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Design of a Government Collaboration Service Map by Big Data Analytics

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Abstract

Korean government has divided works by bureau in order to handle diverse social phenomena in an efficient manner. Due to increase in social complexity, however, abrupt social phenomena have frequently occurred. In addition, it has become difficult to handle them efficiently through inter-government collaboration with a conventional labor-division framework. Based on these aspects, this study measures and quantifies the activities in a work unit designed for the productive management of collaboration and divides them into the following functions to have a general view in connection with these visible activities: analysis of collaborative works, relation analysis, visualization, search for collaboration assistant, promotion of information and discovery of collaborative projects. This study attempts to implement these functions through big data analytics. The purposes of this study are to i) support the achievement of competent government which is the primary goal of Government 3.0 for the effective management and advanced response to complicated social phenomena through the utilization of a collaboration map and ii) investigate current collaborations through the realization of an intra-government collaboration amp and suggest a direction for desirable collaboration. In terms of expectation effects, this study would improve services for the general public through the followings: elimination of bottleneck in communications among government employees using the government collaboration map developed based on social networking analysis (SNA) technique, investigation on intra-government redundant duties and securing a general view on collaboration tasks.

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1. Introduction

1.1. Research necessities

As a modern society gets more complicated and changes faster, complicated social phenomena and problems which could not be solved by individual government bureaus have frequently occurred. In fact, it is very hard to handle these matters efficiently with a conventional labor-division framework. In other words, collaboration for effective response to various problems through inter-department/bureau cooperation is needed. In addition, a necessity of collaboration and better communication with other bureaus continues to increase (Hogue, 1993).

1.2. Research necessities

The purpose of this study is to acquire a plan to manage complicated social phenomena in an effective manner after establishing a big data-based collaboration map as one of the means to promote intra-government collaboration. In addition, it aims to support the achievement of competent government, which has been pursued by 'Government 3.0' by taking care of these complicated social matters in preemptive fashion.

2. Staged roadmap for implementation of government collaboration map

2.1. Concept of collaboration map

Even though collaboration has been defined in diverse ways, a concept of collaboration for collaboration map can be concluded as 'collective operation' performed by more than two parties for the purpose of achieving a shared goal. The level of collaboration can be divided into 'awareness,' 'resources sharing' and 'co-creation' (reconfiguration by integrating the collaboration level of Hogue). In addition, a government collaboration map is one of the methods designed to express the measured results. It is also defined as a tool which promotes collaboration after diagnosing & analyzing current collaborations and revealing actual collaborations and barriers.