Metrics for C21st Learning Systems
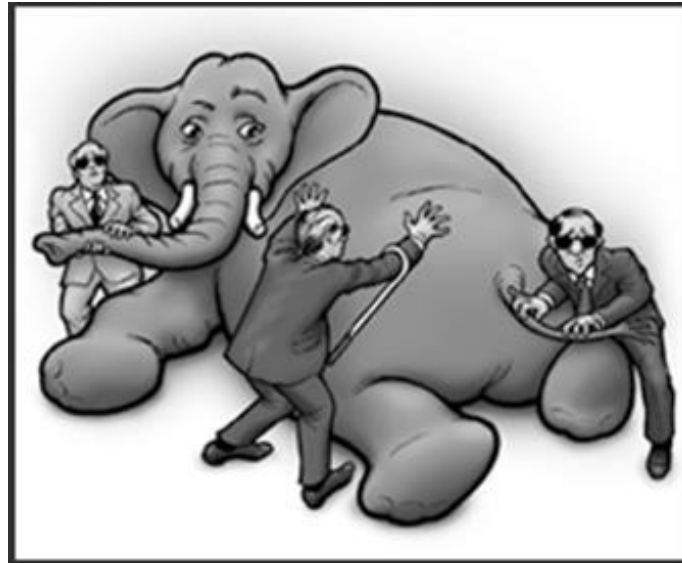
Cross-Jurisdictional Working group
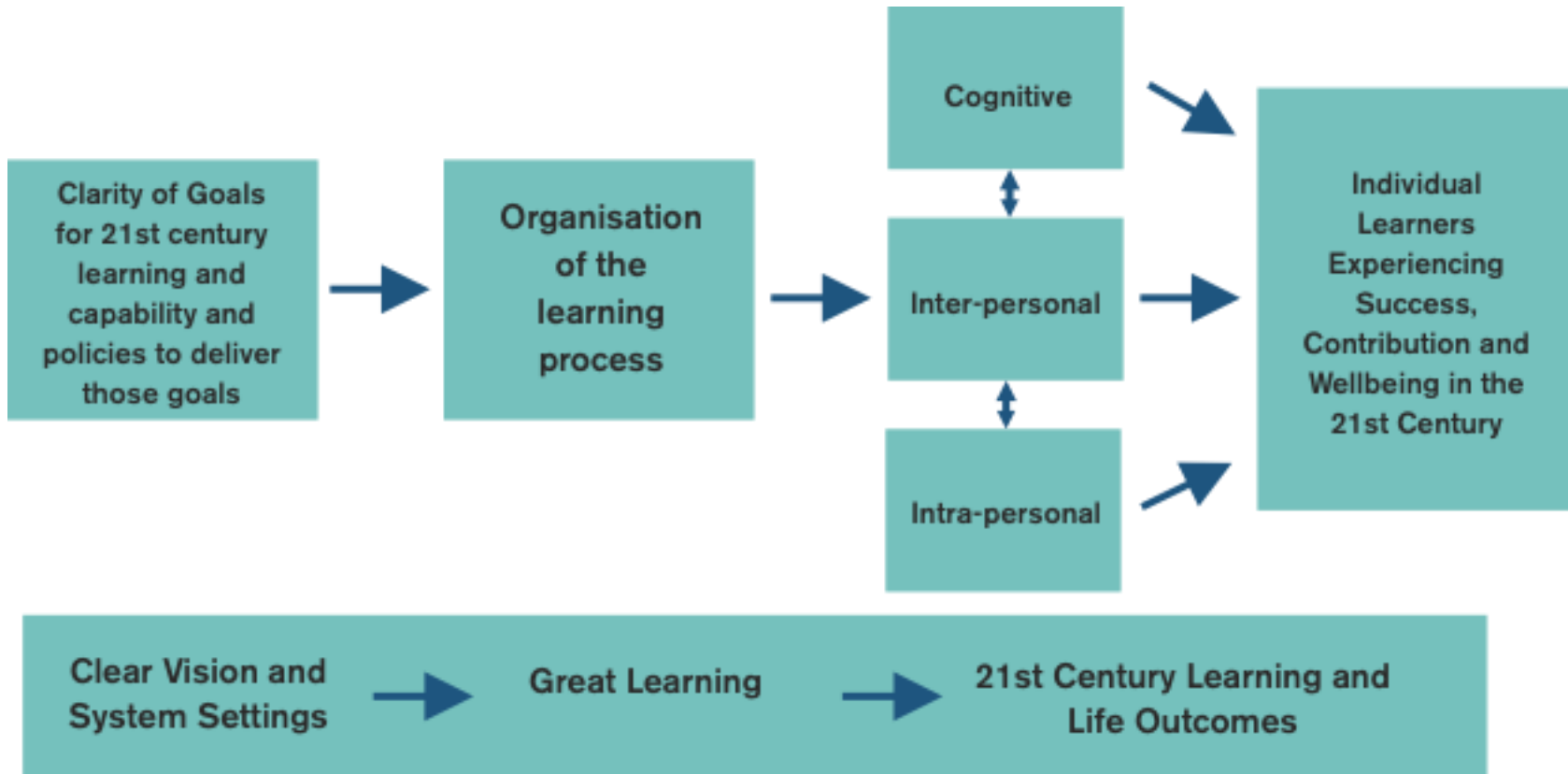
The use of metrics is often dependent on the position from which they are viewed. Ideally system metrics should provide an integrated view for all participants. They should help drive transformation by clarifying goals and supporting system learning and innovation.

The logic flow of system metrics

What to assess and how to assess it

Domain	What to Assess	How to Assess
Learning System	The ability of the system to support 21st century outcomes through clarity of goals, professional capability and enabling policy settings	Qualitative surveys of perceptions, understandings and attitudes of key stakeholders e.g. extension of some of the questions asked currently in TALIS and the GELP system diagnostic tool.
Learning Process	The extent to which the learning processes exhibit characteristics consistent with	Use of surveys of students and teachers so as to understand how current processes are being experienced e.g. student engagement surveys currently in use in some systems
Learning Outcomes Cognitive	Focus on problem solving, critical thinking, information and ICT literacy and creativity	Extend current OECD assessments (e.g. PISA) and studies such as the International Study of Information and Computer Literacy studies or develop new customised tools
Intra-personal	Persistence, resilience, adaptability, self- management, appreciation of diversity and values	Self and peer assessment of attitudes and capabilities. Maybe extended use of the International Civics Study.
Inter-personal	Communicating and understanding others' ideas, working with others, reconciling different perspectives and leading and making decisions	Surveys based on psychometric profiling and self-reporting. Longer term potential to use computer simulations
Life outcomes	Economic and social activity, commitment to sustainability, values, on-going learning, wellbeing, happiness.	Some existing economic and social surveys may offer insights but new tools likely to be required e.g. to assess the nature of economic activity

The logic flow of system metrics
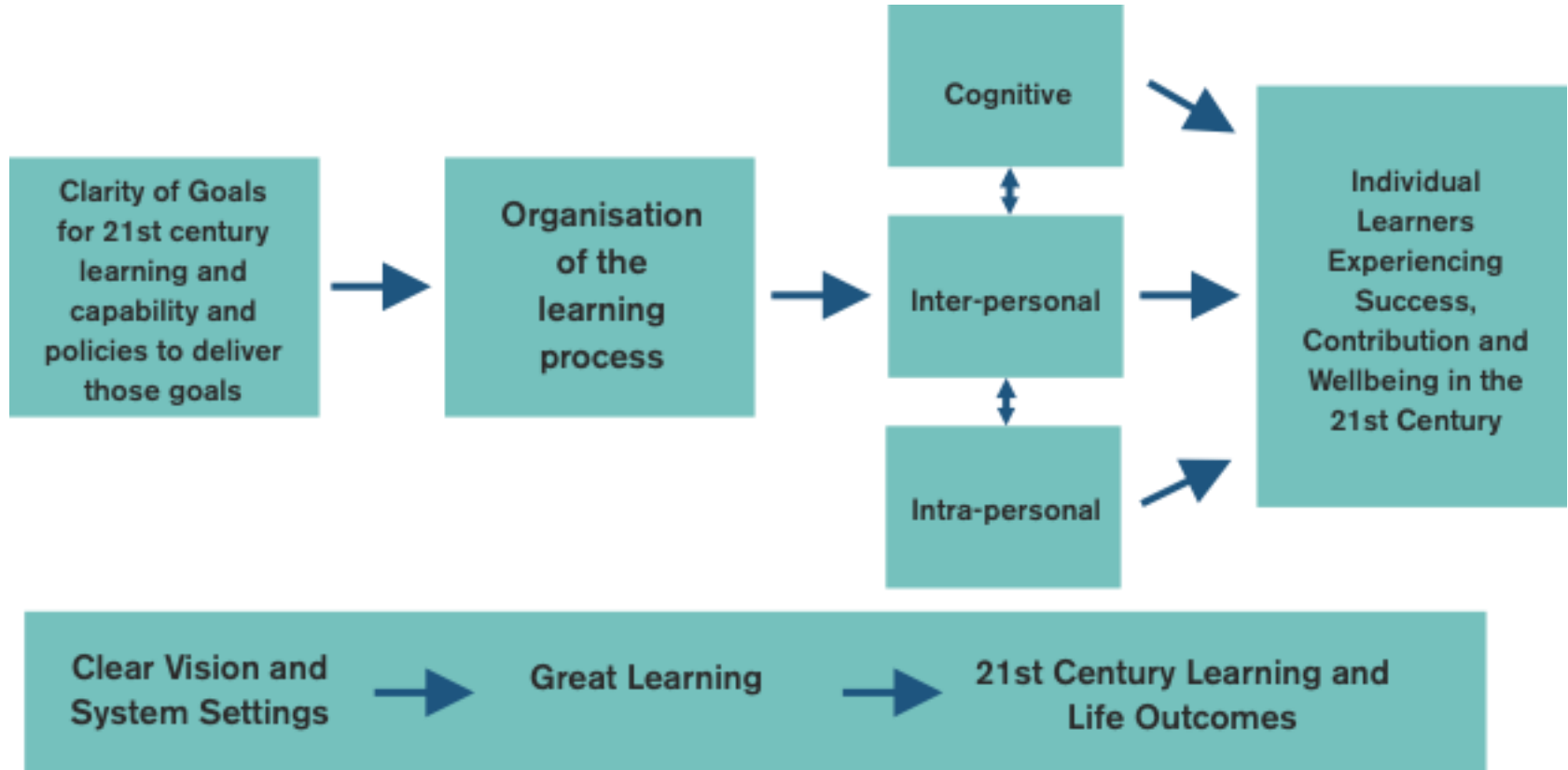
Does this capture the essential elements of C21 system metrics? Is there anything else you would add? Where do we already have tools to support metrics in the various domains?

Learning Outcomes
sourced from the
US National Research Council

COGNITIVE

analysis

decision-making

critical thinking

executive function

adaptive learning

reasoning/argumentation

active listening

problem solving

interpretation

communication

innovation

information and communications technology (ict) literacy

creativity

INTERPERSONAL

responsibility

social influence with others

assertive communication

leadership

empathy/perspective-taking

trust

interpersonal competencies

self presentation

coordination

conflict resolution

service orientation

negotiation

collaboration

cooperation

teamwork

INTRAPERSONAL

adaptability

integrity

appreciation for diversity

intellectual interest and curiosity

self-monitoring

continuous learning

artistic and cultural appreciation

initiative

self-evaluation

productivity

professionalism/ethics

flexibility

metacognition

physical and psychological health

self direction

work ethic/conscientiousness

grit

citizenship

perseverance

responsibility

self-reinforcement

career orientation

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Learning Outcomes - Questions

- Discuss the priority of developing and implementing metrics for each of the learning outcome domains. Would you place a higher priority on one or two of the domains in the short term? Over the longer term?

- Assessment in these domains is reliant on development of new or extension of existing cognitive assessment tools, self reporting surveys and perhaps in time more sophisticated psychometric tests and computer simulations. What developments of tools are currently occurring in your jurisdictions that might usefully support assessment of 21st century learning outcomes?

- For some of the intra-personal and inter-personal outcomes, there may be cultural differences across jurisdictions as to what outcomes are desired. How significant an issue is this and how might it be managed?

Where to from here?

Questions

- What are the quick wins we could look for in terms of using already available information and/or tools?

- What are the development priorities for the next five years?

- A weighted index could be constructed to provide an overall measure of system progress. Is this a priority?

- What role could/should the GELP community play in taking the agenda in this area forward and with which partners?