Minutes for BRS-TRANSIT online meeting
Monday, 27 March 2023 @ 1:30-2:30pm

LOCATION: Online meeting using Zoom
ATTENDANCE:

- Saskatoon Transit (Transit):
  - Cory Shrigley, Customer Support & Engagement Manager
  - Allison Gray, Marketing Consultant
  - Anastasiia Kalugina, Transit's Executive Intern from the University of Saskatchewan, Johnson-Shoyama Graduate School of Public Policy (JSGS)
- Bus Riders of Saskatoon (BRS):
  - Robert Clipperton, Spokesperson and Steering Committee Member
  - Peter Gallén, Transit Co-ordinator and Steering Committee Member
  - Sherry Tarasoff, Steering Committee Member
  - James Wood, Steering Committee Member

ADMINISTRATIVE ISSUES

- For this meeting: Allison led the discussion and Peter prepared the minutes.

OLD BUSINESS

1) A separate online meeting to discuss the New Fare Boxes was set up for March 29.

NEW BUSINESS

The focus of this meeting was to present and discuss the digital tools used and in development at Saskatoon Transit to analyze and report on Transit's Key Performance Indicators (KPIs). Anastasiia Kalugina, Transit's Intern (from September 2022 to April 2023) from the Johnson-Shoyama Graduate School of Public Policy has been looking at Saskatoon Transit's tools for analyzing data and focussing on the initial development of new digital graphical reports.

2) As an introduction, Anastasiia noted that Transit is pursuing continuous improvement according to City of Saskatoon internal policies.
3) The discussion around Anastasiia's slides noted the following about Transit's Key Performance Indicators (KPIs):
   a. Explanatory note on Anastasiia's live reports / digital graphs:
      i. These live reports, which Anastasiia has developed using software tools described later, are always up-to-date and available in real time to Transit staff.
      ii. Data entry is a team effort that determines the quality of these live reports. For example, data is entered only once by appropriate frontline personnel (e.g., mechanics) or Transit's automatic data collection systems (e.g., GPS-data).
      iii. The live graphical Reports, however, can be tailored by many staff to display the information in a format they need regularly or at that moment.

b. **Unit Availability** (i.e., status of each bus in the fleet)
    i. The colour-coding in this live graph makes the relevant information stand out:
        1. GREEN icons: bus 'Available-for-Service'
        2. RED icons: bus 'Out-of-Service'
        3. BLUE icons: bus in 'Longterm Repair'
        4. BLACK icons: bus 'To-Be-Junked'
c. **Spares** (i.e., number of spare buses)
    i. This live graph displays the number of spare buses:
        1. 'Spare' buses means the number of buses in excess of the daily need.
        2. Because the required number of buses is significantly lower during Weekends and Statutory Holidays, Anastasiia has integrated a filter to provide separate views of spare buses available on Weekends vs. on Weekdays.
d. **On-Time Performance (OTP)**:
    i. This live graph is used to analyze how the buses arrive and leave the time-points along their routes within each hour of the day.
    ii. Each hour is displayed in a vertical column, which in turn is split into six individual 10-minute segments.
    iii. As always in these live graphs, drilldowns are available to inspect particular timeslots in more detail.
    iv. Colour-coding is again used for easy visualization:
        1. Precise OTP-criteria have been developed by Transit and are used in this digital graph.
        2. In addition, complex calculations (which are described in the technical documentation) were required to determine the specific colour for each time slot in this graph.
        3. The colour codes displaying variations in On-Time Performance are:
            a. Dark Blue: Too Early
            b. Light Blue: Early
            c. Green: On Time
            d. Orange: Late
            e. Maroon: Late (determined by another set of criteria described in the documentation)
            f. Dark Purple: Late (determined by a third set of criteria described in the documentation)
            g. White: no available data (or certain other potential reasons).
        4. Thus in this very useful graph, it is easy to see by the colour-coding if buses tended to be consistently 'on time' or 'late' or 'early':
            a. Prior to having this graph, Planners could only rely on tools provided by Transit's software vendors.

b. Now when a Planner encounters 'patterns' in this graph, investigation of potential problems and their root causes can begin by drilling down into the data.

e. **Full Bus Weekly** (i.e., number of times within each week that a bus was full)
   i. This live graph is produced from data obtained when an Operator presses a 'Full Bus'-button on the Display Panel in the bus.
   ii. By pressing a different button, the Operator can also indicate if Riders are left at a stop, which is important information for Transit to detect since it is detrimental to riders (particularly during cold weather).
   iii. This graph displays – by route number and week – the number of times these buttons were pushed by Operators.
   iv. As always, drilldowns are available to find out precisely at which bus stop and time-of-day each bus got full, etc.
   v. During the meeting, Anastasiia showed how this graph can easily be re-configured by the user.

f. Development Tools for the live graphs/reports:
   i. Anastasiia used *Microsoft's Power Business Intelligence* (Power BI[1] or PBI) platform to develop her digital graphs.

g. About the Data for the graphs:
   i. Anastasiia noted that Transit is in possession of rich and varied data sets spread over many computer systems and databases within Transit; such as: three separate fare collection systems, Automated Location System (GPS-data), maintenance and inventory systems, etc.

h. Concluding remarks:
   i. Additional digital graphs have already been identified for future development.

4) Next meeting: Site visit and subsequent meeting at the Civic Operations Centre (COC) regarding the BRT Project and its Pilot Station.

NEXT MEETING: Monday, 1 May 2023 @ 1:30am (on-site at COC & via Zoom)

[1] Microsoft Power BI: https://powerbi.microsoft.com/en-ca/why-power-bi/