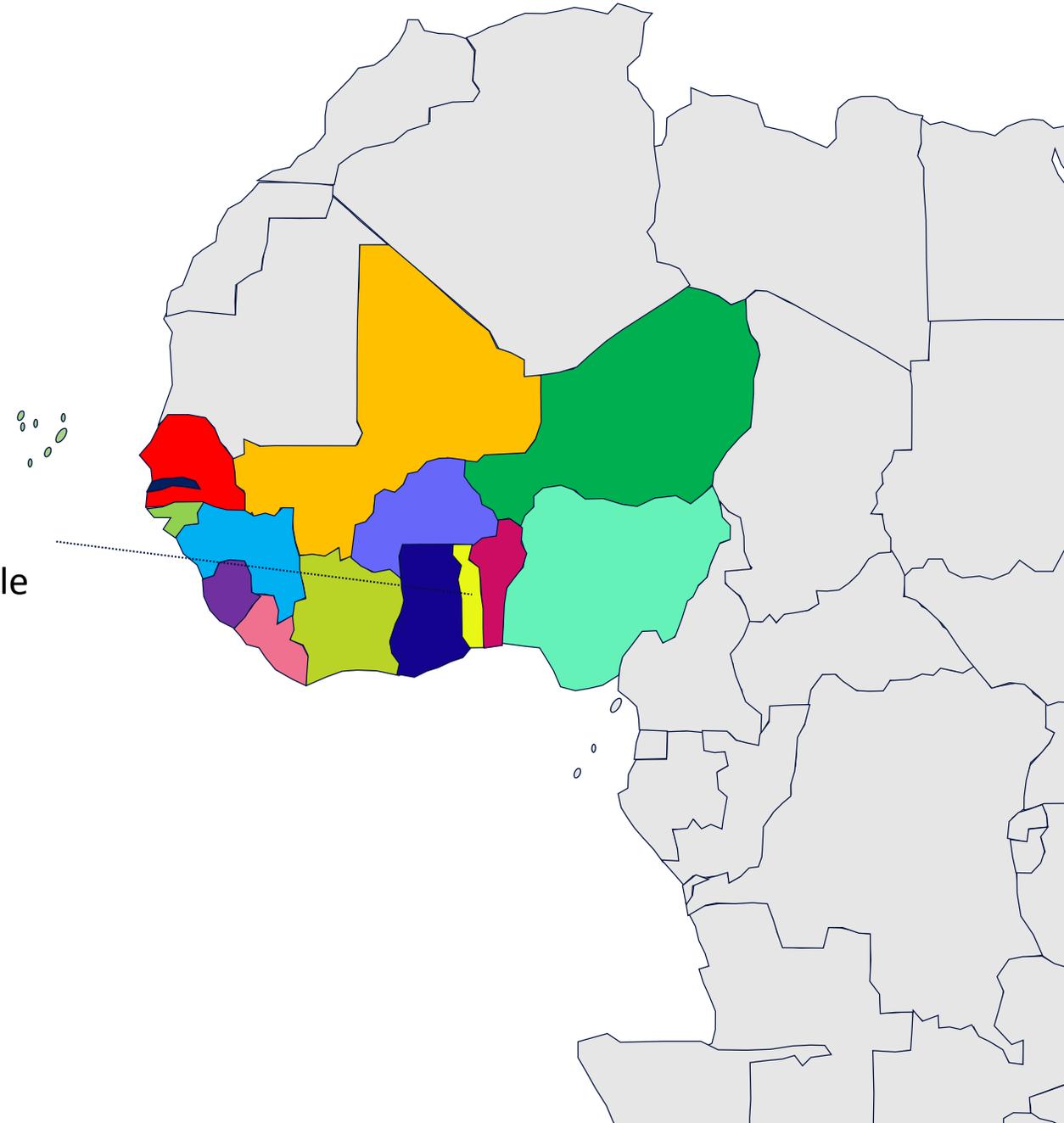
- Foam
- Inj. moulded parts
- Seat Covers
- Assembly
- Steering Tie Rod ends
- Ball Joints
- CV Joints

Reasons:

- Existing capabilities for some components
- Relatively inexpensive to establish
- Manual assembly possible
- Strong aftermarket potential
- Raw materials readily available

2. Badges

- Simple
- High volumes



High Potential products in

any ECOWAS country

Components:

1. Steel Rims

Reasons:

- Strong aftermarket potential
- High volume parts

2. Driveshaft

- Relatively simple processes

3. Exhaust

- Relatively inexpensive and simple

4. Mechanical Cables

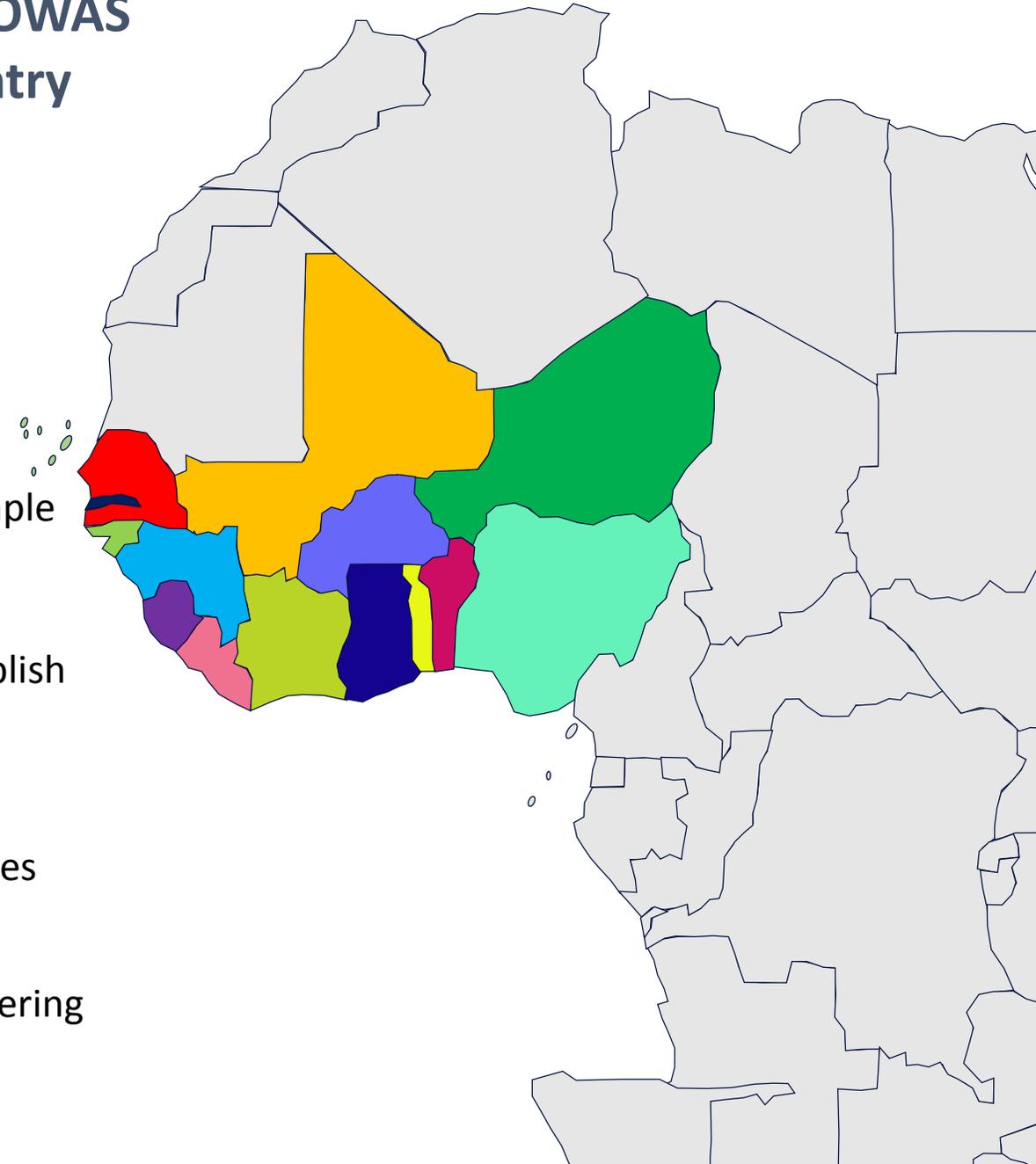
- Existing capabilities
- Relatively inexpensive to establish
- Manual assembly possible

5. Harness Assembly

- Inexpensive to establish
- Simple manufacturing processes
- Manual assembly possible

6. Ball joint & Tie rod ends

- Need a relatively small engineering company
- High demand



Why an automotive value chain in West Africa – three case studies



South Africa

- Auto industry started in 1924
- **630 000** vehicles per annum
- GDP contribution: **7,2%**
- 64% exported
- 7 OEMs
- **187** Tier 1 suppliers
- **350** Tier 2 suppliers
- **106,726** Manufacturing Jobs
- **380,725** Retail Jobs
- MIDP introduced in 1995
- Grey and 2nd hand imports banned



Morocco

- Auto industry started in 1960
- **400 000** vehicles per annum
- **80% exported**
- **7** OEMs
- **187** Tier 1 suppliers
- **350** Tier 2 suppliers
- **106,726** Manufacturing Jobs
- **380,725** Retail Jobs
- GDP contribution: **112.9 billion USD**
- MIDP introduced in 1995
- Grey and 2nd hand imports banned



Thailand

- Auto industry started in 1960
- **600 000** vehicles per annum
- 70% exported
- **18** OEMs, 9 motorcycle assemblers
- **710** Tier 1 suppliers
- **1 700** Tier 2 & 3 suppliers
- **450,000** Manufacturing Jobs
- GDP contribution: **501.8 billion USD**
- MIDP introduced in 1995
- Do not provide warranty work for grey and 2nd hand imports