# 1AC

### We affirm the resolution. Resolved: On balance, the benefits of the Internet of Things outweigh the harms of decreased personal privacy.

Definitions: Oxford Dictionary defines Internet of things as: The interconnection via the Internet of computing devices embedded in everyday objects, enabling them to send and receive data.

Observation:  The negation holds the burden of having all their impacts only pertain to decreased personal privacy. [purely a comparison between IOT and privacy, no other factors][skip if not enough time just make it apparent in first crossfire]

Now moving on to our 2 contentions:

## Contention 1: Economic Benefits.

In order to justify the affirmations following sub points we must identify the key economic benefits. These include Creating Opportunity, Limiting Consumption, Promoting Community and , increasing stabilization.

### Subpoint A: Small Business Creation

Claim: The Internet of Things is able to facilitate the rise of new small businesses and provide innovative business ideas which provides a valuable business resource.

Evidence: {Porter and Heppelmann 14} : Companies may find that the data they accumulate from smart connected products is valuable to entities besides traditional customers. This may lead to new services or even new businesses.

***Link:***Judge, more businesses is the equivalent to *More Jobs*

**Impact:** It is apparent that small-medium sized businesses make up over 95% of enterprises and account for 60-70% of jobs in most countries. Therefore job security will increase. As the number of small businesses increase job security will increase linearly as a result. IOT is increasing the number of small businesses, which will produce more supply output from each country, increasing the GDP of the country.

[Small businesses increase – numbers of jobs increase –job security increases – hand to hand with gdp increase]

### Subpoint B: Increase in Connectivity and Productivity

***Claim*:** The Internet of things increases connectivity, which in turn increases productivity.

http://www.cnbc.com/2016/09/29/artificial-intelligence-will-boost-us-productivity-says-report.html

**Evidence:** {Roy 16} a new study reports that artificial intelligence could dramatically boost economic growth and productivity. The Accenture report looked at 12 countries and found that AI — or technology that senses the environment, comprehends what's happening and takes action — could increase productivity by up to 40 percent in 2035.

*Evidence:* Heidelberg 3; eCall introduced in 2008, takes smart, connected services to the next level by sending automatic notifications to the printer in case of a problem. The printer can then request service. An automated pre-analysis tool transmits the fault details to the responsible worker. A Heidelberg service expert can then immediately get started on solving the problem.

*Link:* The Internet of things is able to connect all devices on a common grid. By raising connectivity, workers are able to work as a team and share ideas effortlessly. In the case of the printers, workers did not have to check each individual printer but instead the printer checked itself so the worker could focus on more equitable jobs.

**impact:**This in turn will increase the work output, which will increase the supply of products from the countries the workers reside from.

This new supply surplus increases the GDP in the country produced. The benefit possibilities are endless and they provide another reason to vote aff in this debate.

[More work done – Higher supply in business – higher GDP and better economy]

### Subpoint C: Gas Prices

#### Claim:The Internet of things stabilizes gas prices and allows for cheaper outcomes of trade barriers, which in turn leads to a better economy for countries while increasing their gross *GDP in the process.*

**Evidence:** Andrew Slaughter & 2: The oil and gas industry, promise of IoT applications lies not with managing existing assets, supply chains, or customer relationships but in creating new value in information about these. “An integrated deployment strategy is key for companies looking to find value in IoT, which basically integrates sensing, communications, and analytics capabilities.” As the core enabling technologies have improved to the point that its widespread adoption seems likely.” Iot’s promise lies with tying all aspects of a business together.

Evidence 2:

PYMNT 16

In a culture that glorifies and relies so heavily upon the personal automobile, it shouldn’t be so surprising that gas prices are employed by pundits, alternatively, as scapegoats for low retail sales or as a bellwether for impending upturns. Just about every update on monthly retail sales will include a comment on the general state of the cost of a barrel of crude, and the recent months-long slide in the cost of gasoline might as well have been a holiday among the poor journalists covering that beat.But for all the stories focused on the rising and falling nature of oil markets, almost no attention is paid to the companies that are trying to stabilize those prices, and Shell may have made a breakthrough with the Internet of Things and its oilfields in rural Nigeria. RCR Wireless News spoke to several people involved in a Royal Dutch Shell project to install IoT sensors over its 80 oilfields in the western African nation that produce upwards of 600,000 barrels of oil per day, or 21 percent of the country’s oil-bearing capacity. In a perfect world, it would be ideal for Shell to be able to remotely monitor the output and performance of each individual well, but most of these sites are located in the Niger Delta, which is not impassable by modern means but can slow down maintenance and drilling crews during transit. Moreover, spotty network infrastructure in the area, combined with the rough terrain’s effect on weak signals, pushed Shell and its partner organization, Upland Consulting, to choose a low-power, long-range IoT network solution put out by San Diego-based Ingenu, known as random phase multiple access (RPMA), to bridge the many gaps. “The key criteria for selecting a solution were the technology’s ability to cover difficult terrain, power performance and long-range transmission, as well as network scalability, two-way communications and secure data transmission,” Upland Consulting CEO Bola Awobamise told RCR Wireless. “Ingenu’s RPMA offered all of these attributes.” While oil production may be a multi-billion dollar enterprise, Shell’s investment in Ingenu’s RPMA sensors was anything but. Each sensor can project and receive signals in a 450-square-mile area, and their small sizes — no larger than shoeboxes and attachable to existing infrastructure — meant that Shell only had to spend $87,000 to monitor its entire oil production capacity in Nigeria. No small feat, said Ingenu CEO John Horn. “Where we would put one tower, cellular companies would put about 30 towers,” Horn told RCR Wireless. “It took three months to build this network in the Nigerian Delta … [for] cellular companies, it would have taken them a couple years to try to figure it out and develop it, and they still wouldn’t have built it because it costs so much money and there are not people there to support it.”

Not having people on site to support these sensors seems entirely the point. Indeed, Shell saw immediate results after installing the eight modules and collecting near-constant data on well production rates. RCR reports a return of $1 million on the $87,000 it spent buying and installing the IoT system in rural Nigeria. While IoT sensors can help oil producers when things are running smoothly, they’re also proving to be valuable tools when things go wrong in the field. Drillers off the coast of Alaska have been working with IoT sensors for years to monitor when systems go down, and Mark McKinley of Hilcorp Energy Company explained that real-time notifications aren’t always the primary benefit of onsite IoT sensors in oil drilling. Sometimes, the data on exactly what’s gone wrong from the machines themselves is the more important part. “The last time we had a well trip offline, within five minutes, we had a phone call telling us what broke, what to look at and how to test it,” McKinley said in an interview with Microsoft. “It saved six hours of troubleshooting or more, and we got right back online. The staff is ecstatic, because they get support before they have to break out manuals and figure it out on their own.” It’s enough to get environmentalists and Big Oil on the same side.

**Link:** Integrating IoT manages the totality of businesses making it easier to communicate with businesses nationally but more so internationally.

**Impact:**This means that every car owner will benefit from the implementation of IOT due to the stabilizing gas prices. Companies will also benefit from uniform gas prices because their transportation costs will be increasingly predictable as well. Gasoline is a building block in our economy, and IOT is taking a huge step towards stabilizing gas prices and improving the economy. Therefore countries implementing IOT will undoubtedly have their living situation and economy improve drastically.

[IOT helps gas prices – Gas Prices stabilize – Small businesses can predict profits and potential revenue amounts ahead of time – trade barriers will costs less – Companies will either make more money, or more discounts would occur – more money for families.

## Contention 2: Health

### Subpoint A: Diabetes Patients

The Internet of things provides medical solutions to mitigate disease and/or pain.

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Jara, A.J., Zamora, M.A. & Skarmeta, A.F.G. Pers Ubiquit Comput (2011) 15: 431. doi:10.1007/s00779-010-0353-1

Recent research indicates that using diabetes self-management systems help to control glycemia and associated blood glucose levels. For this reason, software solutions [4] have been deﬁned for monitoring and modeling of blood glucose. Since these solutions have the problem that depends on a PC, different kinds of solutions closer to the user are being deﬁned such as glucometers integrated in digital photography [5] and in cellular phones, i.e. mobile Health solutions (mHealth)

All Patients are being positively affected by the implementation of IOT. With patients constantly being monitored, health research is being conducted easier because all doctors will have access to all of their patient’s data. This will make it easier to analyze data and could lead to new health discoveries. Therefore, IOT will help increase the health of the overall society and is another reason aff is the right vote.