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CONNECTA

Technical Assistance to Connectivity in the Western Balkans



Feasibility Study for Border Crossing Facilitation and
Improvement of Cross-border Road Transport on TEN-T Road
Core/Comprehensive Network in the WB6

Code: CONNECTA-TRA-CRM-REG-04
Area: Connectivity Transport Reform Measures

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CONSORTIUM

Border Crossing Facilitation and Improvement of Cross-border Road Transport on TEN-T Road Core/Comprehensive Network in the WB6

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Contents:

- Background and Objectives
- Activities
- Key Findings & Outcomes
- Next Steps

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TA to Connectivity in the Western Balkans
EuropeAid/137850/IH/SER/MULTI

Sub-Project

Code: CONNECTA-TRA-CRM-REG-04
Area: Connectivity Transport Reform Measures

Study for border crossing facilitation and improvement of the cross-border road transport on the indicative extension of TEN-T Road Core/Comprehensive Network in the Western Balkans

FINAL REPORT (DRAFT)
5 June 2019



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- (Sub)Project within Connecta TA framework
- Context: Freight forwarders and road transport companies are suffering from lengthy waiting times in excess of 160 minutes (occasionally 280 minutes) on the Orient-East/Med corridor (Corridor X).
- Viability assessment of One-Stop Shops and eQMS on all border crossing points (BCPs) on the Core and Comprehensive Road Network in the Western Balkans
- Scope of assignment:
 - i) Feasibility study and Cost Benefit Analyses (CBAs) for CBPs one-stop shops □ road map / strategy to implementation & international (bilateral) agreements template for pilot BCPs
 - ii) Feasibility studies and CBAs for eQMS at 5 BCPs identified by the pre-feasibility study, and possibly, implementation of pilot project

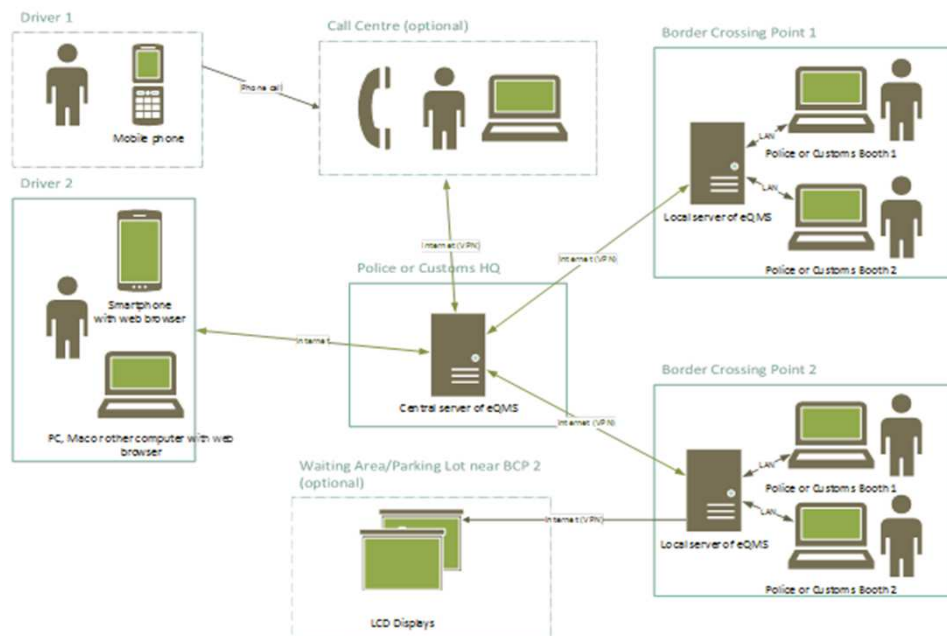
- **One-Stop Shop:** Facility where all cross-border formalities occurring in one place (i.e. joint controls from the two border sides) e.g. issuance of documents, permits and certificates to citizens. It can also be applied to export, import and transit processes.
- OSS requires that all Border Agencies – primarily Customs and Border Police – operate from a single office.
- CONNECTA project has a more ambitious goal of creating Joint Border Crossing Points, operating as One-Stop-Shops → co-location of at least 4 Border Agencies from two neighbouring Regional Participants/ EU Member States – RP/MS A and RP/MS B – in a single facility to process cross-border traffic.



Background

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- **Electronic Queue Management Systems (e-QMS):** consist of 3 main components: a) the underlying software system; b) a payment system; and c) a camera system.
- Software used for pre-booking time slots via an online portal, which provides users with clear step-by-step information starting with a virtual waiting process, arrival and check-in at the waiting area, the actual (physical or in-presence) queuing, and finally exit from the waiting area (using licence plate recognition cameras).



Study Area

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32 pairs of BCPs/CCPs being assessed in study area

-14 intra-WB6

-18 WB6-EU

Of the 32 BCPs, 5 to be assessed also for e-QMS

- **Principal overarching objective:** Assist WB6 Regional Participants identifying suitable systems to manage and facilitate the movement of cross-border road traffic resulting in simpler, more efficient border controls, reduced waiting and processing times → reduced trade and logistic costs, improved mobility.
- Further to the above, we have looked to identify systems and measures at the different BCPs/CCPs which offer the best economic returns

Component 1: One-Stop Shops

- Activity (i): Site visit and analysis of the candidate BCPs/CCPs;
- Activity (ii): Preparation of a feasibility study;
- Activity (iii): Cost Benefit Analysis (CBA);
- Activity (iv): Preparation of Road Map for introduction of One-Stop Shops (OSS);
- Activity (v): Preparation of template for bilateral agreements

Component 2: eQMS

- Activity (i): Site visit and analysis of the BCPs/CCPs;
- Activity (ii): Preparation of a feasibility study for preferred candidate sites;
- Activity (iii): Cost Benefit Analysis (CBA);
- Activity (iv): Proposals for legal and institutional restructuring to enable eQMS;

- Fact-finding missions focused on:
 - **Location** on the road network, road type and category (i.e. between Western Balkans countries or with EU member country)
 - **Physical characteristics** for each location, including the availability of lay-by areas, the number of lanes for passenger and freight traffic, parking and queue capacity
 - **Other facilities** with which the BCP is equipped
 - **Historical traffic** volume per direction for all months in last year
 - **Composition** of the freight traffic (domestic/international) as well as type of payload
 - Available or estimated **projection of the future** traffic
 - **Percentage** of the trucks that are subject of **physical inspection**
 - **Duration** and stepwise process of the overall inspection activity
 - **Waiting time** for the inspection activity
 - **Total time needed for inspection** activity and passing BCP

- **Exponential traffic growth:** entire Western Balkans region is indeed experiencing substantial growth in traffic volumes, and in particular, freight traffic.
- In all 32 BCPs/CCPs assessed, the year-on-year freight traffic growth > the general car traffic growth rates. BCP Hum / Scepan Polje along the Bosnia & Herzegovina - Montenegro border has year-on-year growth rate over 25% p.a.
- Busiest crossing BCP Bajakovo / Batrovci with c. 400,000 trucks per year growing at 2% p.a.
- **Design Deficiencies in BCP Layouts and General Design:** Existing and even newer crossing facilities based on outdated arrangement and layouts with HGVs and buses processed in a linear first-in, first out manner.
- Buses also processed at same facilities and share HGV lanes



- **Need for Ancillary Facilities at BCPs/CCPs:**
- The need to introduce non-intrusive scanning technology e.g. fixed or mobile x-ray scanners.
- Customs, border guard and freight forwarding staff cars are typically parked inside the Customs Control Zone (CCZ) of the BCPs/CCPs. Ideally, these cars should be parked in a separate fenced and secure parking area outside the BCP.
- Installing ANPR systems to help enhance the risk management systems in place, facilitate vehicle identification and help detect stolen or non-taxed vehicles.
- Introduce sniffer dogs to detect narcotics, other contraband and smuggled currency



- **Quick-wins through Improved Institutional Frameworks:**
opportunities for quick-wins comprising non-physical measures with minimal cost
- Streamlining processes to remove controls/activities not strictly related to the border crossing e.g. Road Tax Collection, Check of Transport Licences, Technical Compliance, Weight Limit Compliance and similar tasks that can/should be performed elsewhere
- Eliminate system-wide repetitive weighing of trucks (even empty ones) as this creates unnecessary work and delays to freight companies
- Uninterruptible Power Supply (UPS) and local data backup and IT system redundancy should be standardised
- BCPs and CCPs should not function as principal customs clearance facilities but rather as exit and entry registration facilities → Import and export clearance should be at inland clearance deports (ICDs)



- In keeping with the EU accession process, all WB6 regional participants partners have introduced the concept of Integrated Border Management (IBM) and have relatively new (i.e. recently adopted) and modern laws on border control and laws on customs.
- These laws underpin the concept of IBM and of the wider domestic legal system in conformity with the EU acquis-related requirements in the fields of the Customs Union; free movement of goods; justice, freedom and security; and common foreign and security policy.
- General legal framework in WB6 provides basis for the organisation of joint controls e.g. various forms of one-stop-shop controls but eQMS elements are not recognised in current legal acts.



- EC Guidelines on IBM encourage one-stop controls as advanced level of international cooperation requiring intra- and inter-agency cooperation → This is the next stage in the evolution of WB6 IBM system.
- The establishment of one stop controls at the BCPs would not entail substantial changes of the legislation as main aspects of joint border controls must be defined in bilateral (international) agreements which prevail over national border control laws.
- For eQMS, some legal amendments would need to be introduced:
 - current legal framework does not clearly regulate waiting areas at BCPs or elsewhere on the territory of the countries.
 - For time-based or slot-based management systems, the inspection of vehicles and the operator of the waiting area should also be defined in legal acts



Legal & Institutional Issues

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General Objectives	<ul style="list-style-type: none"> • General objectives of the two countries regarding the operational activities
Legal Status of BCP/CCP	<ul style="list-style-type: none"> • These facilities do not have an extra-territorial legal status and are under the complete jurisdiction of the host country.
Legal Status of Staff	<ul style="list-style-type: none"> • As a rule, staff do not have special immunities other than being guaranteed unlimited access to the checkpoint while on duty. • Depending on the relations between the two states, the staff of the guest country possesses service identification cards and national identification documents or/and service passports
Security of OSS & Staff	<ul style="list-style-type: none"> • There is a general rule that the host country of the territory in which the JBC is located assumes full responsibility for ensuring the security of equipment, infrastructure, and staff on duty
Uniforms	<ul style="list-style-type: none"> • Wearing a national uniform in border checkpoint territory is mandatory
Use of Firearms	<ul style="list-style-type: none"> • Current practices within the European Union establish the mandatory carrying of arms while on duty in the territory of the border checkpoints, and the use of these arms on the territory of the foreign state only for self-defense
Telecommunications	<ul style="list-style-type: none"> • As a rule, agreements regulate only those aspects related to telecommunications that ensure avoiding interference in the activity of the telecommunications of the host country, or general issues of reciprocal assistance in the field
Right to Control, Inspect & Arrest	<ul style="list-style-type: none"> • A general rule respected by EU countries stipulates that the right to control and inspect at JBC checkpoints located in the territory of another state should be similar to the respective rights in force on the national territory
Mode of Seizing Goods	<ul style="list-style-type: none"> • Respective agreements usually stipulate the rights of the control agencies (services) of the guest country to seize illegal goods, and the protocols to be followed in doing so
Financial Issues	<ul style="list-style-type: none"> • Agreements stipulate the financial responsibilities of the parties related to the maintenance of the JBCs, the procedures of payments and applying the customs rights, etc
Governing Protocols	<ul style="list-style-type: none"> • Issues for which regulation is authorised by protocols and working documents at the services (departmental) level: the physical boundaries of the JBC; the physical demarcation dividing the authority limits; work procedures; interaction between the teams of the two states; administration and maintenance of the infrastructure at the JBCs; the order of actions in exceptional cases; organisational issues, etc

- Stepwise process for Implementing Bi-Lateral Agreements*:
 - **Step 1:** Government adopts/approves Basis/Platform of the Government for Negotiation of Bilateral Agreement (name of the Agreement e.g. on opening JBC); this document should include:
 - Constitutional and legal base for conclusion of the Bilateral Agreement
 - Assessment of the relationship between the future parties to the agreement
 - Reasons for conclusion of the Bilateral Agreement
 - Main topics for negotiations
 - Assessment of the funds needed for the implementation of the Future Agreement
 - Needs for harmonisation/amendments to the laws and regulation
 - Government Team for negotiations and data related to the cost of negotiations
 - Draft of the Agreement that will be negotiated
 - **Step 2:** Governments will adopt the final text of the Agreement and will authorise their representatives to sign the bilateral agreement.
 - **Step 3:** Signed Bilateral Agreement, along with draft Law on Ratification submitted to Parliament for Ratification, after which it will be published in the respective Official Gazettes. This step supplemented with parallel Implementing (detailed) Protocols.
 - **Step 4:** Implementation of Bilateral Agreement and Protocol

** CONECTA team prepared draft Bilateral Agreement along with ancillary supporting documents have been prepared by the CONECTA team and attached in Annex 2 of the Bi-Lateral Agreement Report.*

Proposed Improvements

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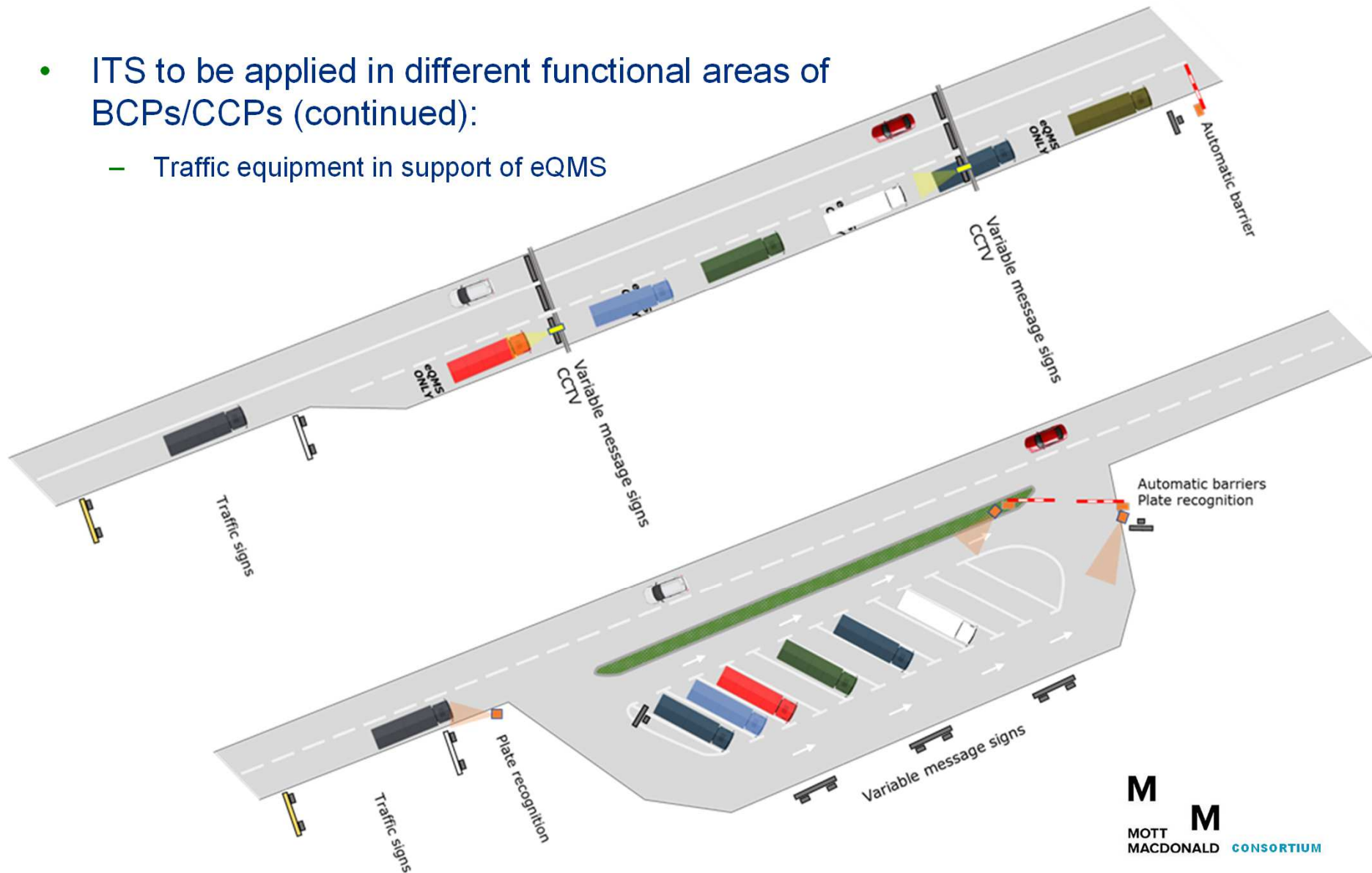
- Proposed improvements to BCPs/CCPs focused on two strands:
 - Intelligent Transport Systems (ITS) measures
 - Physical measures
- ITS to be applied in different functional areas of BCPs/CCPs:
 - Segregation of users/traffic e.g. HGVs separated from coaches and cars, with dual-purpose lanes for spare capacity; border crossing functions separate from rest and parking areas
 - Traffic and lane management e.g. traffic counters, variable message signs (VMS), info boards, jersey barriers, etc.
 - Automatisisation of procedures e.g. ANPR, Weigh-in-Motion, X-ray scanners
 - Enhanced information systems e.g. estimated waiting times on VMS as well as pre-arrival info at waiting areas
 - Real-time data collection (upstream of BCPs/CCPs) e.g. SEED



Proposed Improvements

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- ITS to be applied in different functional areas of BCPs/CCPs (continued):
 - Traffic equipment in support of eQMS



Proposed Improvements

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- Proposed improvements for each individual BCP/CCP (extract shown below)
- Details reported in Fact Finding Mission Report, CBA Report, and Final Report

BCP / CCP	Traffic technology measures
1 BCP Qafe Thane - Kjafasan	<ul style="list-style-type: none">• Automatic weighting system• Extension of approach road capacity• Real time data collection• Pre-arrival information on road-side facilities• Pre-arrival information on internet
2 BCP Kapshtice - Krystallopigi	<ul style="list-style-type: none">• Real time data collection• Pre-arrival information on road-side facilities• Pre-arrival information on internet
3 BCP Hani I Hotit - Bozaj	<ul style="list-style-type: none">• Provision of additional parking capacity• Real time data collection• Pre-arrival information on road-side facilities• Pre-arrival information on internet

Proposed Improvements

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- Apart from ITS measures, physical measures were also proposed.
- Similar to ITS, these were done for each BCP/CCP (sample below).
- Details reported in Fact Finding Mission Report, CBA Report, and Final Report

No.	Border Crossing Point	New buildings	New layout	Extra lanes	Detection equipment(s)
1	Qafe Thane / Kjafasan	Secondary vehicle inspection facility; combined customs and border guard booths	Herringbone vehicle parking	NCTS/TIR lanes	X-Ray scanner; vehicle number plate scanner (ANPR); sniffer dogs and kennels; extra weighbridge; radiological detection equipment
2	Kapshtice / Krystallopigi	Bus passenger processing facility; combined customs and border guard booths	N.A	Empty truck lane	Vehicle number plate scanner (ANPR); sniffer dogs and kennels; extra weighbridge
3	Hani I Hotit/Bozaj	Secondary vehicle inspection facility; bus passenger facility; parking for the customs and border guard cars outside the BCP area; combined customs and border guard booths; primary truck lane booth to the height of the truck window	N.A	Empty truck lanes; access lane to the secondary vehicle inspection facility	X-Ray scanner; vehicle number plate scanner (ANPR); sniffer dogs and kennels

Proposed Improvements

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- Figure below depicts typical BCP linear design with three lanes in and three lanes out i.e. 'first-in first-out' management method, which results in traffic queues and time delays.



Proposed Improvements

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- Figure below illustrates improved herringbone angled parking spaces where trucks will not impede other trucks, and the central reservation is small enough to allow lane switching.
- The administrative building is on one side and does not impede traffic flow. Multi-lane entry and exit lanes are not inhibited by secondary inspection, weighing and scanning and import, export and transit procedures. The primary truck lanes are separated from the car and bus lanes.



CBAs are an invaluable tool in assessing investment projects and account for the opportunity costs of the schemes being considered over the long-term, and allow evaluators to calculate economic performance expressed in monetary terms such as

- Economic Net Present Value (ENPV),
- the Internal Rate of Return (IRR) or Economic Rate of Return (ERR),
- Benefit to Cost Ratio (BCR)

Financial analysis also carried out in order to:

- Assess the consolidated project profitability,
- Assess the project profitability for the project owner and key stakeholders,
- Verify project financial sustainability,
- Outline the cash flows.

Costs and Benefits – CBA Approach

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Scenarios considered:

- Business As Usual (BAU) Scenario: maintenance of the status quo
- “With Project” or “Do Something” Scenarios:
 - DS1: One-Stop Shop (OSS) with separate facilities;
 - DS2 – OSS with one consolidated site (i.e. a Joint Border Crossing or JBC facility);
 - DS3 – eQMS only with separate facilities;
 - DS4 – OSS with eQMS, separate facilities; and
 - DS5 – OSS with eQMS, JBC facility.

Costs and Benefits – CBA Approach

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Initial sift of 32 BCPs/CCPs using Multi-Criteria Analysis based on 4 criteria:

- Political will on both sides, which is used to score the current political climate and relations between the two countries.
- Need for Reconstruction, which we have considered as a proxy for the age of the present facilities and infrastructure on site
- Institutional Frameworks in place, reflects the perceived level of cooperation present at each specific BCP/CCP,
- Maturity is used to denote the level of readiness for project implementation

Costs and Benefits – CBA Approach

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Scenarios considered:

BCP/CCP 1 Name	BCP/CCP 2 Name	DS1 2022	DS2 2022	DS3 w/WA 2022	DS3 wo/WA 2022	DS4 w/WA 2022	DS4 wo/WA 2022	DS5 w/WA 2022	DS5 wo/WA 2022
Qafe Thane	Kjafasan	x	x						
Hani I Hotit	Bozaj	x	x						
Bijaca	Prud	x	x						
Deve Bair	Gyuesevo	x	x						
Blace	Hani i Elezit	x	x						
Neum (I) NorthWest	Klek			x				x	
Neum (II) SouthEast	Zaton Doli			x				x	
Debeli Brijeg	Karasovici			x				x	
Merdare	Merdare				x				x
Bosanski Samac	Slavonski Samac						x*		x*
Gradiska	Nova Gradiska						x		x
Tabanovci	Presevo						x		x
Dobrakovo	Gostun					x		x	
Batrovci	Bajakovo						x*		x*
Horgos	Roszke						x		x
Gradina (Dimitrovgrad)	Kalotina						x		x

CBA Results

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Extract only shown below; detailed results in CBA Report

No.	BCP/CCP 1	BCP/CCP 2	BCP/CCP 1 Name	BCP/CCP 2 Name	EU BCP / Non EU BCP(CCP)	A - OSS B - EQMS C- OSS+eQMS	Scenario	Economic Analysis					
								Separated facilities			Joint border facilities		
								NPV	IRR	B/C	NPV	IRR	B/C
1	ALB	MKD	Qafe Thane	Kjafasan	Non-EU	A	Pes	-8,710,907	#NUM!(neg.)	0.05	470,426	24.31%	3.56
							Cen	-8,704,445	#NUM!(neg.)	0.05	479,349	24.96%	3.61
							Opt	-8,296,376	#NUM!(neg.)	0.09	1,131,915	47.85%	7.16
2	ALB	MNE	Hani I Hotit	Bozaj	Non-EU	A	Pes	-2,940,677	#NUM!(neg.)	0.17	594,762	21.84%	3.20
							Cen	-2,903,257	#NUM!(neg.)	0.18	644,149	23.22%	3.39
							Opt	-2,045,103	#NUM!(neg.)	0.43	2,098,801	>50.00%	8.77
3	BIH	CRO	Bijaca	Prud	EU	A	Pes	-11,045,331	#NUM!(neg.)	0.02	305,877	24.29%	3.29
							Cen	-10,975,840	#NUM!(neg.)	0.03	417,705	29.55%	4.13
							Opt	-10,019,167	#NUM!(neg.)	0.11	2,246,915	>50.00%	17.82
4	BIH	CRO	Bosanski Samac	Slavonski Samac	EU	C	Pes	-12,002,769	#NUM!(neg.)	0.07	-1,380,386	-12.04%	0.53
							Cen	-15,520,692	#NUM!(neg.)	0.07	-980,472	-5.64%	0.66
							Opt	-11,337,587	#NUM!(neg.)	0.12	-144,561	3.61%	0.95
5	BIH	CRO	Neum (I) NorthWest	Klek	EU	B	Pes	-3,308,154	#NUM!(neg.)	0.47	-154,221	3.67%	0.95
							Cen	-2,583,884	-16.01%	0.59	616,402	9.72%	1.19
							Opt	-2,145,240	-12.24%	0.66	1,091,384	13.51%	1.33
6	BIH	CRO	Neum (II) SouthEast	Zaton Doli	EU	B	Pes	604,437	10.01%	1.10	3,747,355	42.73%	2.13
							Cen	2,225,210	20.66%	1.36	5,411,906	>50.00%	2.64
							Opt	1,978,515	20.70%	1.32	5,159,014	>50.00%	2.56

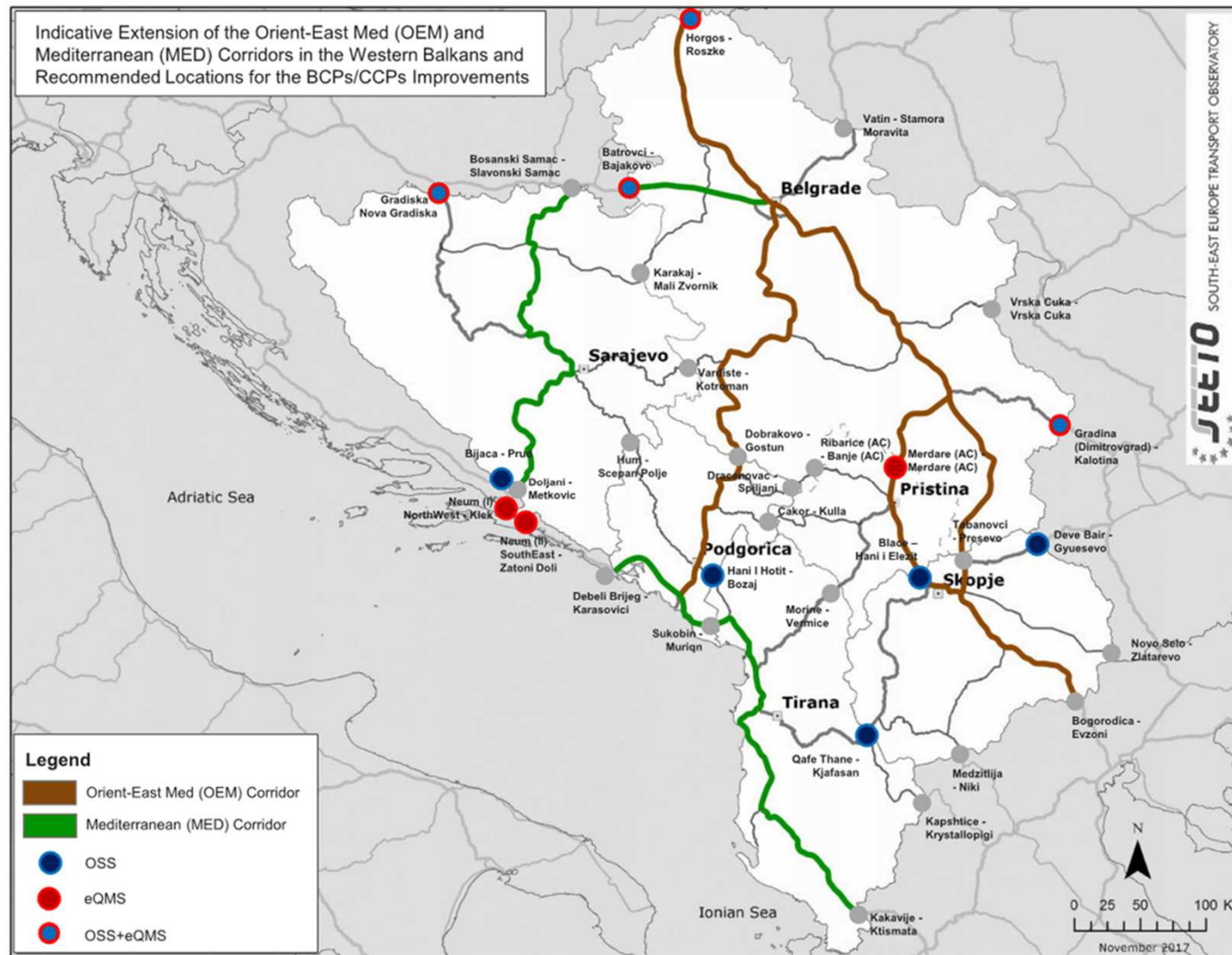
The following BCPs/CCPs have been identified for further elaboration and implementation since there are clear and supportive business cases:

- Qafe Thane/Kjafasan (OSS)
- Hani I Hotit/Božaj (OSS) – MED Corridor
- Bijača/Prud (OSS) – MED Corridor
- Neum I/Klek (eQMS) – MED Corridor
- Neum II/Zaton Doli (eQMS) – MED Corridor (could be implemented also as consolidated separated border facility)
- Gradiška/Nova Gradiška (OSS+eQMS)
- Deve Bair/Gyushevo (OSS)
- Blace/Hani i Elezit (OSS) – OEM Corridor
- Batrovci/Bajakovo (OSS + eQMS) – MED Corridor
- Horgoš/Rozske (OSS + eQMS) – OEM Corridor
- Gradina/Kalotina (OSS + eQMS) – OEM Corridor
- Merdare/Merdare (eQMS) – OEM Corridor

* Note the Corridor-based approach

Final results

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Concluding Remarks

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-
- Clear business case supporting OSS (Component 1) and eQMS (Component 2) at some of the BCPs/CCPs
 - For implementation, there is a clear need to elaborate the joint procurement and implementation aspects of those components that are common to both Component 1 and Component 2 to:
 1. Ensure that the technical interfaces are safeguarded,
 2. Leverage economies of scale.
 - These components include items such as utilities and substations (since both components 1 and 2 would require electrical power supply), ducting (for burying fibre-optic cables, etc.) and civils works.
 - In terms of the planning/design, implementation and testing/commissioning of the ITS at the BCPs/CCPs earmarked for eQMS systems (starting with Corridor X), the entire process could take up to two years (24 months) from a standing start to operational readiness
 - Moreover, legal changes will require more time than the physical infrastructure and ITS components.

-
- Legal process can take anywhere from 21 to 38 months to draft and eventually ratify → fits nicely into the timeframe for the physical infrastructure and ITS procurement if legal process started immediately.
 - Potential “Quick-wins” initiatives in 2019, in conjunction with WB pipeline:
 - Priority BCPs/CCPs:
 - Hani i Elezit/Blace (KOS/MKD; Route 6a - Orient-East/Med Corridor);
 - Bijača/Prud (BIH/CRO; Corridor Vc - MED Corridor);
 - Dobrakovo/Gostun (MNE/SER; Route 4 - Orient-East/MED Corridor);
 - Qafe Thane/Kjafasan (ALB/MKD; Corridor VIII);
 - Corridor X eQMS cluster:
 - Horgoš/Roszke
 - Batrovci/Bajakovo;
 - Preševo/Tabanovci;
 - Bogorodica/Evzoni.

- Potential “Quick-wins” initiatives in 2020 in conjunction with WB pipeline:
 - Priority BCPs/CCPs:
 - Deve Bair/ Gyuesevo (MKD-BUL - Corridor VIII)
 - Corridor 2a/Vc eQMS cluster:
 - Gradiska/Nova Gradiska;
 - Bosanski Samac/Slavonski Samac;
 - Doljani/Metkovic*

* N.B. For peak season in summer

- Follow-on Technical Assistance (TA) for implementation:
 1. Legal and Institutional TA to produce multi-lateral Memorandum of Understanding (MoU) for WB6 and immediate neighbouring EU Member States to initiate implementation of OSS and e-QMS:
 - To include stakeholder engagement and lobbying activities to ensure MoU signed and ratified.
 - Tailoring of bi-lateral agreement template prepared by CONNECTA team to the specific needs of the pertinent country pairs for 12 priority BCPs/CCPs identified (at regional or corridor/bi-lateral level);
 2. TA to prepare the functional and technical specifications for the procurement of civil works and/or ICT, procurement plan and procurement support to contract award:
 - The scope of works should start with 12 priority BCPs/CCPs, including those facilities identified as “quick-win” locations (at corridor/bi-lateral level);
 3. TA to draft BCP/CCP design guidelines document for WB6 covering best international practices:
 - preferential layouts, operational considerations and other design parameters to help balance security needs with operational efficiency and speediness of processing (at regional or corridor/bi-lateral level).

Thank You



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