

# Data Sonification Canvas

1 Use Case: Who are your users, what are the goals and the context of your sonification?

<div><b>Users</b></div> <div>Who are the users of your sonification? What rold do they have in relation to the phenomenon? Do they have a specific opinion about it? Do they have any specific competence or knowledge of the phenome-non? How much are they affected by the phenomenon?</div>	<div><b>Goals</b></div> <div>What are the specific goals you want to achieve with the sonification? Which specific needs does it address? Is it for analysis, explanation, communication, advocacy...</div>	<div><b>Context</b></div> <div>In which context will the sonification be experienced? Is it a web application? Is it used in a security operations center or in a public venue? Is it played through headphones or speakers? Is it a global or a local project? Does it have any specific cultural connotations?</div>	<div><b>Type of Sounds</b></div> <div>Synthesised: are the sounds generated with a synthesizer? Is it intended to mimic an existing sound? Concrete: is the sound from nature or from human activities? Is it sourced from analogue musical instruments?</div>	<div><b>Behaviour</b></div> <div>What are the rules that link changes in the dataset to changes in the sounds?</div>
			<div><b>Functions</b></div> <div>Indexical: is sound directly produced by the phenomenon you want to represent? Iconic: is sound similar to the phenomenon you want to represent? Symbolic: is sound arbitrarily related to the phenomenon you want to represent?  e.g. Indexical: the intensity of rain is detected by listening to the sound it emits. Iconic: the intensity of rain is mimicked by the sound of rice grains falling on a surface. Symbolic: the intensity of rain is represented by the sound of different musical instruments.</div>	<div><b>Multi-modality</b></div> <div>Are you using only sound or is sound coupled with other sensory modalities?</div>

<div><b>Analytical</b></div> <div>Are you representing hard values from a dataset?</div> <div><div></div></div>	<div><b>Narrative</b></div> <div>Do you want to communicate a message or tell a story?</div>	<div><b>Causal</b></div> <div>Will they gather information on the phenomenon that produced the sounds?  e.g. when you tap a container and the sound it makes give you information on how full it is.</div>	<div><b>Semantic</b></div> <div>Will they apply a code to interpret the sounds?  e.g. when you need to apply Morse code to decipher the message contained in a sound</div>	<div><b>Reduced</b></div> <div>Will they focus on the sound itself and its inner characteristics?  e.g. when we distinguish the interval between two notes or the pitch of a birdsong.</div>
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3 Sonification Approach: How would you position your approach to the sonification?

4 Listening Experience: How do you imagine your users will listen to the sonification?