

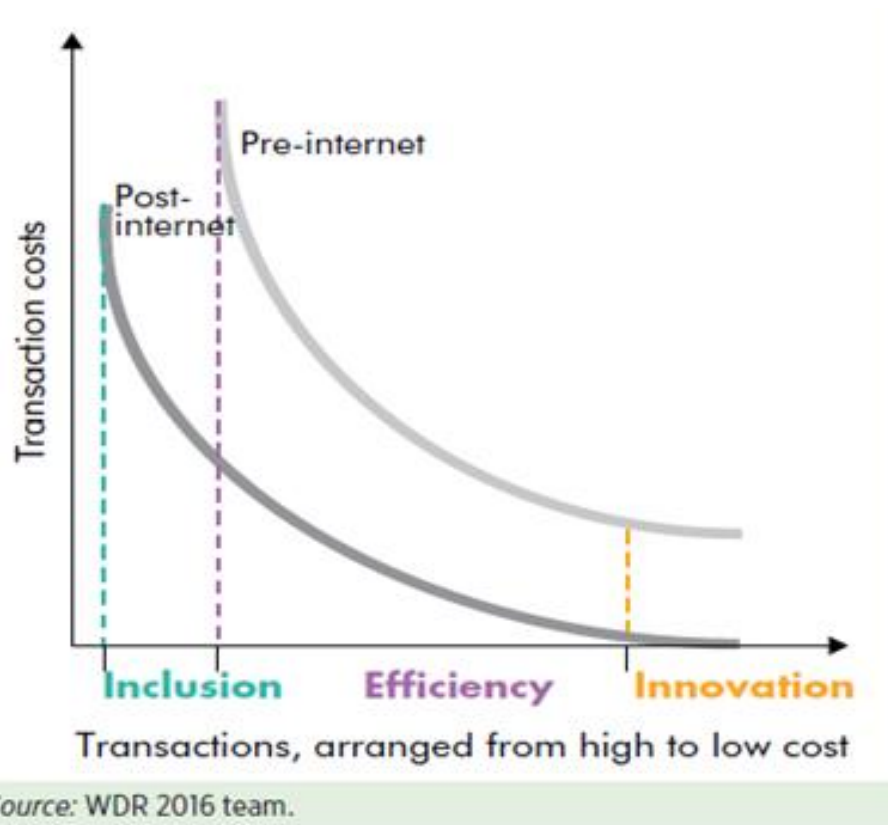
ICT and SMEs Resiliency in Central Asia

SMEs and ICT

SMEs profitability improves when ICT help leverage efficiency and delivery of better quality goods and services

- ICT enhances the means for SMEs business
 - Data and information are key to decisions and operations
 - Transforms the data processing, information management, and reach of the communication
 - E-commerce and e-business broaden SMEs options
- ICT also opens up new threats
- SMEs need to keep abreast of ICT developments in hardware and software

Sample of the add values of ICT



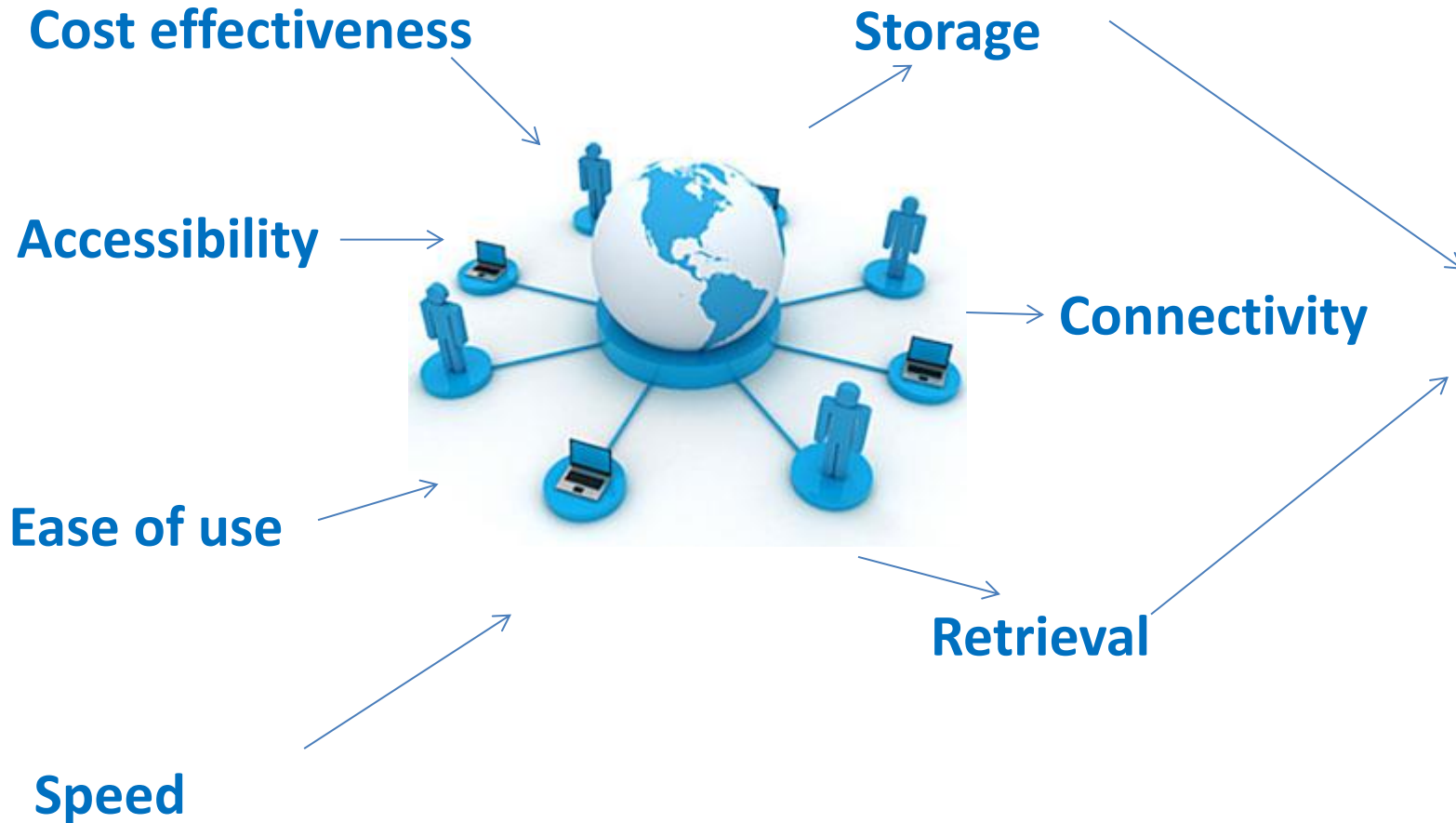
Business Environment

Economy	Ease of Doing Business Rank	Starting a Business	Dealing with Construction Permits	Getting Electricity	Registering Property	Getting Credit	Protecting Minority Investors	Paying Taxes	Trading Across Borders	Enforcing Contracts	Resolving Insolvency	Average
Kazakhstan	41	21	92	71	19	70	25	18	122	9	47	49
Azerbaijan	63	7	114	110	22	109	36	34	94	40	84	65
Kyrgyz Republic	67	35	20	160	6	28	36	138	83	137	126	76
Uzbekistan	87	42	151	112	87	42	88	115	159	32	75	90
Tajikistan	132	57	152	177	102	109	29	172	132	54	147	115
Afghanistan	177	34	185	156	184	97	189	89	174	172	160	147

ICT and Disaster Risk reduction

<div> <div>DRM Phases</div> <div>ICT Roles</div> </div>	Risk Prevention	Risk Reduction	Preparedness and Response	Recovery
Key Tasks	Improving risk-informed measures For investments, strategies, operations	Mitigating the chance of disaster-induced disruption, damage, losses	Lessening the impacts by preparing and being able to respond to disaster	Restoring and bouncing stronger Of functions, recover assets and operations, and to build back better
ICT for its own resilience	<ul style="list-style-type: none"> Not to create new risks Not to exacerbate existing risks Avoid and transfer risks 	<ul style="list-style-type: none"> Address the underlying risk factors Reduce vulnerability Increase capacity /protection Retrofit assets and capital Reduce exposure Invest in early warning 	<ul style="list-style-type: none"> Continuity plan Redundancy / backup Response readiness Training and drills Contingency planning Emergency mechanisms Early recovery 	<ul style="list-style-type: none"> Rapid assessment Estimate needs Recovery strategy Invest to reduce future risks
ICT for society's resilience	<ul style="list-style-type: none"> ICT to improve risk assessments ICT for better analysis ICT for development planning 	<ul style="list-style-type: none"> Risk databases GIS, RS, ST for DRR Knowledge, innovation, Enhance coordination Enhance risk monitoring & warning 	<ul style="list-style-type: none"> ICT for preparedness Assessment and emergency decision making Enhance communication and coordination 	<ul style="list-style-type: none"> Rapid assessments and detailed PDNA Enhance future investments

ICT as SMEs Business Investment



ICT Options for SMEs

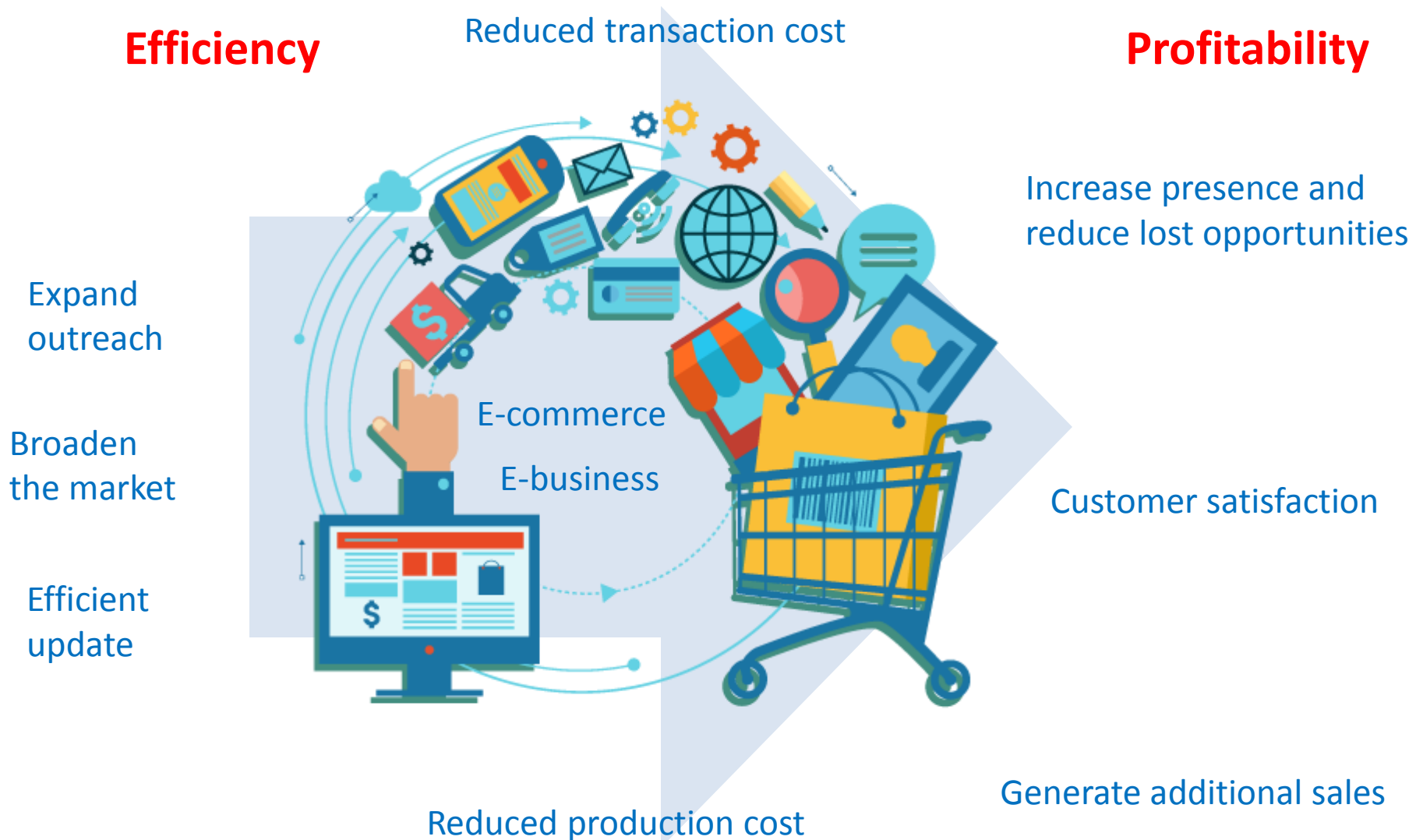
ICT Applications	Advantages	Disadvantages
Cell Broadcasting	<ul style="list-style-type: none"> Not affected by traffic load. Will not add to congestion Messages can be differentiated by cells or sets of cells. Greater authenticity of message. 	<ul style="list-style-type: none"> Must be literate Phone must be switched on Phone must be set to receive cell broadcasting.
GIS and Remote Sensing	<ul style="list-style-type: none"> Continuous monitoring. ·Spatial presentation of data. Facilitates cooperative effort. 	<ul style="list-style-type: none"> Require high bandwidth Require high-speed networks Costly hardware and software Require skilled professionals Difficulty capturing qualitative data
Internet/Email	<ul style="list-style-type: none"> Interactive Multiple sources can be checked for accuracy of information. 	<ul style="list-style-type: none"> Low penetration rate Must be literate Internet content in local languages may be limited.
Mobile Phone (Text SMS)	<ul style="list-style-type: none"> High penetration rate Portable. Relatively low cost 	<ul style="list-style-type: none"> Must be literate No indication that message is generated by a legitimate authority Subject to congestion and thereby delay
Radio	<ul style="list-style-type: none"> One-to-many broadcasting Does not require user to be literate Portable. · 	<ul style="list-style-type: none"> Less effective at night.
Satellite Communications	<ul style="list-style-type: none"> Independent of terrestrial communication network that can be damaged by natural hazards 	<ul style="list-style-type: none"> High cost of systems hardware and bandwidth utilization Unlikely to work indoors.
Telephone	<ul style="list-style-type: none"> Does not require user to be literate. 	<ul style="list-style-type: none"> Inadequate penetration rates. Congestion of phone lines during emergencies Disasters can damage infrastructure.
Television	<ul style="list-style-type: none"> ·One-to-many broadcasting. ·Does not require user to be literate 	<ul style="list-style-type: none"> ·Less effective at night.

E-Commerce and E-Business for SMEs

Efficiency

Reduced transaction cost

Profitability



SMEs Risk reduction measures for resilience

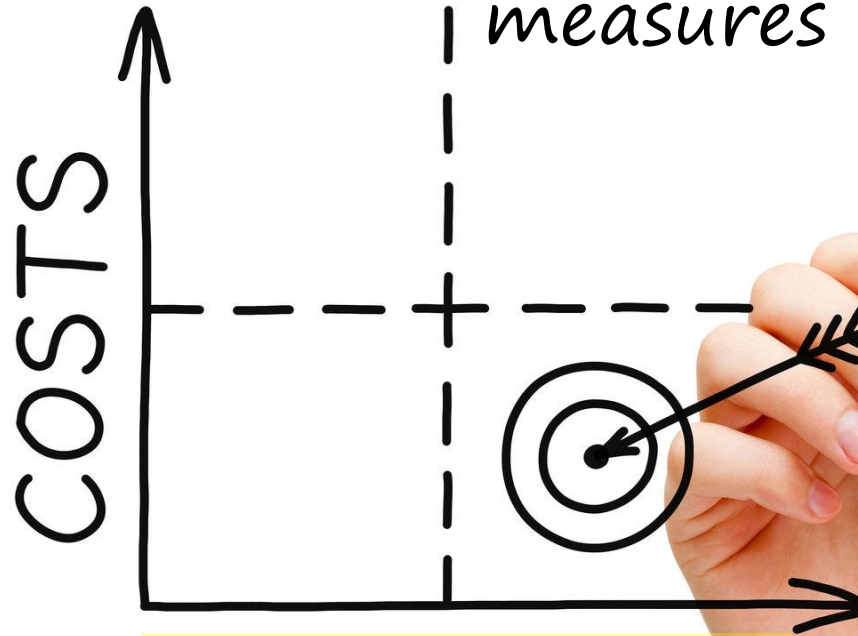
Acquisition price

Research time

Operations and
maintenance

System upgrade

Consumables



BENEFITS

Enhanced decision making

Redundancy

Security

System integrity
Privacy & confidentiality

ICT can't guarantee SMEs resiliency

- ICTs becomes indispensable to SMEs
- Resilience is part of business strategy
- SMEs need careful planning to choose options
- SMEs must weigh up the cost and benefits

There are areas that could be done better by people, talking, and writing