**A rater’s guide when promoting someone to a Senior Level (Vitro and other JS Projects)**

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Soft skills

* **Communication skills**. Written communication is free from mechanical errors (grammar). Thoughts are collected and communicated clearly, aware of the common techniques on how to organize ideas e.g. spatially, chronologically, general to specific (vice versa)
* **Prioritize and communicate.**  When there’s conflict between task, he can reassess priorities and communicate/escalate as necessary. Knows time management basics and puts it into practice
* **Customer orientation.** Understands customer point of view, even when it conflicts with established practice or project protocol. Can diplomatically say “No” but still maintain a problem solving attitude — at the the end of the day, we need to solve the customer’s problems
* **Drive for results**. Has the desire to meet and even exceed objectives. Agressively pursue ticket or bug resolution. Pursue task completion

Criteria: should score a 3 at least on all of the above

Strategic skills

* **Project dynamics**. Can get agreement amongst team members. Knows the basic precepts and trade offs between (1) time (2) quality and (3) feature — you can only choose any two, one of them has to be quality
* **Functional or domain knowledge**. Can perform impact analysis on new feature request, is conversant and well informed on legacy issues or limitations of product/project
* **Problem solving**. Can demonstrably look beyond “symptoms” to find the root cause. Puts both his crystallized and fluid intelligence at work. Identify appropriate steps for the solution. Implements solution by design — abstract thinker

Criteria: should score a 3 at least on all of the above

Engineering, Operational, Process

* **Build tools**. Can write automation scripts in tools like Gulp, Grunt
* **SCM**. Well versed in branching, merging and patch solutions
* **Estimation and decomposition of tasks**. Uses reasonable heuristics to come up with ball-park estimates. Knows how to mitigate risk of overestimation or underestimation when the problem is novel

Programming part

* **Defensive coding**. Use of linting tools
* **Security awareness**. Aware of OWASP top web app issues
* **Troubleshooting**. Has knowledge and experience using analytic tools e.g. code performance profiler, WebKit Dev Tools, FireBug. Has experience seeking out answers from established knowledge bases e.g. RFC, specifications
* **Pattern awareness**. MVC, MVVM
* **Automated testing**. Has written code in TDD manner, unit testing is second nature
* **JS Knowledge**. Knowledge of Async patterns and behavior. Knows the difference between OOP and Functional style — when to use one and/or the other. Knows the difference between composition and inheritancef. Conversant of 2-way data binding/one way data-flow

Science part

* **Knowledge and appreciation of Time complexity** and choice of data structures and/or algorithms. O(1), O(n). Not necessarily able to explain O(log n) and the other Big-Oh notations, but he should have a passing knowledge of the effect of implementation choices on time complexity — more to the point, on the performance of the code
* **Systems programming**. Should have decent knowledge of heap and stack.
* **Algorithms**. Has knowledge of basic retrieval, sorting traversal algos.
* **HTTP protocol**. Has intimate knowledge of how a web server works, permissions etc. Has protocol level knowledge of HTTP methods and various errors
* **General TCP/IP**. Has passing knowledge of the general layers of TCP/IP and DNS resolutions. Can have a conversation about what happens to a browser request (at socket level) up until the web server it returns the HTML
* **DOM and Browser stack**. Intimate knowledge of DOM structure, it’s event model and hierarchy
* **Systems programming**. Understands the difference between user mode and kernel mode. Has knowledge of which data structures are thread-safe and which are aren’t — and when to use one or the other.
* **Regex**. Has decent knowledge of Regular Expressions

Emerging Technologies

* Aware of ES6
* Has passing knowledge of transpilers and TypeScript
* Aware, and possibly have used NodeJS
* Keeps tabs on emerging frameworks, platforms and libraries e.g. fullstack JS e.g. MEAN, MERN, React