

## *Workshop on CAREC Corridors Performance Measurement and Monitoring*



# Country Presentation : MONGOLIA

**Speaker : UNURJARGAL Dalaikhuu**

Designation : Head of Barcode and Logistics  
Division

Organization : Mongolian National Chamber  
of Commerce and Industry

Guangzhou CPMM Workshop

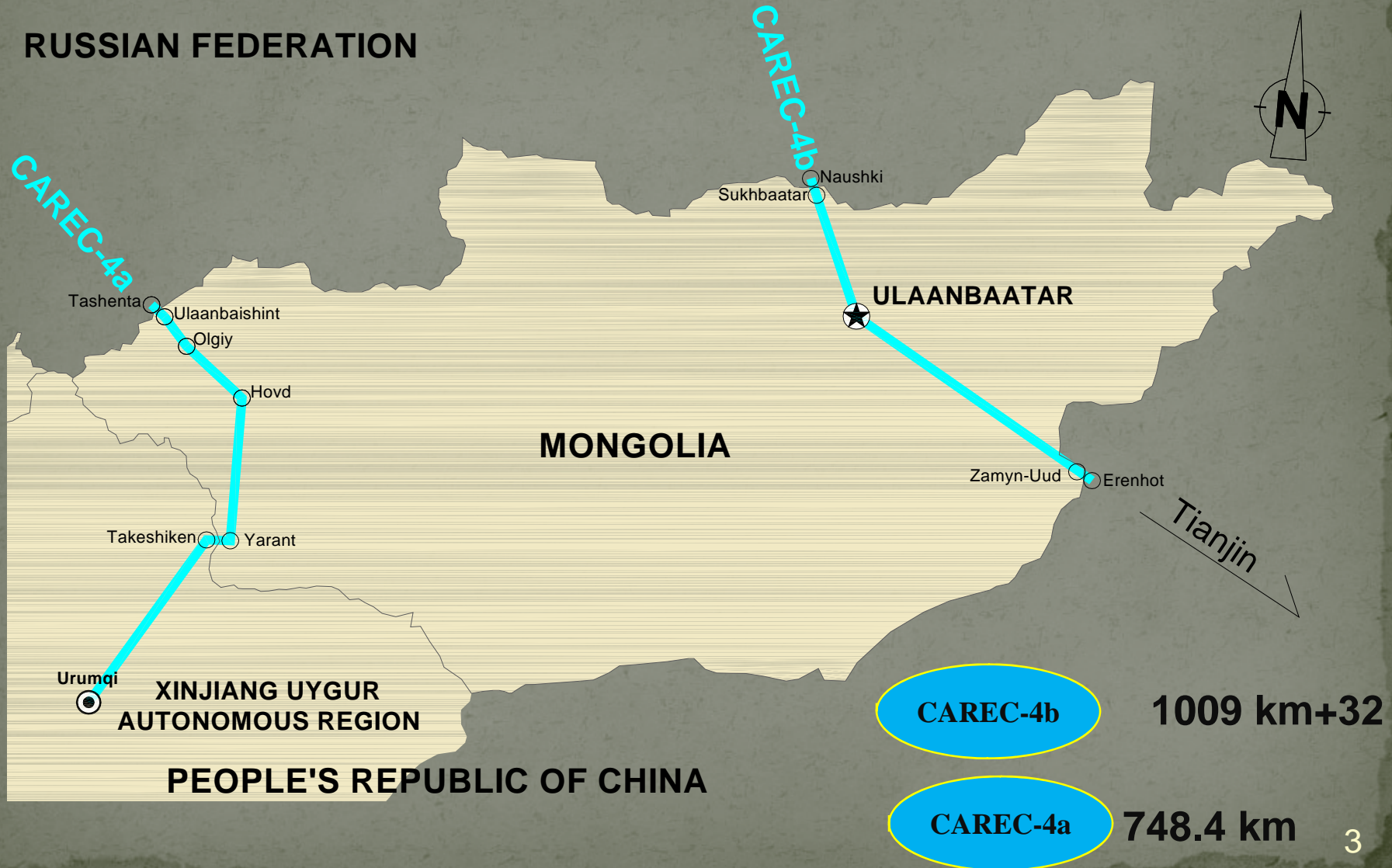
23-24 Feb 2009

# CONTENT

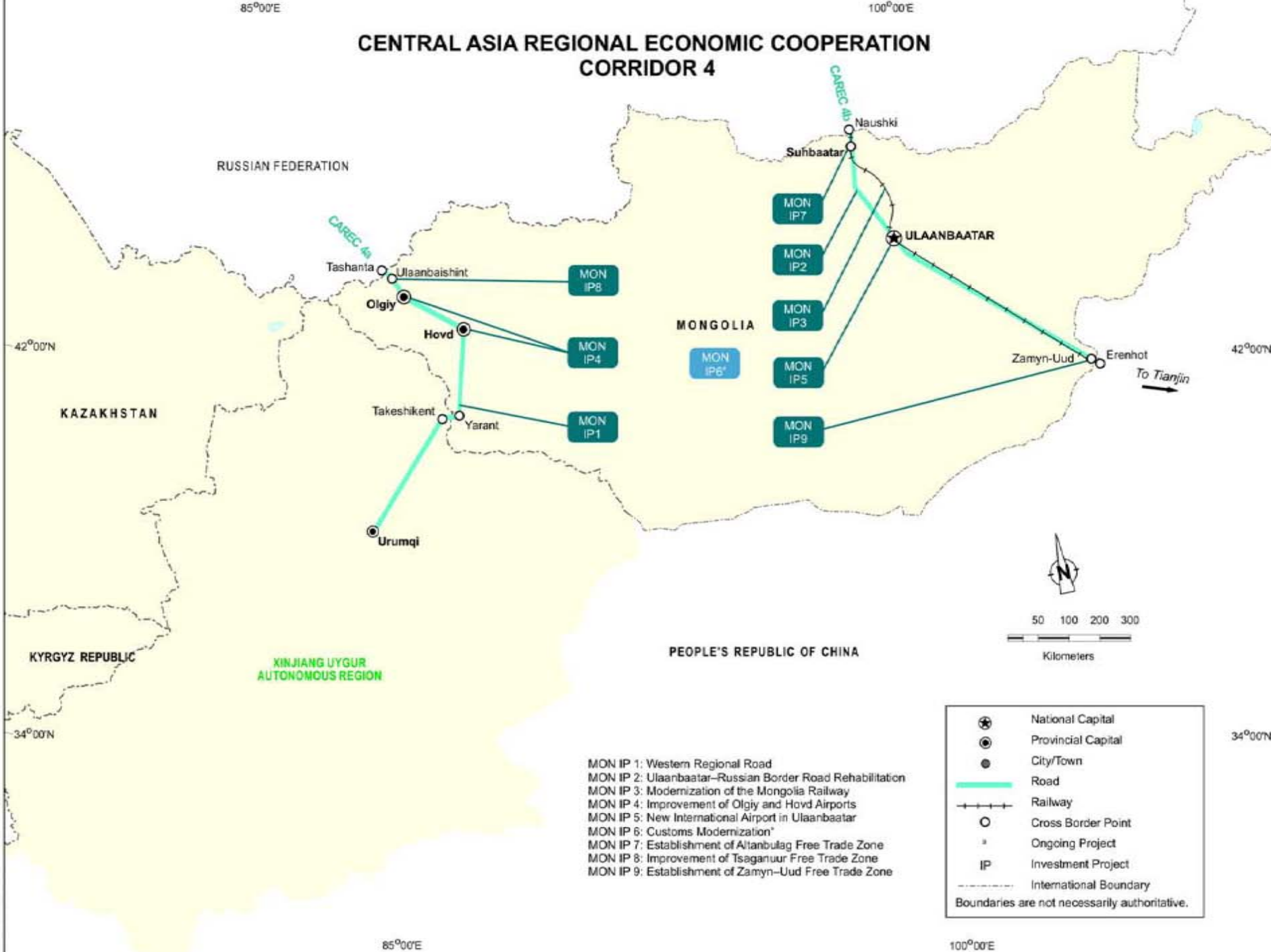
1. CAREC TRANSPORT CORRIDORS IN MONGOLIA
2. MONGOLIAN ROAD NETWORK
  - A. LENGTH OF THE ROAD
  - B. GENERAL CONDITIONS
  - C. ONGOING PROJECTS
3. MONGOLIAN EXISTING RAILWAY LINE
4. TIME COST DISTANCE DATA
  - A. BY RAIL (TRANSIT, IMPORT, EXPORT)
  - B. BY ROAD (IMPORT, EXPORT)



# CAREC Transport Corridor 4



# CENTRAL ASIA REGIONAL ECONOMIC COOPERATION CORRIDOR 4



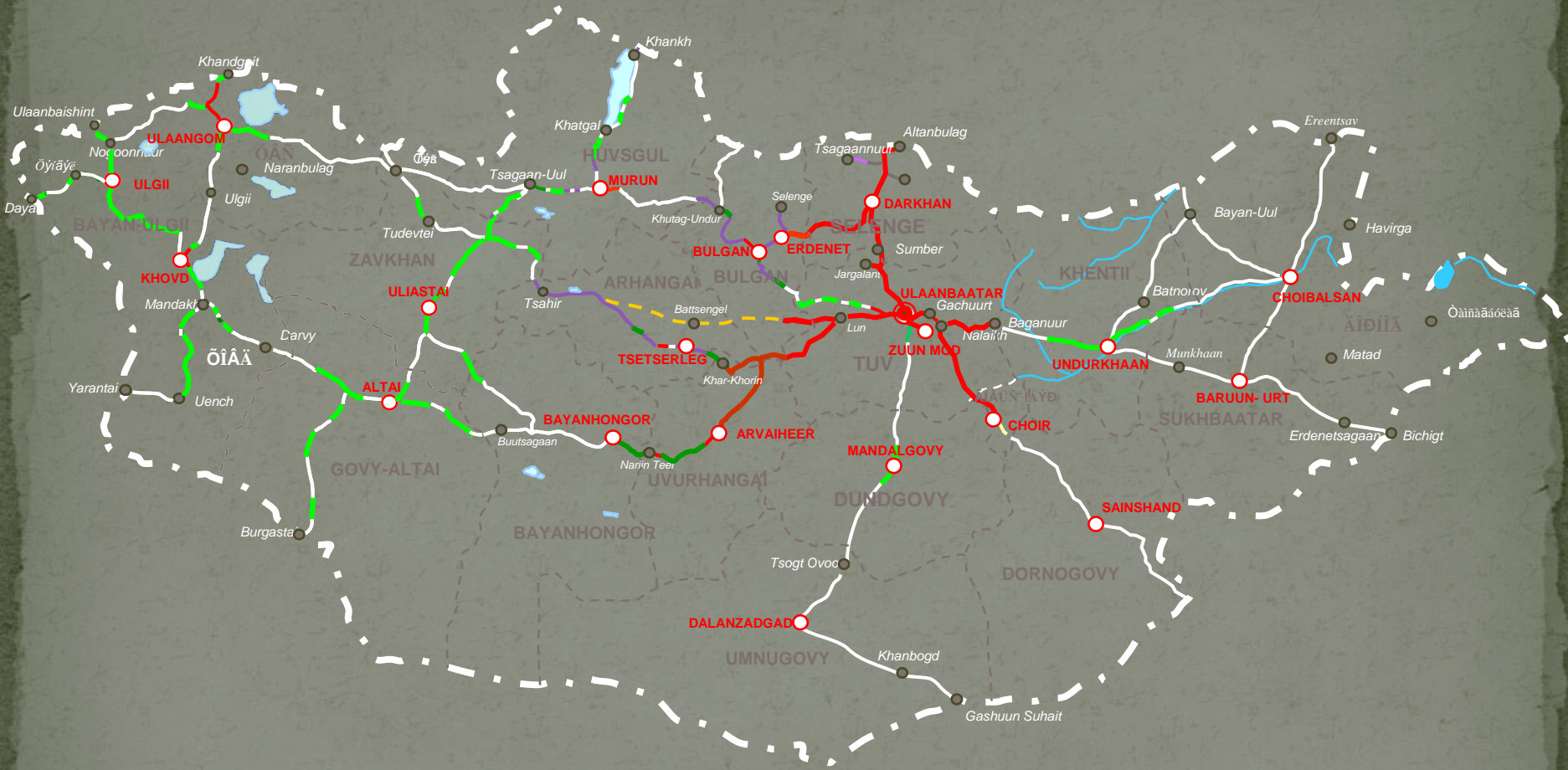
- MON IP 1: Western Regional Road
- MON IP 2: Ulaanbaatar–Russian Border Road Rehabilitation
- MON IP 3: Modernization of the Mongolia Railway
- MON IP 4: Improvement of Olgii and Hovd Airports
- MON IP 5: New International Airport in Ulaanbaatar
- MON IP 6: Customs Modernization\*
- MON IP 7: Establishment of Altanbulag Free Trade Zone
- MON IP 8: Improvement of Tsaganuur Free Trade Zone
- MON IP 9: Establishment of Zamyn–Uud Free Trade Zone

	National Capital
	Provincial Capital
	City/Town
	Road
	Railway
	Cross Border Point
	Ongoing Project
	Investment Project
	International Boundary

Boundaries are not necessarily authoritative.

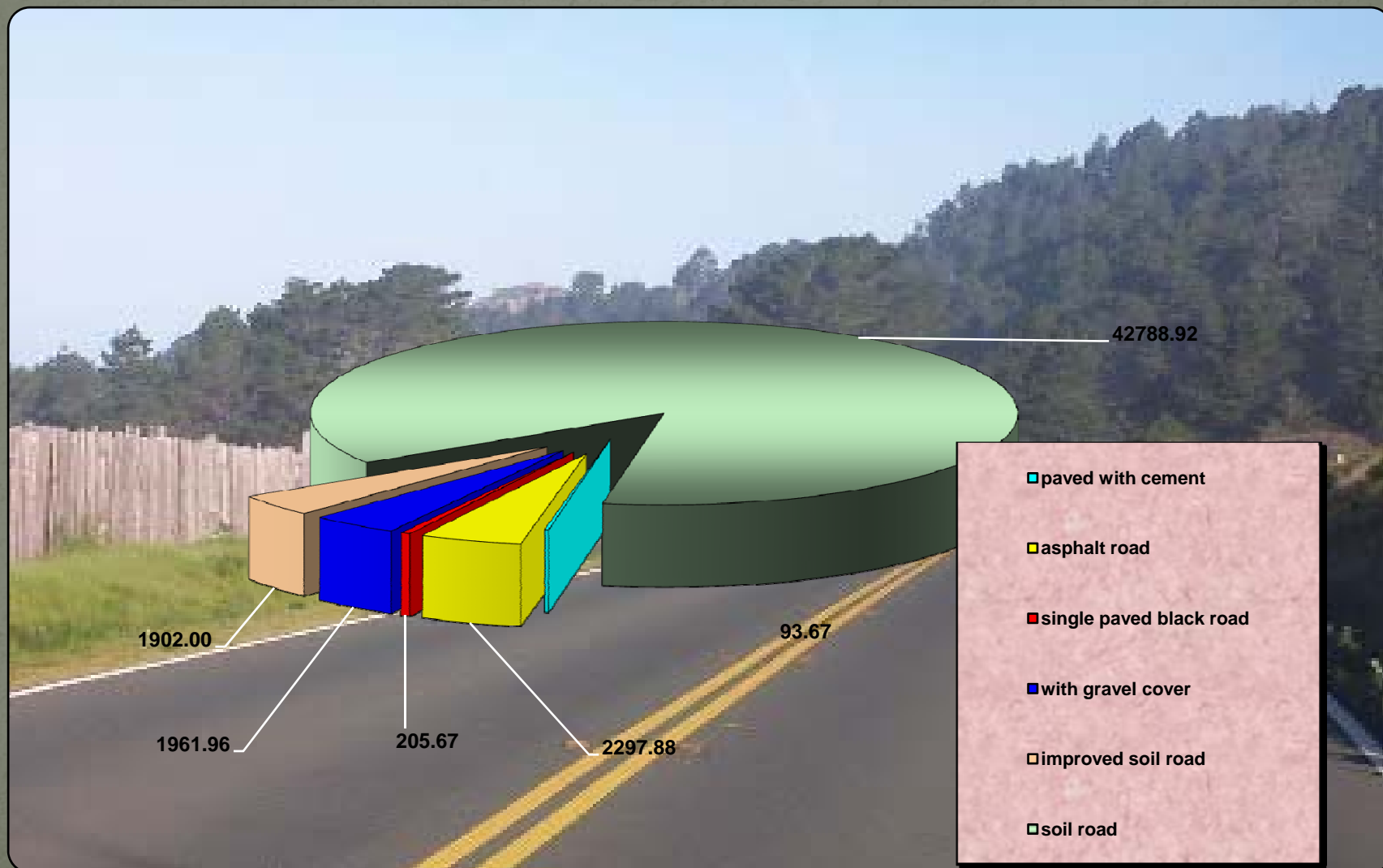


# A.MONGOLIAN ROAD NETWORK



- Paved road
- Gravel road
- Earth road

# Total length of Mongolian road, by types of pavement as of Jan 01, 2008





# Asian highway design standards



Highway classification		Primary (4 or more lanes)				Class I (4 or more lanes)				Class II (2 lanes)				Class III (2 lanes)			
Terrain classification		L	R	M	S	L	R	M	S	L	R	M	S	L	R	M	S
Design speed (km/h)		120	100	80	60	100	80	50		80	60	50	40	60	50	40	30
Width (m)	Right of way	(50)				(40)				(40)				(30)			
	Lane	3,50				3,50				3,50				3,00 (2,25)			
	Shoulder	3,00		2,50		3,00		2,50		2,50		2,00		1,5 (2,0)		0,75 (1,5)	
Median strip		4,00		3,00		3,00		2,50		N/A		N/A		N/A		N/A	
Min. radii of horizontal curve (m)		520	350	210	115	350	210	80		210	115	80	50	115	80	50	30
Pavement slope (%)		2				2				2				2-5			
Shoulder slope (%)		3-6				3-6				3-6				3-6			
Type of pavement		Asphalt/cement concrete				Asphalt/cement concrete				Asphalt/cement concrete				Double bituminous treatment			
Max. superelevation (%)		10				10				10				10			
Max. vertical grade (%)		4	5	6	7	4	5	6	7	4	5	6	7	4	5	6	7
Structure loading (min)		HS20-44				HS20-44				HS20-44				HS20-44			





Ulaanbaatar-Darkhan-Altanbulag  
312 km



Nalaikh-Choir  
200 km



# ALTANBULAG-ULAANBAATAR-ZAMYN UUD HIGHWAY

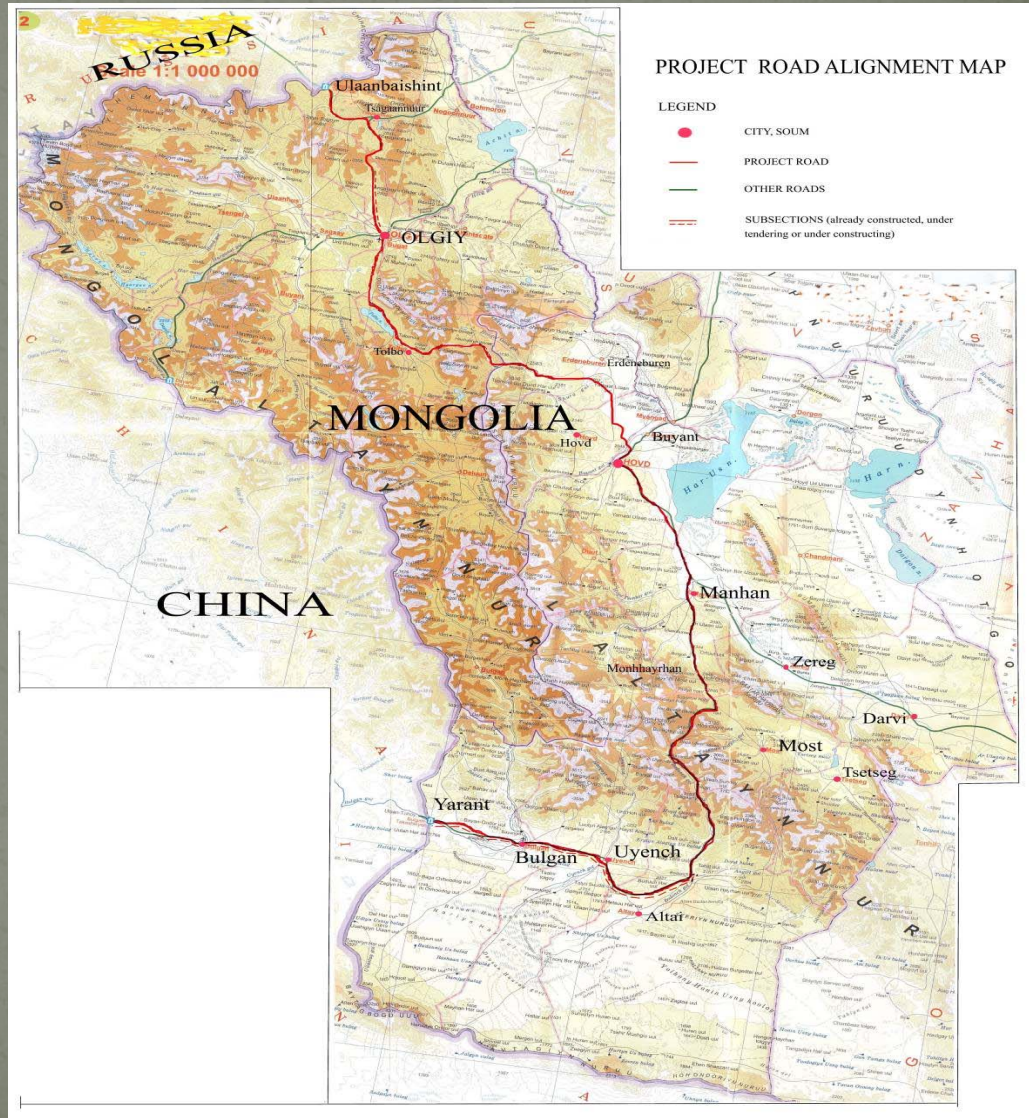
- The construction of 990 km highway from Altanbulag-Ulaanbaatar -Zamiin Uud is planned in Government Program. In framework of this plan, the preparation work of Feasibility Study for improvement of existing AH-3 paved roads and construction of 4 lane-highway was started..





# “WESTERN VERTICAL ARTERIAL ROAD PROJECT”

- ✘ “Western Arterial Road Project” which is 748.4 km paved road from Yarant border port in Khovd province to Ulaanbaishint in Bayan-Ulgii province was recently started its implementation that is part of AH-4 link in Mongolia.
- ✘ It was decided to co-finance by Asian Development Bank, P.R. China and Government of Mongolia. It is planned to implement the construction work between 2009-2013.





# B. MONGOLIAN EXISTING RAILWAY LINE





# Current situation of Mongolian Railway

Total length of railway line, km	1810,0
Length of main line, km /Sukhbaatar- ZamiinUud/	1110,0
Capacity of main line, mln.tonn	20.0
Percentage of the railway freight transport in total freight transport in Mongolia	90,0
Percentage of the railway passenger transport in total passenger transport in Mongolia	50,0



# Freight transportation by rail /2003-2008 /, mln.tn



# TIME COST DISTANCE DATA

- BY RAIL (TRANSIT, IMPORT, EXPORT)



- **Export by rail**

ok.Export-Ulaanbaatar-Erlian FEU.5 min [Compatibility Mode] - Microsoft Excel

Save (Ctrl+S) | Page Layout | Formulas | Data | Review | View | Add-Ins

Normal | Page Layout | Page Break Preview | Custom Views | Full Screen | Workbook Views

Ruler |  Formula Bar |  Gridlines |  Headings |  Message Bar | Show/Hide

Zoom | 100% | Zoom to Selection

New Window | Arrange All | Freeze Panes | Hide | Unhide

Split | View Side by Side | Synchronous Scrolling | Reset Window Position | Window

Save Workspace | Switch Windows | Macros

	A	B	C	D	E	F	G	H	I	J	K	L	
1			<b>Export /FEU 40'</b>										
2													
3			<b><u>Questionnaire for Application of UNESCAP Time/Cost-Distance Model</u></b>										
4													
5	a		<b>Date of questionnaire completion:</b>		May-08		[date of filling out the questionnaire]						
6	b		<b>Route description:</b>		Ulaanbaatar-Sainshand-Zamiin Uud-Erlian		[detailed route description]						
7	c		<b>Goods:</b>		garment		[type of good(s) transported]						
8	d		<b>Quantity:</b>		40'		[TEU]						
9	e		<b>Nationality of driver:</b>									[Only applicable when road]	
10	f		<b>Country of vehicle registration:</b>									[Only applicable when road]	
11	g		<b>Effective date of transport start:</b>		08 May, 2008		[date when transport leaves the place of departure]						
12	h		<b>Effective delivery date of goods:</b>		09 May, 2008		[date when transport reaches the final destination]						
13	i		<b>Was the transport performed under an international transit system (e.g. TIR, NCTS)?</b>		no		[yes/no, please specify the type of international transit system applicable]						
14	j		<b>Overall distance of route:</b>		711		km						
15	k		<b>Overall costs:</b>		344.48		USD						
16	l		<b>Overall duration:</b>		1.57		days						
17													
18													

Ready

PART A - General Questions | PART B - Route | Graph Time-Distance | Graph Cost - Distance | Graph - All-in-One | Graph Average Speed | Data Average Speed | Graph - Time comparison

start | Adobe Photoshop - [...] | Removable Disk (F:) | Microsoft Excel - ok.E... | Microsoft PowerPoint ... | EN | 3:42 PM



# Export of textile garment in 40 ft container in May, 2008

## By rail

### Time/Cost-Distance Model



Home Insert Page Layout Formulas Data Review View Add-Ins

Normal Page Layout Page Break Preview Custom Views Full Screen

Workbook Views

Ruler  Formula Bar  
 Gridlines  Headings  
 Message Bar

Show/Hide

Zoom 100% Zoom to Selection

New Window Arrange All Freeze Panes Unhide

Split Hide

View Side by Side Synchronous Scrolling Reset Window Position

Window

Save Workspace Switch Windows

Macros

Message Bar

Open the Message Bar to complete any required actions on the document.

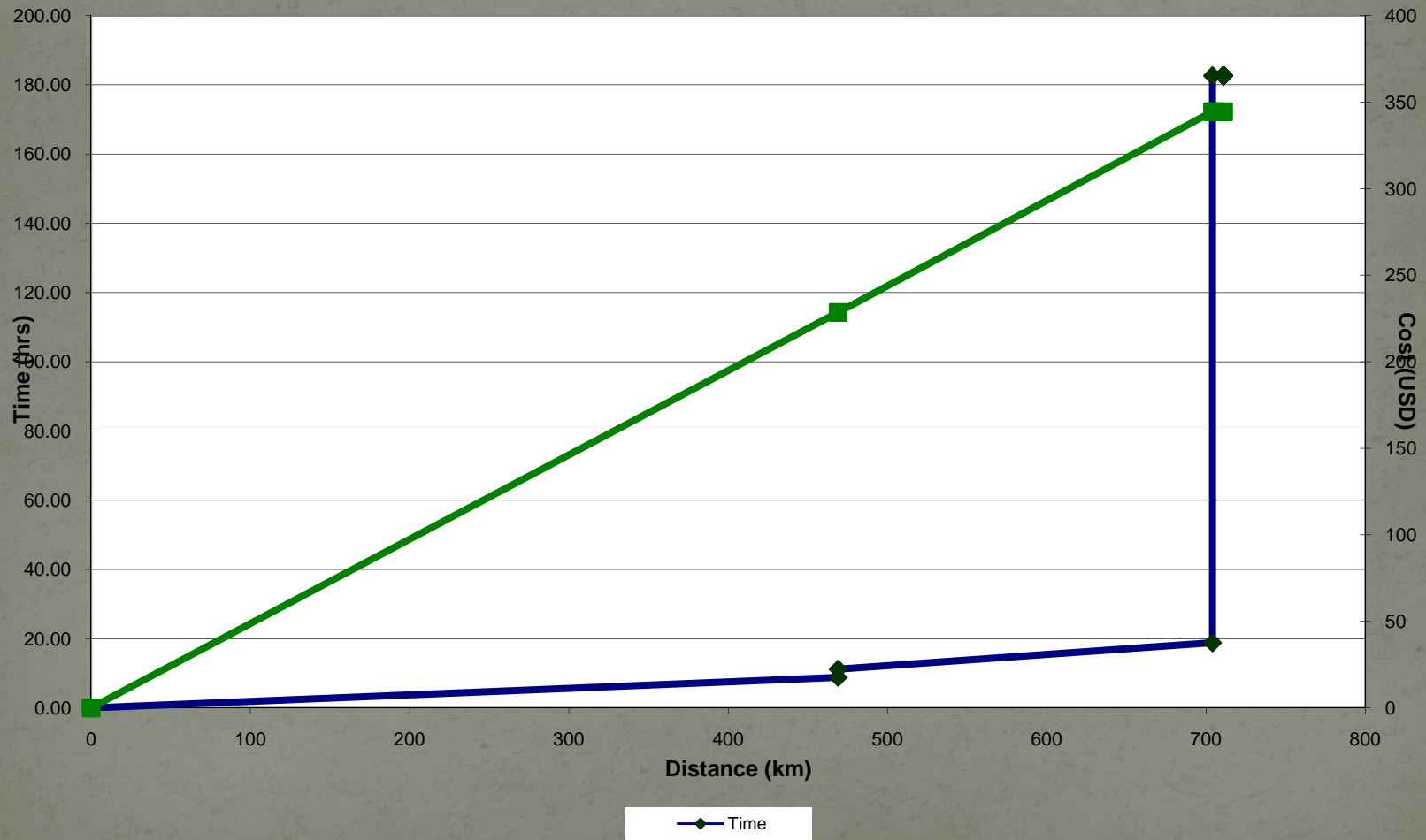
	A	B	C	D	F	G	H	I	J	K	L		
1					<b>Export /FEU 40'</b>								
2													
3					<b><u>Questionnaire for Application of UNESCAP Time/Cost-Distance Model</u></b>								
4													
5	a			<b>Date of questionnaire completion:</b>	Sep-08			[date of filling out the questionnaire]					
6	b			<b>Route description:</b>	Ulaanbaatar-Sainshand-Zamiin Uud-Erlian			[detailed route description]					
7	c			<b>Goods:</b>	sheep wool			[type of good(s) transported]					
8	d			<b>Quantity:</b>	40'			[TEU]					
9	e			<b>Nationality of driver:</b>				[Only applicable when road]					
10	f			<b>Country of vehicle registration:</b>				[Only applicable when road]					
11	g			<b>Effective date of transport start:</b>	10 Sep, 2008			[date when transport leaves the place of departure]					
12	h			<b>Effective delivery date of goods:</b>	18 Sep, 2008			[date when transport reaches the final destination]					
13	i			<b>Was the transport performed under an international transit system (e.g. TIR, NCTS)?</b>	no			[yes/no, please specify the type of international transit system applicable]					
14	j			<b>Overall distance of route:</b>	711			km					
15	k			<b>Overall costs:</b>	344.48			USD					
16	l			<b>Overall duration:</b>	7.61			days					
17													
18													



# Export of sheep wool in 40 ft container in Sep, 2008

## By rail

### Time/Cost-Distance Model



ok.Export-Ulaanbaatar-Xingang TEU.5 [Compatibility Mode] - Microsoft Excel

Home Insert Page Layout Formulas Data Review View Add-Ins

Normal Page Layout Page Break Preview Custom Views Full Screen

Workbook Views

Ruler Formula Bar Gridlines Headings Message Bar Show/Hide

Zoom 100% Zoom to Selection

New Window Arrange All Freeze Panes Hide Unhide

Split View Side by Side Synchronous Scrolling Reset Window Position

Window

Save Switch Workspace Windows

Macros

Export /TEU 20'

**Questionnaire for Application of UNESCAP Time/Cost-Distance Model**

a	Date of questionnaire completion:	May-08	[date of filling out the questionnaire]
b	Route description:	Ulaanbaatar-Sainshand-Zamiin Uud-Xingang	[detailed route description]
c	Goods:	molybdenum	[type of good(s) transported]
d	Quantity:	20'	[TEU]
e	Nationality of driver:		[Only applicable when road]
f	Country of vehicle registration:		[Only applicable when road]
g	Effective date of transport start:	13 May, 2008	[date when transport leaves the place of departure]
h	Effective delivery date of goods:		[date when transport reaches the final destination]
i	Was the transport performed under an international transit system (e.g. TIR, NCTS)?	no	[yes/no, please specify the type of international transit applicable]
j	Overall distance of route:	1277	km
k	Overall costs:	344.48	USD
l	Overall duration:	4.13	days

**The worksheets "Part A - General Questions" and "Part B - Route" require your input**

Ready

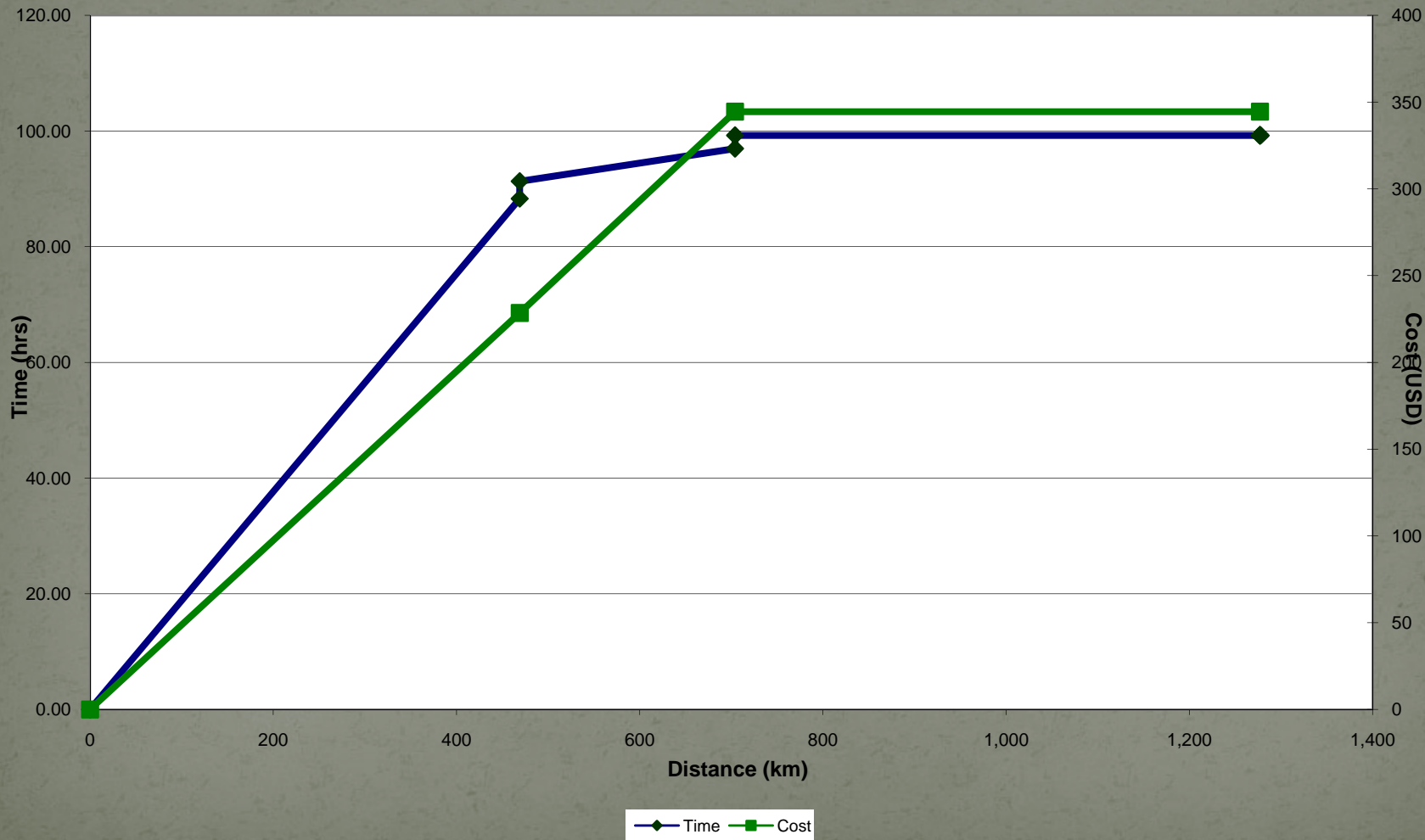
PART A - General Questions PART B - Route Graph Time-Distance Graph Cost - Distance Graph - All-in-One Graph Average Speed Data Average Speed Graph - Time compar

start Adobe Photoshop unuruud1 ok.Export-Ulaanbaat... Microsoft PowerPoint ... EN 4:01 PM



# Export of molybdenum in 20 ft container in May, 2008.by rail

## Time/Cost-Distance Model



# Import by rail



ok.Import-Xingang-Ulaanbaatar-FEU.8 [Compatibility Mode] - Microsoft Excel

Home Insert Page Layout Formulas Data Review View Add-Ins

Cut Copy Paste Format Painter Clipboard

Font: Arial, 10, Bold, Italic, Underline, Text Color, Background Color, Paragraph Spacing, Bullets, Numbering, Indentation, Wrap Text, Merge & Center

Alignment: Left, Center, Right, Justify, Merge & Center

Number: Currency, Percentage, Increase/Decrease, Fraction, Decimals, Rounding

Styles: Conditional Formatting, Format as Table, Cell Styles

Cells: Insert, Delete, Format

Editing: AutoSum, Fill, Clear, Sort & Filter, Find & Select

	A	B	C	D	E	F	G	H	I	J	K	L
1						Import /FEU 40'						
2												
3						<b><u>Questionnaire for Application of UNESCAP Time/Cost-Distance Model</u></b>						
4												
5	a				Date of questionnaire completion:	December, 2008						[date of filling out the questionnaire]
6	b				Route description:	China/Xingang - Mongolia/Zamiin-Uud - Mongolia/Sainshand - Mongolia/Ulaanbaatar						[detailed route description]
7	c				Goods:	spare parts						[type of good(s) transported]
8	d				Quantity:	40'						[TEU]
9	e				Nationality of driver:							[Only applicable when road]
10	f				Country of vehicle registration:							[Only applicable when road]
11	g				Effective date of transport start:	19 Aug, 2008						[date when transport leaves the place of departure]
12	h				Effective delivery date of goods:	04 Sep, 2008						[date when transport reaches the final destination]
13	i				Was the transport performed under an international transit system (e.g. TIR, NCTS)?	no						[yes/no, please specify the type of international transit system applicable]
14	j				Overall distance of route:	1277						km
15	k				Overall costs:	2,644.48						USD
16	l				Overall duration:	9.39						days
17												
18												
19						<b>The worksheets "Part A - General Questions" and "Part B - Route" require your input ar</b>						

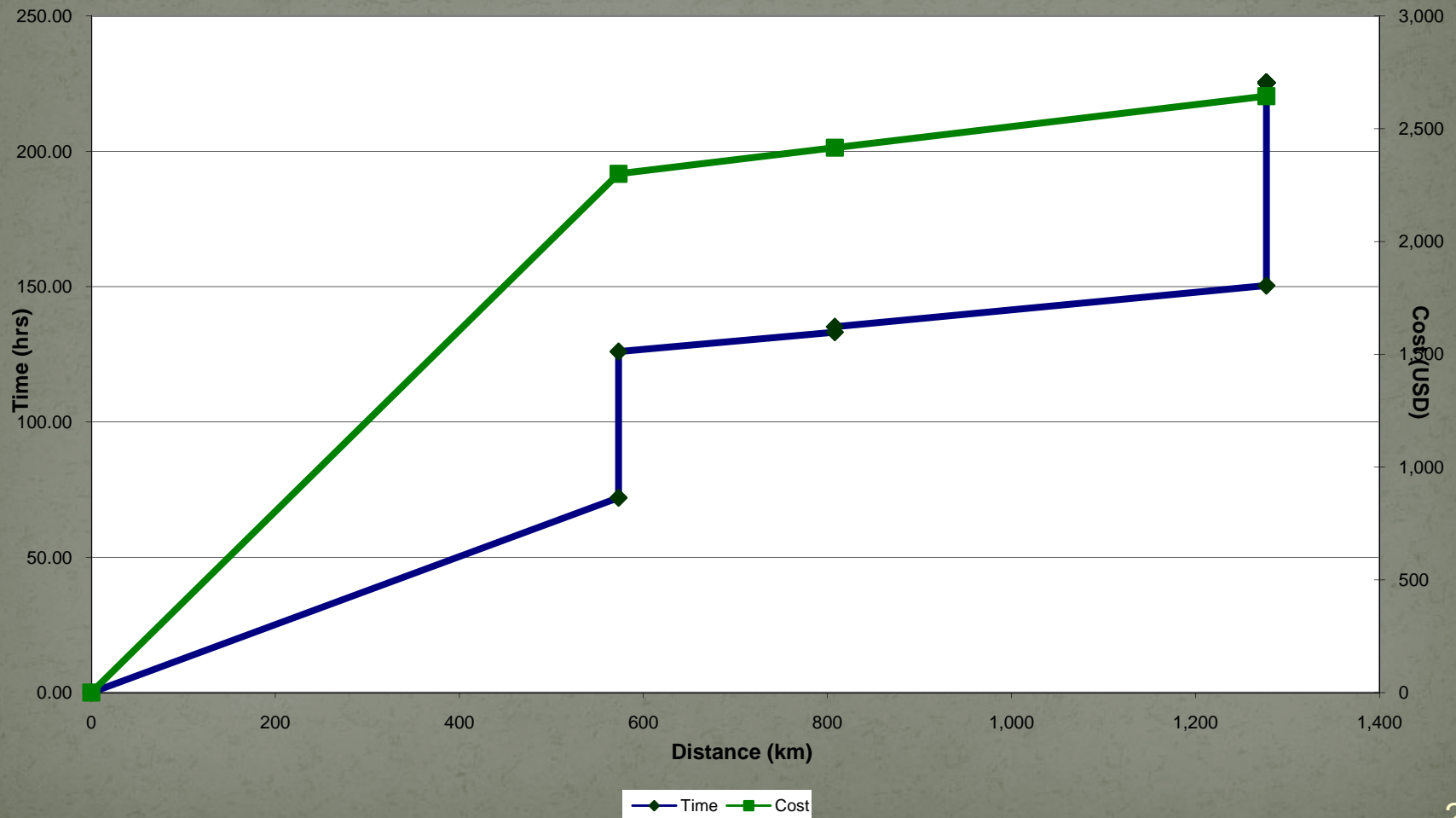
PART A - General Questions | PART B - Route | Graph Time-Distance | Graph Cost - Distance | Graph - All-in-One | Graph Average Speed | Data Average Speed | Graph - Time compar

Ready

start | Adobe Photoshop - [...] | unuruud1 | ok.Import-Xingang-Ul... | Microsoft PowerPoint ... | EN | 150% | 4:17 PM

# Import of spare parts 40 ft container in aug-sep, 2008.by rail

## Time/Cost-Distance Model





ok.Import-Xingang-Ulaanbaatar-TEU.7 max [Compatibility Mode] - Microsoft Excel

Home Insert Page Layout Formulas Data Review View Add-Ins

Normal Page Layout Page Break Preview Custom Views Full Screen

Workbook Views Show/Hide

Ruler Formula Bar

Gridlines Headings

Message Bar

Zoom 100% Zoom to Selection

New Window Arrange All Freeze Panes Unhide

Split Hide Unhide

View Side by Side Synchronous Scrolling Reset Window Position

Window

Save Workspace Switch Windows

Macros

1 Import / TEU 20'

2

3 **Questionnaire for Application of UNESCAP Time/Cost-Distance Model**

4

5 **Date of questionnaire completion:** July, 2008 [date of filling out the questionnaire]

6 **Route description:** China/Xingang - Mongolia/Zamiin-Uud - [detailed route description]  
Mongolia/Sainshand -  
Mongolia/Ulaanbaatar

7 **Goods:** Asphalt [type of good(s) transported]

8 **Quantity:** 20' [TEU]

9 **Nationality of driver:** [Only applicable when road]

10 **Country of vehicle registration:** [Only applicable when road]

11 **Effective date of transport start:** [date when transport leaves the place of departure]

12 **Effective delivery date of goods:** [date when transport reaches the final destination]

13 **Was the transport performed under an international transit system (e.g. TIR, NCTS)?** [yes/no, please specify the type of international transit system applicable]

14 **Overall distance of route:** 1277 km

15 **Overall costs:** 1,744.48 USD

16 **Overall duration:** 41.50 days

17

18

19 **The worksheets "Part A - General Questions" and "Part B - Route" require your input and**

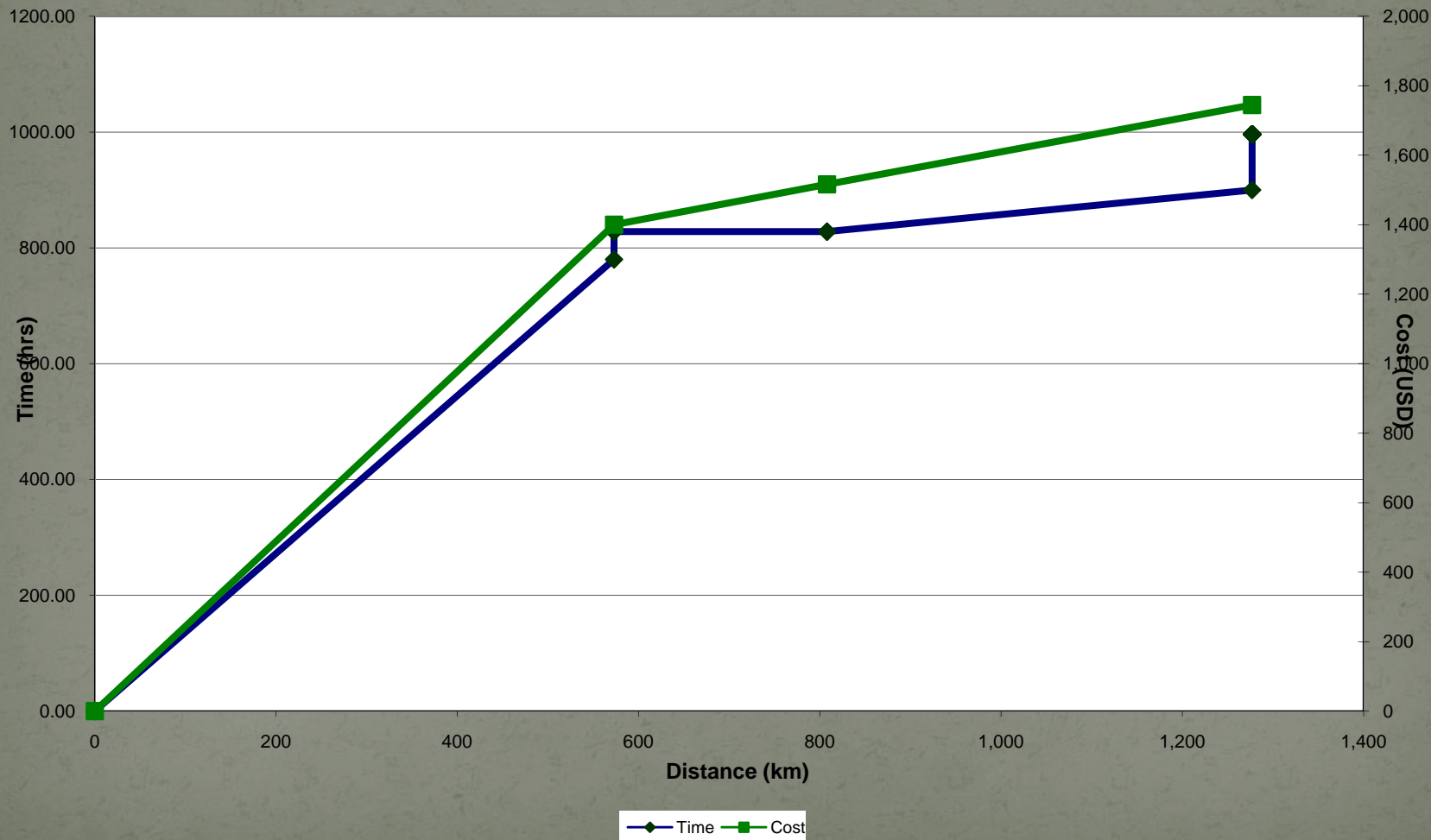
PART A - General Questions PART B - Route Graph Time-Distance Graph Cost - Distance Graph - All-in-One Graph Average Speed Data Average Speed Graph - Time compar

Ready 150%

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# Import of spare parts 40 ft container in aug-sep, 2008.by rail

## Time/Cost-Distance Model





ok.Import-Xingang-Ulaanbaatar-TEU.9 mid [Compatibility Mode] - Microsoft Excel

Home Insert Page Layout Formulas Data Review View Add-Ins

Normal Page Layout Page Break Preview Custom Views Full Screen

Workbook Views

Ruler  Formula Bar  
 Gridlines  Headings  
 Message Bar  Show/Hide

Zoom 100% Zoom to Selection

New Window Arrange All Freeze Panes  
 Split Hide Unhide

View Side by Side Synchronous Scrolling Reset Window Position  
 Save Workspace Switch Windows

Macros

	A	B	C	D	E	F	G	H	I	J	K	L	
1						Import /TEU 20'							
2													
3						<b><u>Questionnaire for Application of UNESCAP Time/Cost-Distance Model</u></b>							
4													
5	a				Date of questionnaire completion:	September, 2008						[date of filling out the questionnaire]	
6	b				Route description:	China/Xingang - Mongolia/Zamiin-Uud - Mongolia/Sainshand - Mongolia/Ulaanbaatar						[detailed route description]	
7	c				Goods:	Car						[type of good(s) transported]	
8	d				Quantity:	20'						[TEU]	
9	e				Nationality of driver:							[Only applicable when road]	
10	f				Country of vehicle registration:							[Only applicable when road]	
11	g				Effective date of transport start:	15 Sep, 2008						[date when transport leaves the place of departure]	
12	h				Effective delivery date of goods:	23 Sep, 2008						[date when transport reaches the final destination]	
13	i				Was the transport performed under an international transit system (e.g. TIR, NCTS)?							[yes/no, please specify the type of international transit system applicable]	
14	j				Overall distance of route:	1277						km	
15	k				Overall costs:	1,944.48						USD	
16	l				Overall duration:	8.50						days	

The worksheets "Part A - General Questions" and "Part B - Route" require your input and

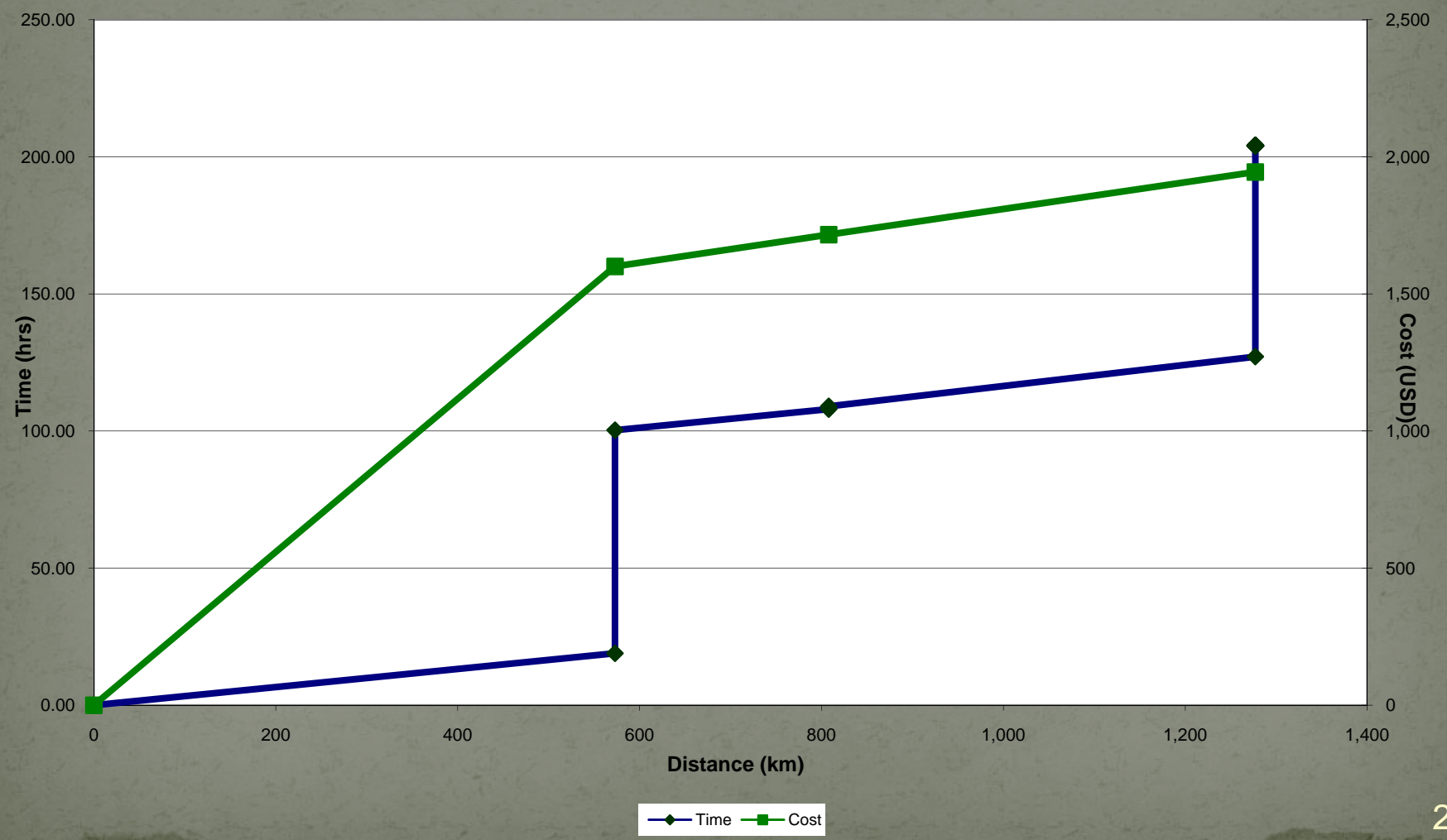
PART A - General Questions PART B - Route Graph Time-Distance Graph Cost - Distance Graph - All-in-One Graph Average Speed Data Average Speed Graph - Time compar...

Ready 150%

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# Import of car in 20 ft container in Sep, 2008.by rail

## Time/Cost-Distance Model





ok.Import-Xingang-Ulaanbaatar-TEU.12 min [Compatibility Mode] - Microsoft Excel

Home Insert Page Layout Formulas Data Review View Add-Ins

Normal Page Layout Page Break Preview Custom Views Full Screen

Workbook Views Show/Hide

Ruler Formula Bar

Gridlines Headings

Message Bar

Zoom 100% Zoom to Selection

New Window Arrange All Freeze Panes Unhide

Split Hide

View Side by Side Synchronous Scrolling Reset Window Position

Window

Save Workspace Switch Windows

Macros

Macros

A B C D E F G H I J K L

1 Import /TEU 20'

2

3 **Questionnaire for Application of UNESCAP Time/Cost-Distance Model**

4

5 a Date of questionnaire completion: December, 2008 [date of filling out the questionnaire]

6 b Route description: China/Xingang - Mongolia/Zamiin-Uud -  
Mongolia/Sainshand -  
Mongolia/Ulaanbaatar [detailed route description]

7 c Goods: vodka [type of good(s) transported]

8 d Quantity: 20' [TEU]

9 e Nationality of driver: [Only applicable when road]

10 f Country of vehicle registration: [Only applicable when road]

11 g Effective date of transport start: 04 Dec, 2008 [date when transport leaves the place of departure]

12 h Effective delivery date of goods: 11 Dec, 2008 [date when transport reaches the final destination]

13 i Was the transport performed under an international transit system (e.g. TIR, NCTS)? [yes/no, please specify the type of international transit system applicable]

14 j Overall distance of route: 1277 km

15 k Overall costs: 1,944.48 USD

16 l Overall duration: 7.30 days

17

18

19 **The worksheets "Part A - General Questions" and "Part B - Route" require your input and**

Ready

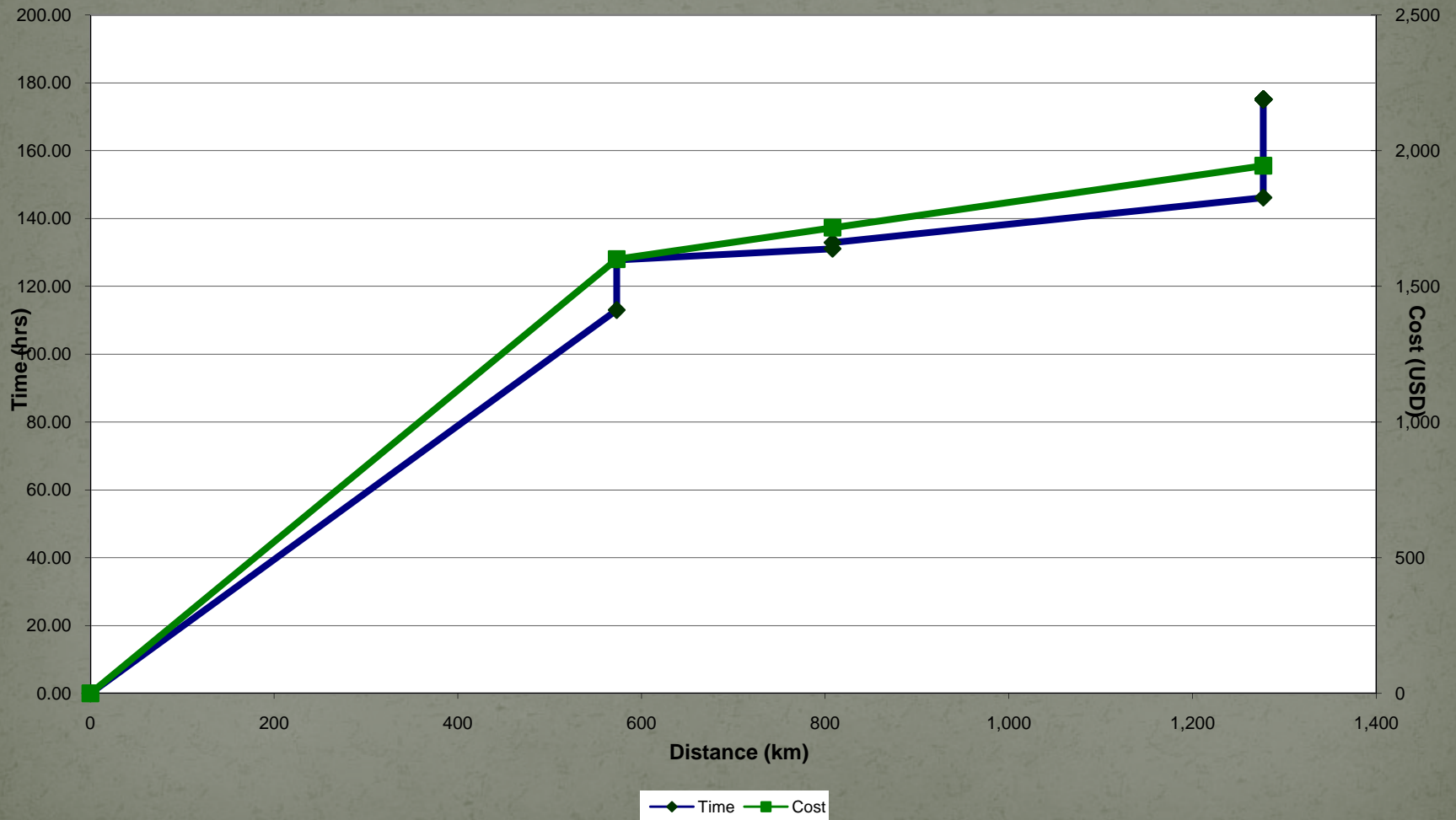
PART A - General Questions PART B - Route Graph Time-Distance Graph Cost - Distance Graph - All-in-One Graph Average Speed Data Average Speed Graph - Time compar

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# Import of vodka in 20 ft container in Dec, 2008.by rail

## Time/Cost-Distance Model





ok.Import-Xingang-Ulaanbaatar-wagon.1 [Compatibility Mode] - Microsoft Excel

Home Insert Page Layout Formulas Data Review View Add-Ins

Normal Page Layout Page Break Preview Custom Views Full Screen

Workbook Views

Ruler  Formula Bar  
 Gridlines  Headings  
 Message Bar

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Zoom

New Window Arrange All Freeze Panes

Split Hide View Side by Side Synchronous Scrolling Save Workspace Switch Windows

Reset Window Position Window

Macros

	A	B	C	D	E	F	G	H	I	J	K	L
1						Import /wagon/						
2												
3						<b><u>Questionnaire for Application of UNESCAP Time/Cost-Distance Model</u></b>						
4												
5	a				Date of questionnaire completion:	January, 2009			[date of filling out the questionnaire]			
6	b				Route description:	China/Xingang - Mongolia/Zamiin-Uud - Mongolia/Sainshand - Mongolia/Ulaanbaatar			[detailed route description]			
7	c				Goods:	Equipment			[type of good(s) transported]			
8	d				Quantity:	wagon			[TEU]			
9	e				Nationality of driver:				[Only applicable when road]			
10	f				Country of vehicle registration:				[Only applicable when road]			
11	g				Effective date of transport start:	31 Dec, 2008			[date when transport leaves the place of departure]			
12	h				Effective delivery date of goods:	09 Jan, 2009			[date when transport reaches the final destination]			
13	i				Was the transport performed under an international transit system (e.g. TIR, NCTS)?				[yes/no, please specify the type of international transit system applicable]			
14	j				Overall distance of route:	1277			km			
15	k				Overall costs:	344.48			USD			
16	l				Overall duration:	9.46			days			

**The worksheets "Part A - General Questions" and "Part B - Route" require your input**

Ready

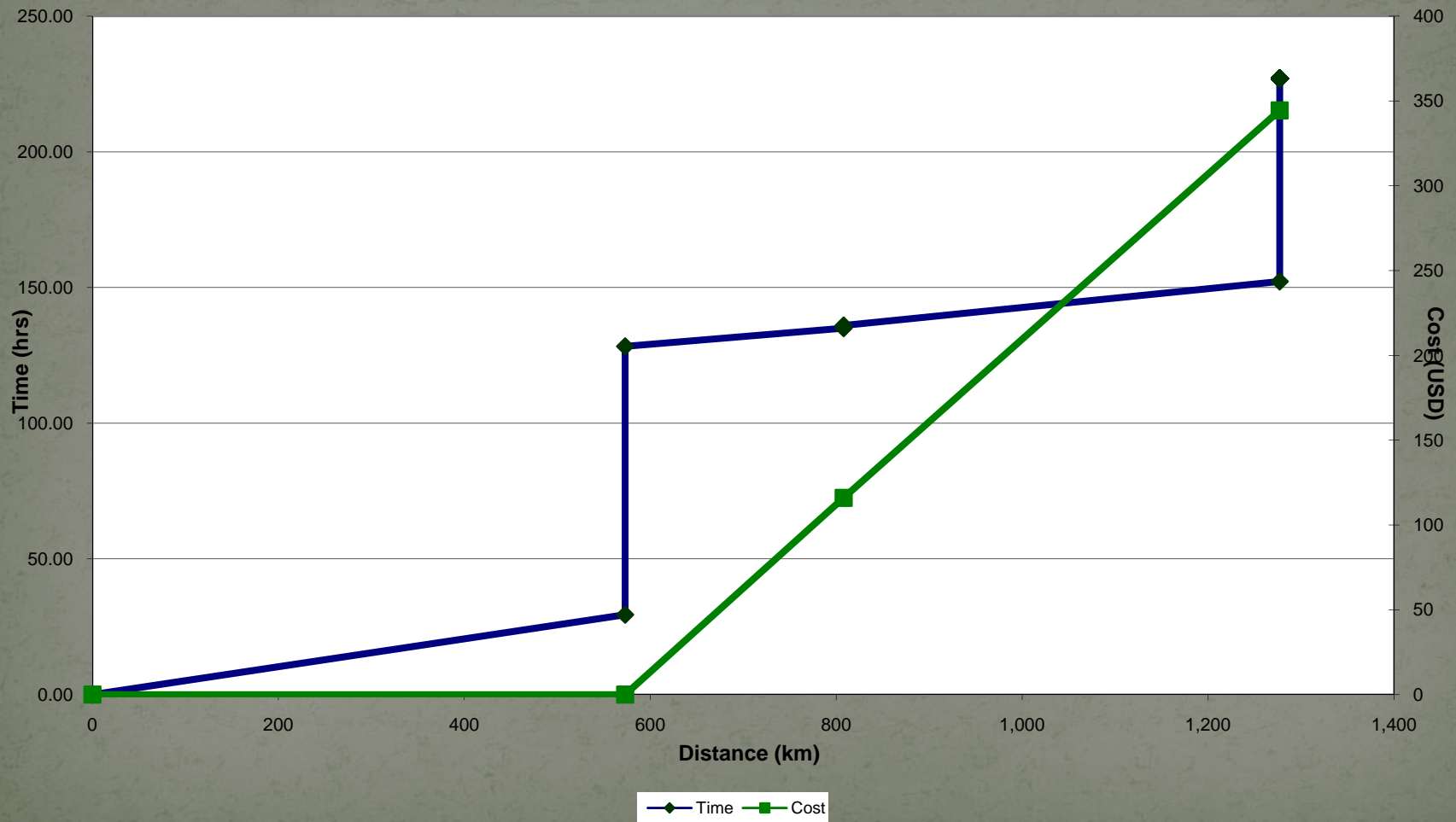
PART A - General Questions PART B - Route Graph Time-Distance Graph Cost - Distance Graph - All-in-One Graph Average Speed Data Average Speed Graph - Time compar

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start Adobe Photoshop unuruud1 ok.Import-Xingang-Ul... Microsoft PowerPoint ... EN 4:45 PM

# Import of equipment in wagon in Jan, 2009

## Time/Cost-Distance Model





ok.Import-Xingang-Ulaanbaatar-wagon.11 [Compatibility Mode] - Microsoft Excel

Home Insert Page Layout Formulas Data Review View Add-Ins

Normal Page Layout Page Break Preview Custom Views Full Screen

Workbook Views

Ruler  Formula Bar  
 Gridlines  Headings  
 Message Bar  Show/Hide

Zoom 100% Zoom to Selection  
 New Window Arrange All Freeze Panes Hide Unhide

Split View Side by Side Synchronous Scrolling Reset Window Position  
 Save Workspace Switch Windows

Macros

	A	B	C	D	E	F	G	H	I	J	K	L
1						<b>Import /wagon/</b>						
2												
3						<b><u>Questionnaire for Application of UNESCAP Time/Cost-Distance Model</u></b>						
4												
5	a				<b>Date of questionnaire completion:</b>	November, 2008						[date of filling out the questionnaire]
6	b				<b>Route description:</b>	China/Xingang - Mongolia/Zamiin-Uud						[detailed route description]
7	c				<b>Goods:</b>	Soap						[type of good(s) transported]
8	d				<b>Quantity:</b>	wagon						[TEU]
9	e				<b>Nationality of driver:</b>							[Only applicable when road]
10	f				<b>Country of vehicle registration:</b>							[Only applicable when road]
11	g				<b>Effective date of transport start:</b>	04 Dec, 2008						[date when transport leaves the place of departure]
12	h				<b>Effective delivery date of goods:</b>	26 Dec, 2008						[date when transport reaches the final destination]
13	i				<b>Was the transport performed under an international transit system (e.g. TIR, NCTS)?</b>							[yes/no, please specify the type of international transit system applicable]
14	j				<b>Overall distance of route:</b>	1277						km
15	k				<b>Overall costs:</b>	344.48						USD
16	l				<b>Overall duration:</b>	27.38						days

18

19 **The worksheets "Part A - General Questions" and "Part B - Route" require your input ar**

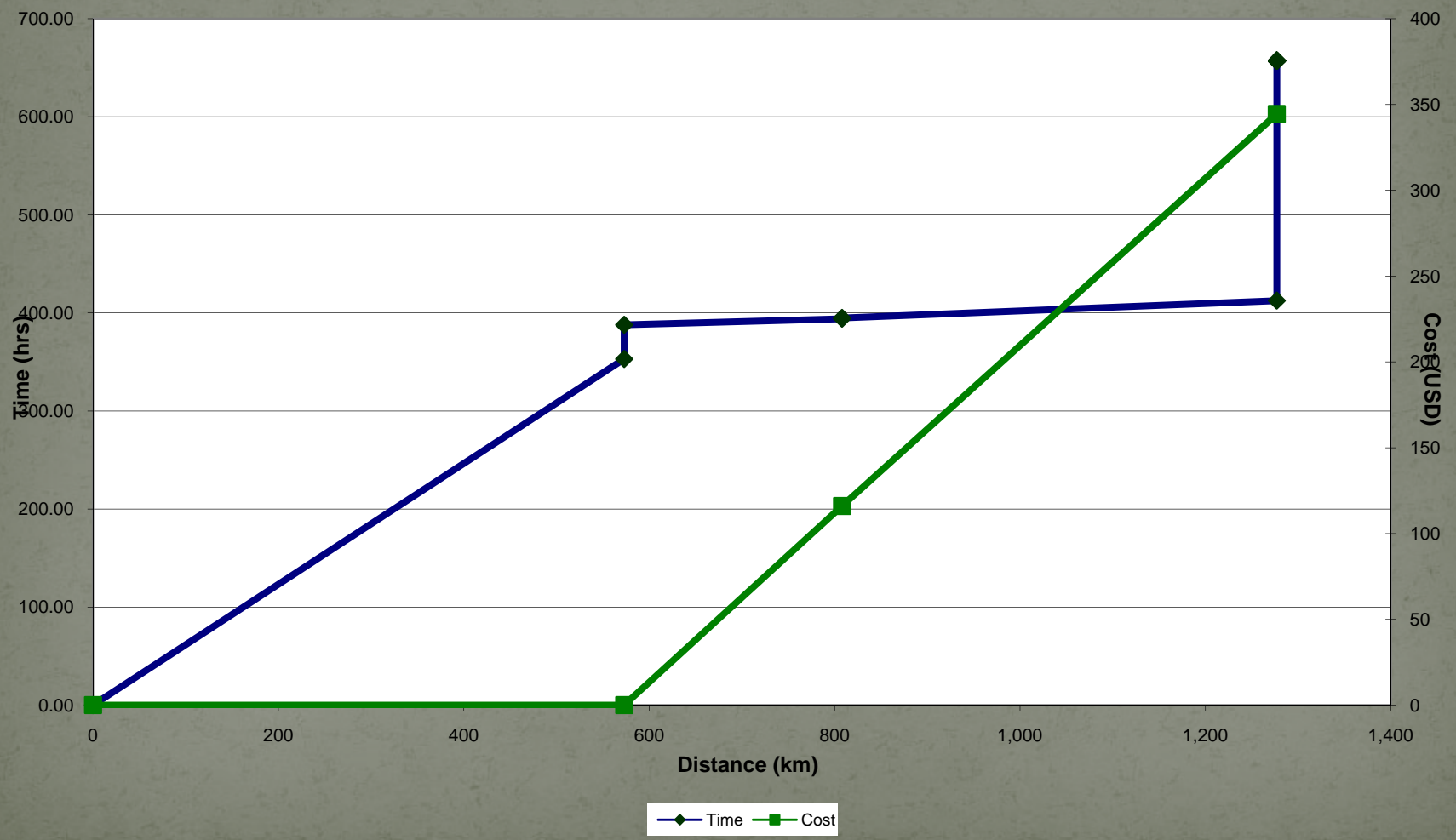
PART A - General Questions PART B - Route Graph Time-Distance Graph Cost - Distance Graph - All-in-One Graph Average Speed Data Average Speed Graph - Time compar

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# Import of soap in wagon in Nov, 2009

## Time/Cost-Distance Model





- Transit by rail





ok.Transit-China-Russia-wagon-5 [Compatibility Mode] - Microsoft Excel

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Workbook Views Show/Hide

Ruler Formula Bar Gridlines Headings Message Bar

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Split Hide Synchronous Scrolling Reset Window Position Window

Save Switch Workspace Windows

Macros

Transit VIA Mongolia /Railway/

**Questionnaire for Application of UNESCAP Time/Cost-Distance Model**

5	a	Date of questionnaire completion:	May, 2008	[date of filling out the questionnaire]
6	b	Route description:	Zamiin-Uud -Sainshand - Ulaanbaatar - Sukhbaatar, Mongolia	[detailed route description]
7	c	Goods:	electrode	[type of good(s) transported]
8	d	Quantity:	wagon	[TEU]
9	e	Nationality of driver:		[Only applicable when road]
10	f	Country of vehicle registration:		[Only applicable when road]
11	g	Effective date of transport start:	26 may, 2008	[date when transport leaves the place of departure]
12	h	Effective delivery date of goods:	01 June, 2008	[date when transport reaches the final destination]
13	i	Was the transport performed under an international transit system (e.g. TIR, NCTS)?		[yes/no, please specify the type of international transit system applicable]
14	j	Overall distance of route:	1088	km
15	k	Overall costs:	531.28	USD
16	l	Overall duration:	5.75	days

**The worksheets "Part A - General Questions" and "Part B - Route" require your input ar**

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PART A - General Questions PART B - Route Graph Time-Distance Graph Cost - Distance Graph - All-in-One Graph Average Speed Data Average Speed Graph - Time compar

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# Transit transportation of electrode in wagon in May, 2008

## Time/Cost-Distance Model



ok.Transit-China-Russia-wagon-12 [Compatibility Mode] - Microsoft Excel

Home Insert Page Layout Formulas Data Review View Add-Ins

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Workbook Views

Ruler  Formula Bar  
 Gridlines  Headings  
 Message Bar

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New Window Arrange All Freeze Panes Unhide

Split Hide

View Side by Side Synchronous Scrolling Reset Window Position

Save Workspace Switch Windows

Macros

	A	B	C	D	E	F	G	H	I	J	K	L	
1			<b>Transit VIA Mongolia /Railway/</b>										
2													
3			<b><u>Questionnaire for Application of UNESCAP Time/Cost-Distance Model</u></b>										
4													
5	a		Date of questionnaire completion:		December, 2008		[date of filling out the questionnaire]						
6	b		Route description:		China/Erlan - Mongolia/Zamiin-Uud province - Mongolia/Sainshand province - Mongolia/Ulaanbaatar city -		[detailed route description]						
7	c		Goods:		empty		[type of good(s) transported]						
8	d		Quantity:		wagon		[TEU]						
9	e		Nationality of driver:									[Only applicable when road]	
10	f		Country of vehicle registration:									[Only applicable when road]	
11	g		Effective date of transport start:		04 Dec, 2008		[date when transport leaves the place of departure]						
12	h		Effective delivery date of goods:		06 Dec, 2008		[date when transport reaches the final destination]						
13	i		Was the transport performed under an international transit system (e.g. TIR, NCTS)?									[yes/no, please specify the type of international transit system applicable]	
14	j		Overall distance of route:		1118		km						
15	k		Overall costs:		531.28		USD						
16	l		Overall duration:		2.49		days						
17													
18													
19													

**The worksheets "Part A - General Questions" and "Part B - Route" require your input and**

PART A - General Questions PART B - Route Graph Time-Distance Graph Cost - Distance Graph - All-in-One Graph Average Speed Data Average Speed Graph - Time compar...

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# Transit transportation of empty wagon in Dec, 2008

## Time/Cost-Distance Model



Save (Ctrl+S) | Page Layout | Formulas | Data | Review | View | Add-Ins

Ruler     Formula Bar  
 Gridlines     Headings  
 Message Bar

Zoom 100%    Zoom to Selection  
 New Window    Arrange All    Freeze Panes    Unhide  
 Split    View Side by Side    Synchronous Scrolling    Reset Window Position  
 Save Workspace    Switch Windows    Macros

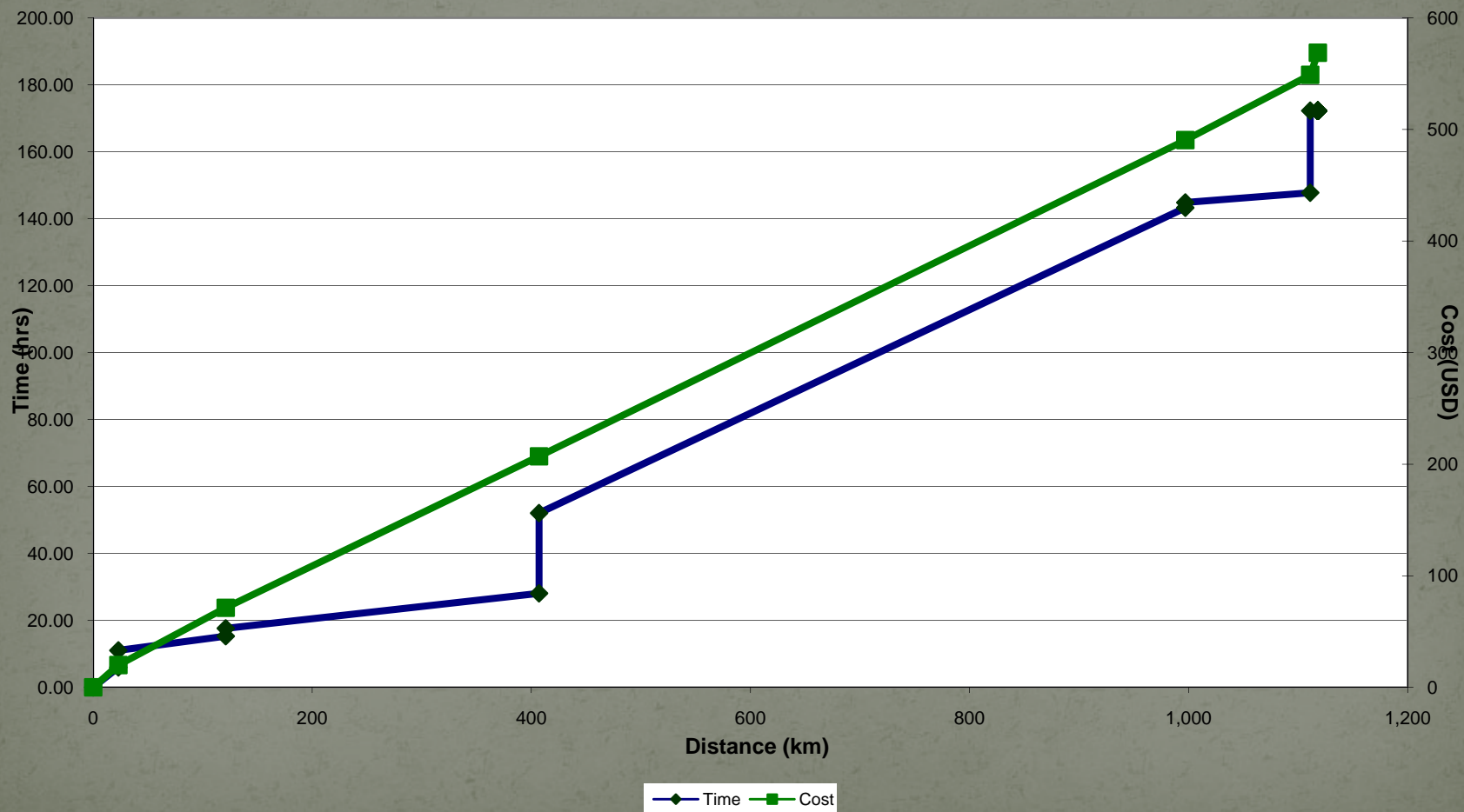
	A	B	C	D	E	F	G	H	I	J	K	L	
1					<b>Transit VIA Mongolia /Railway/</b>								
2													
3					<b><u>Questionnaire for Application of UNESCAP Time/Cost-Distance Model</u></b>								
4													
5	a		<b>Date of questionnaire completion:</b>		June, 2008	[date of filling out the questionnaire]							
6	b		<b>Route description:</b>		Russia/Naushki - Mongolia/Sukhbaatar province - Mongolia/Darkhan province -	[detailed route description]							
7	c		<b>Goods:</b>		Timber	[type of good(s) transported]							
8	d		<b>Quantity:</b>		wagon	[TEU]							
9	e		<b>Nationality of driver:</b>			[Only applicable when road]							
10	f		<b>Country of vehicle registration:</b>			[Only applicable when road]							
11	g		<b>Effective date of transport start:</b>		01 June, 2008	[date when transport leaves the place of departure]							
12	h		<b>Effective delivery date of goods:</b>		08 June, 2008	[date when transport reaches the final destination]							
13	i		<b>Was the transport performed under an international transit system (e.g. TIR, NCTS)?</b>			[yes/no, please specify the type of international transit system applicable]							
14	j		<b>Overall distance of route:</b>		1118	km							
15	k		<b>Overall costs:</b>		568.80	USD							
16	l		<b>Overall duration:</b>		7.18	days							

The worksheets "Part A - General Questions" and "Part B - Route" require your input and



# Transit transportation of timber in wagon in June, 2008

## Time/Cost-Distance Model



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Workbook Views

Ruler  Formula Bar  
 Gridlines  Headings  
 Message Bar

Zoom 100% Zoom to Selection

New Window Arrange All Freeze Panes Hide Split Hide View Side by Side Synchronous Scrolling Reset Window Position Save Workspace Switch Windows

Macros

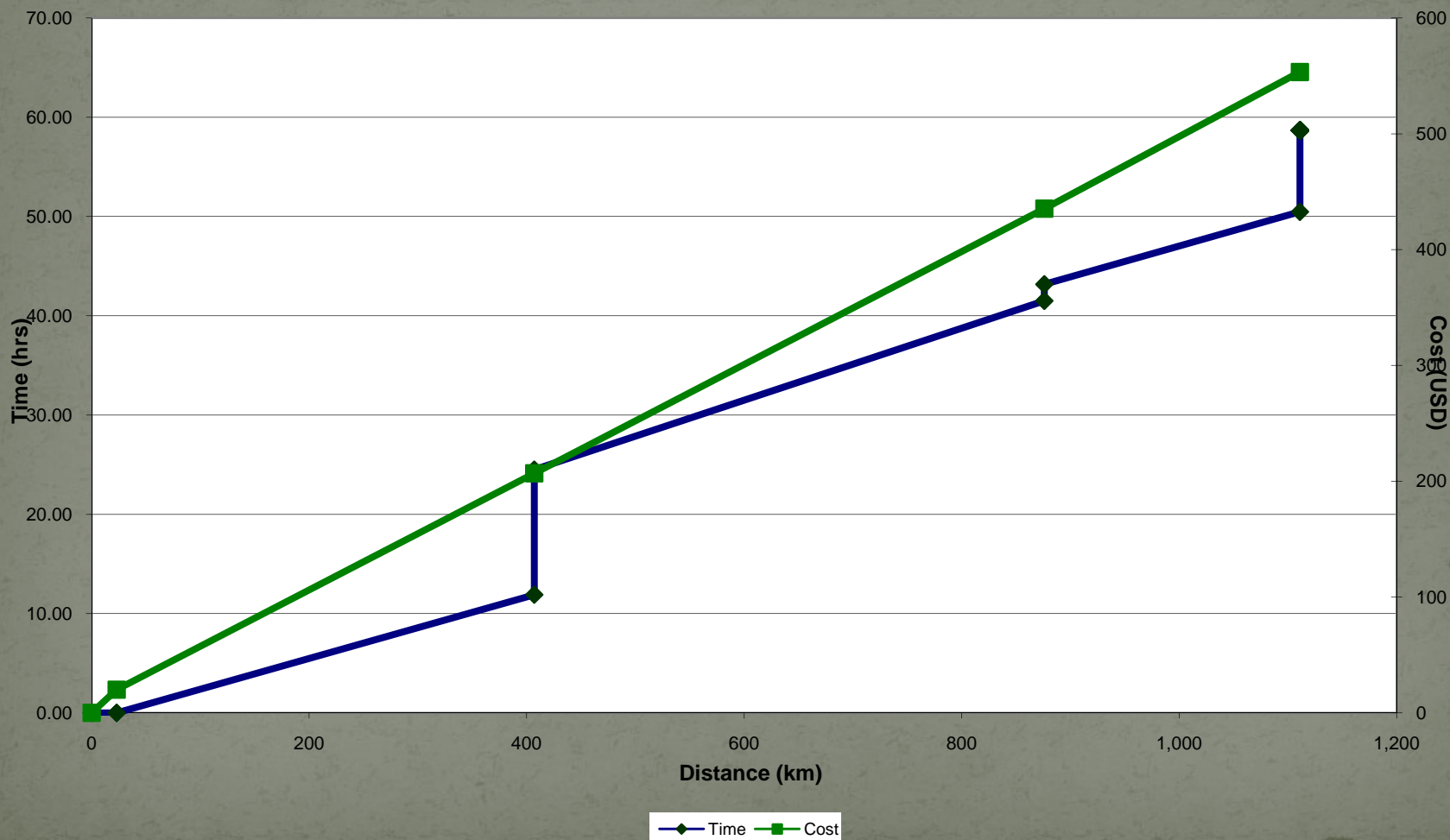
	A	B	C	D	E	F	G	H	I	J	K	L
1							<b>Transit VIA Mongolia /Railway/</b>					
2												
3							<b><u>Questionnaire for Application of UNESCAP Time/Cost-Distance Model</u></b>					
4												
5	a		Date of questionnaire completion:		October, 2008			[date of filling out the questionnaire]				
6	b		Route description:		Mongolia/Sukhbaatar - Mongolia/Darkhan - Mongolia/Ulaanbaatar -			[detailed route description]				
7	c		Goods:		Timber			[type of good(s) transported]				
8	d		Quantity:		wagon			[TEU]				
9	e		Nationality of driver:					[Only applicable when road]				
10	f		Country of vehicle registration:					[Only applicable when road]				
11	g		Effective date of transport start:		07 Oct, 2008			[date when transport leaves the place of departure]				
12	h		Effective delivery date of goods:		10 Oct, 2008			[date when transport reaches the final destination]				
13	i		Was the transport performed under an international transit system (e.g. TIR, NCTS)?					[yes/no, please specify the type of international transit system applicable]				
14	j		Overall distance of route:		1111			km				
15	k		Overall costs:		553.28			USD				
16	l		Overall duration:		2.44			days				

The worksheets "Part A - General Questions" and "Part B - Route" require your input ar



# Transit transportation of timber in wagon in Nov, 2008

## Time/Cost-Distance Model



# TCData by road



ereen-ub3 [Compatibility Mode] - Microsoft Excel

Home Insert Page Layout Formulas Data Review View Add-Ins

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Workbook Views Show/Hide

Ruler Formula Bar Gridlines Headings Message Bar

Zoom 100% Zoom to Selection

New Window Arrange All Freeze Panes Hide Unhide

Split View Side by Side Synchronous Scrolling Reset Window Position

Save Workspace Switch Windows

Macros

	A	B	C	D	E	F	G	H	I	J	K	L	
1						Imported new car-empty							
2													
3						<b><u>Questionnaire for Application of UNESCAP Time/Cost-Distance Model</u></b>							
4													
5	a				Date of questionnaire completion:	12/18/2008			[date of filling out the questionnaire]				
	b				Route description:	Erlian-UB			[detailed route description]				
6													
7	c				Goods:	empty new car			[type of good(s) transported]				
8	d				Quantity:	30 tonnes			[TEU]				
9	e				Nationality of driver:	mongolian			[Only applicable when road]				
10	f				Country of vehicle registration:	China			[Only applicable when road]				
11	g				Effective date of transport start:	12/17/2008			[date when transport leaves the place of departure]				
12	h				Effective delivery date of goods:	12/18/2008			[date when transport reaches the final destination]				
	i				Was the transport performed under an international transit system (e.g. TIR, NCTS)?	no			[yes/no, please specify the type of international transit system applicable]				
13													
14	j				Overall distance of route:	440		km					
15	k				Overall costs:	387.10		USD					
16	l				Overall duration:	0.68		days					
17													
18													
19													

**The worksheets "Part A - General Questions" and "Part B - Route" require your input and**

PART A - General Questions PART B - Route Graph Time-Distance Graph Cost - Distance Graph - All-in-One Graph Average Speed Data Average Speed Graph - Time compar...

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Microsoft Excel - green-ub3 [Compatibility Mode]

Home | Insert | Page Layout | Formulas | Data | Review | View | Add-Ins

Normal | Page Layout | Page Break Preview | Custom Views | Full Screen | Workbook Views

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View Side by Side | Synchronous Scrolling | Reset Window Position

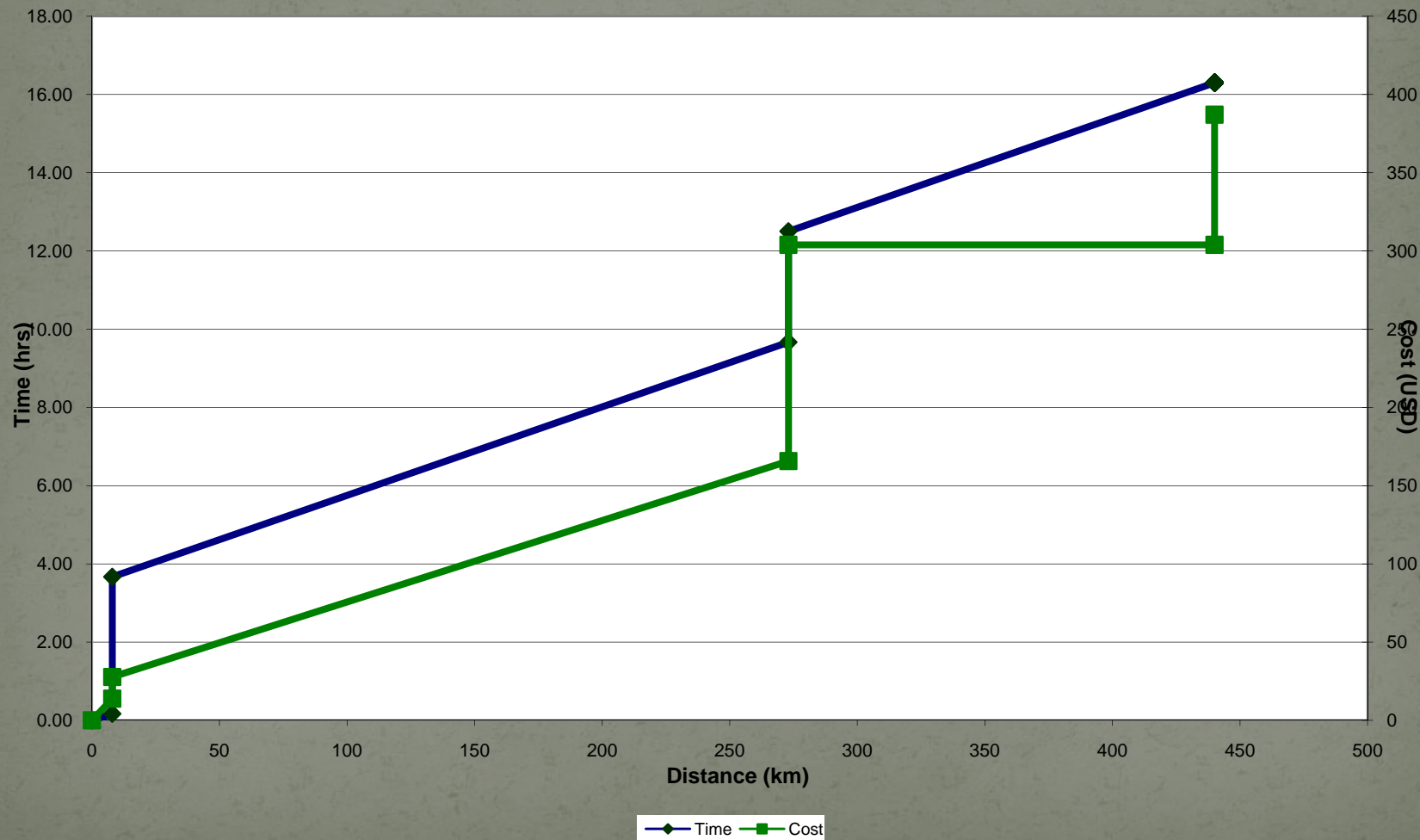
Save Workspace | Switch Windows | Macros

		LEG 1			LEG 2			LEG 3			LEG 4				
Place of departure	Name of city:	erlian			zamin-uid			Sainshand			Choir				
	Name of country:	china			mongolia			Mongolia			Mongolia				
Mode of Transport		road			road										
Distance to next stop		8	km		265	km		167	km			km			
Duration of travel			hrs	10 min	6	hrs	min	3	hrs	48 min		hrs min			
Costs per leg (while en route, in USD)		\$13.85			\$138.00			\$0.00			\$0.00				
Place of next stop	Name of city:	zamin-uid			Sainshand			Choir			ulaanbaatar				
	Name of country:	mongolia			Mongolia			Mongolia			Mongolia				
Reason for stop		Entry Border Crossing			Intermediate Stop						Final Destination				
Description of stop	Type of activity	Duration		Costs	Type of activity	Duration		Costs	Type of activity	Duration		Costs	Type of activity	Duration	
	Activity A at stop	petroleum	hrs min	\$4.00	petroleum	hrs 20 min	\$132.50	petroleum	hrs min	\$83.20	petroleum	hrs min		hrs min	
	Activity B at stop	meal	hrs min	\$2.85	meal	2 hrs min	\$5.70		hrs min	\$0.00		hrs min		hrs min	
	Activity C at stop	police control	1 hrs min	\$7.00	police control	hrs 30 min	\$0.00		hrs min	\$0.00		hrs min		hrs min	
	Activity D at stop	inspection	1 hrs min			hrs min	\$0.00		hrs min	\$0.00		hrs min		hrs min	
	Activity E at stop	documents	1 hrs min			hrs min	\$0.00		hrs min	\$0.00		hrs min		hrs min	
	Activity F at stop	inspection	hrs min			hrs min	\$0.00		hrs min	\$0.00		hrs min		hrs min	
	Activity G at stop	others	hrs 30 min			hrs min	\$0.00		hrs min	\$0.00		hrs min		hrs min	
			3 hrs 30 min	\$13.85		2 hrs 50 min	\$138.20		0 hrs 0 min	\$83.20		0 hrs 0 min		0 hrs 0 min	
Description of actions taken (e.g. procedures, formalities applicable to the section of the route).															



# Import of New truck in Dec, 2008

## Time/Cost-Distance Model



ereen-ub1 [Compatibility Mode] - Microsoft Excel

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Workbook Views

Ruler Formula Bar Gridlines Headings Message Bar Show/Hide

Zoom 100% Zoom to Selection

New Window Arrange All Freeze Panes Unhide

Split Hide View Side by Side Synchronous Scrolling Reset Window Position Window

Save Workspace Switch Windows Macros

	A	B	C	D	E	F	G	H	I	J	K	L
1						<b>[Transportation of furniture]</b>						
2												
3						<b><u>Questionnaire for Application of UNESCAP Time/Cost-Distance Model</u></b>						
4												
5		a			Date of questionnaire completion:	15/01/2009						[date of filling out the questionnaire]
		b			Route description:	ERLIAN -UB						[detailed route description]
6												
7		c			Goods:	furniture						[type of good(s) transported]
8		d			Quantity:	15 tonnes						[TEU]
9		e			Nationality of driver:	mongolian						[Only applicable when road]
10		f			Country of vehicle registration:	mongolian						[Only applicable when road]
11		g			Effective date of transport start:	12/1/2009						[date when transport leaves the place of departure]
12		h			Effective delivery date of goods:	15/01/2009						[date when transport reaches the final destination]
		i			Was the transport performed under an international transit system (e.g. TIR, NCTS)?	no						[yes/no, please specify the type of international transit system applicable]
13												
14		j			Overall distance of route:	736						km
15		k			Overall costs:	506.06						USD
16		l			Overall duration:	1.67						days
17												

**The worksheets "Part A - General Questions" and "Part B - Route" require your input and**

Ready

PART A - General Questions Graph - All-in-One PART B - Route Graph Time-Distance Graph Cost - Distance Graph Average Speed Data Average Speed Graph - Time compar

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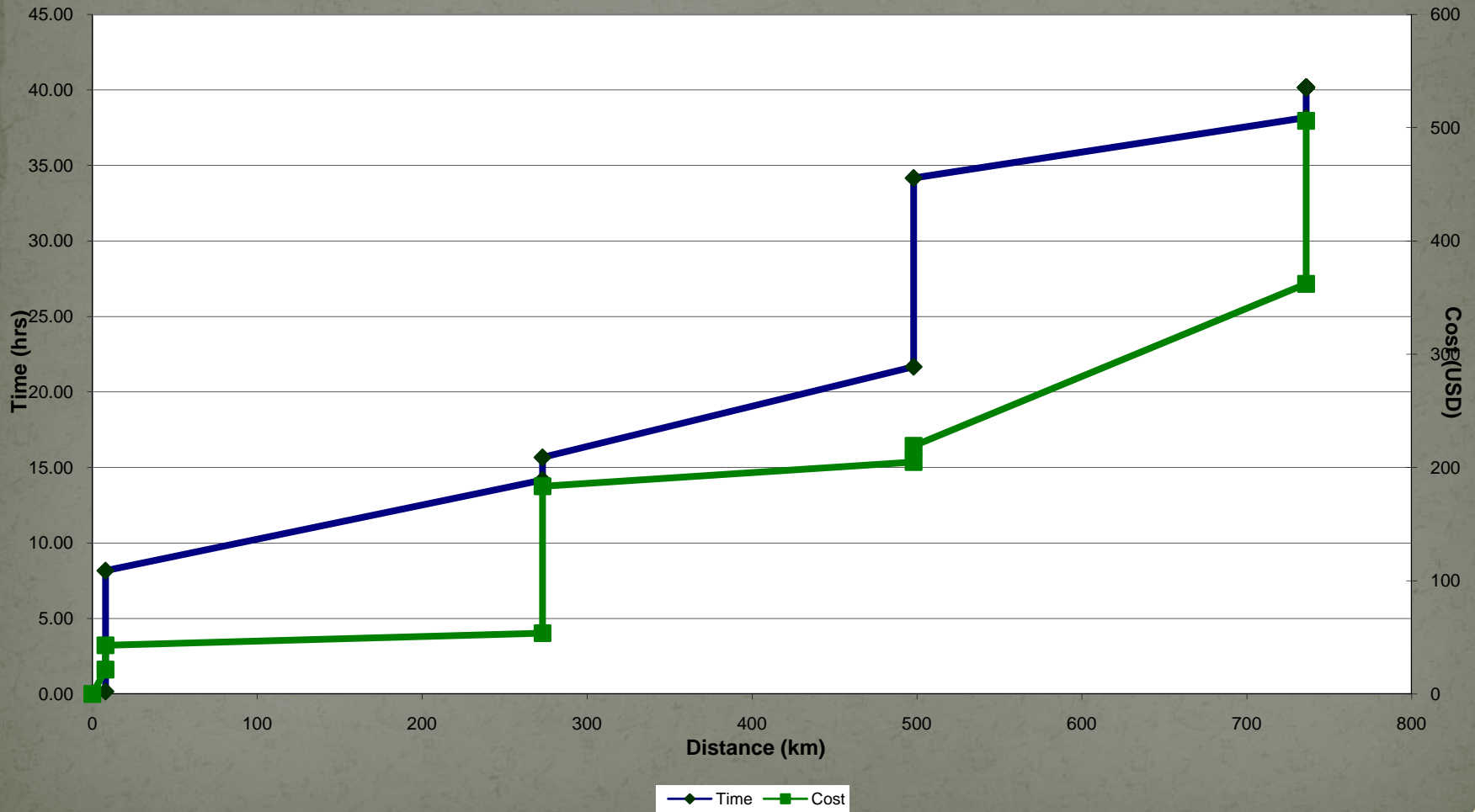
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# Import of furniture in Dec, 2008

## Time/Cost-Distance Model



Microsoft Excel - green-ub4 [Compatibility Mode]

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Workbook Views Show/Hide

Ruler Formula Bar Gridlines Headings Message Bar

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Split Hide Synchronous Scrolling Reset Window Position

View Side by Side Save Workspace Switch Windows

Macros

**[Transportation of construction material and paper]**

**Questionnaire for Application of UNESCAP Time/Cost-Distance Model**

5	a	Date of questionnaire completion:	14/12/2008	[date of filling out the questionnaire]
6	b	Route description:	Erlian-UB	[detailed route description]
7	c	Goods:	construction material, paper	[type of good(s) transported]
8	d	Quantity:	35 tonnes	[TEU]
9	e	Nationality of driver:	mongolian	[Only applicable when road]
10	f	Country of vehicle registration:	mongolia	[Only applicable when road]
11	g	Effective date of transport start:	10/12/2008	[date when transport leaves the place of departure]
12	h	Effective delivery date of goods:	15/12/2008	[date when transport reaches the final destination]
13	i	Was the transport performed under an international transit system (e.g. TIR, NCTS)?	no	[yes/no, please specify the type of international transit system applicable]
14	j	Overall distance of route:	736	km
15	k	Overall costs:	966.70	USD
16	l	Overall duration:	1.99	days

**The worksheets "Part A - General Questions" and "Part B - Route" require your input and**

Ready

PART A - General Questions PART B - Route Graph Time-Distance Graph Cost - Distance Graph - All-in-One Graph Average Speed Data Average Speed Graph - Time compar

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# Import of construction material in Dec, 2008

## Time/Cost-Distance Model

